

Oxford Cambridge and RSA Examinations



OCR GCSE IN APPLIED ICT (DOUBLE AWARD)

1494

TEACHER GUIDANCE AND SELECTED TEACHER RESOURCES

GCSE in Applied Information and Communication Technology (Double Award)

Foreword

This Pack contains Frequently Asked Questions and Additional Guidance for Portfolios plus Selected Teacher Resources provided by teachers of the OCR GCSE in Applied ICT (Double Award).

OCR have published these in order to supplement teaching materials and learning stimuli currently being used to deliver the GCSE in Applied ICT.

Key Features

- a collection of Frequently Asked Question responses
- a section dedicated to Guidance for Portfolios
- a collation of resources that have been produced by teachers and used in the classroom
- 'tried and tested' resources to supplement current delivery materials
- resources provided by a number of centres using different teaching and learning styles
- includes materials to support the Teaching Modules and the Assessment Units
- supplementary handouts, activities and presentations to suit individual centres requirements
- photocopyable worksheets, handouts, class exercises, case studies and tests
- sample assessment materials for portfolio assessed units

Materials are collated in the order of the Specification, and the numbers refer to the corresponding paragraphs in the Specification. Please note that GCSE in Applied ICT is taught in Modules and assessed in Units. The Specification provides further detail on this matter and guidance on the best order for teaching. Additional materials, such as past question papers, are available through OCR publications, telephone 0870 770 6622 or email publications@ocr.org.uk

The materials are provided as a support to teachers and to encourage sharing of resources. They are not intended to be a comprehensive coverage of the specification and should not be taken to cover all areas of the assessment required.

Acknowledgements

OCR wish to thank the following Centres who have provided the basis for the enclosed materials:

- Ashton-On-Mersey School, Manchester
- Ernesford Grange School and Community College, Coventry
- John Cleveland College, Hinckley
- John Willmott School, Sutton Coldfield
- St Wilfrid's Catholic School, Crawley
- Wrockwardine Wood Arts College, Telford

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GCSE in Applied Information and Communication Technology (Double Award)

Guidance for Teachers: Frequently Asked Questions and Additional Guidance for Portfolios

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FREQUENTLY ASKED QUESTIONS

General

What entries do I need to make for the GCSE in Applied ICT?

You need to enter at least once for each of the assessment units:

- Unit 1, Written Paper, code 4872;
- Unit 2, Business Systems Portfolio, code 4873;
- Unit 3, ICT Survey Portfolio, code 4874.

In order to receive an overall grade you also need to enter for:

- Aggregation, code 1494.

It is usual to enter for aggregation in the session when all three Units will have been entered. There is no fee for aggregation.

How much time should be allocated to a course working towards this specification?

This is a double GCSE award and candidates are expected to do more than they would on an equivalent single award. Candidates need to acquire a thorough knowledge of the use of ICT in business and society and master the range of applications software. Whilst it is not possible to specify how long this will take the specification suggests a minimum of four hours a week over two years. In deciding how long is needed centres are advised to take account of the level of practical skills candidates will have acquired prior to commencing the course.

At what age can candidates start preparing for this specification?

There is no age restriction on this specification. It has been designed for assessment at KS4 and post-16. Some centres successfully start courses during KS3. However, it should be noted that the assessment standards are set at GCSE level, which may have implications for candidates completing portfolios in KS3.

What are the rules about retaking Units?

All three Units can be retaken once, with the best mark being counted in each case. The written paper is simply sat a second time, and each portfolio can be reworked and added to before being remarked and submitted. Fees for retaking the Units are the same as for the first submissions.

Do candidates have to study real organisations?

The purpose of the Applied ICT specification is to provide assessment for candidates who want to study the use of ICT in context. Therefore it is assumed that candidates will study the use of ICT in real organisations and the effects of ICT on real people and groups. However, it is recognised that schools may have difficulty accessing suitable organisations. In this instance Case Studies may be used but this is far from ideal and schools must make sure that such material is as realistic as possible, and gives sufficient detail about the organisation for the candidates to access the full mark range.

Teaching the course and support materials

I'm starting this specification for the first time. What support is available to me?

You need to acquire and read the following documents for Applied ICT, code 1494:

- Specification document;
- Teacher Guidance;
- Portfolio Administration Pack;
- Specimen Assessment materials.

All these documents are available from OCR publications, tel: 0870 870 6622, fax: 0870 870 6621, e-mail: publications@ocr.org.uk, or can be downloaded from the OCR website (www.ocr.org.uk).

Additionally you may obtain:

- Past examination papers and mark schemes (available for January and June from January 2004) from OCR publications as above. As chargeable items these are not downloadable from the website.

Details of INSET appropriate to this specification can be found in the INSET pack sent to all centres each summer. Details are also available on the OCR website or by telephoning the OCR Training and Customer Support team on 01223 552950. OCR runs a number of ICT mailing lists to which you may wish to subscribe. For more details go to <http://community.ocr.org.uk/lists/listinfo>

Is there a recommended scheme of work for this specification?

Pages 31-41 of the Teacher Guidance document contain outlines of three alternative strategies, two for teaching over 2 years and one for a 1-year course. However, these are just suggested starting points and teachers need to devise their own individual schemes to fit the needs of their students and their timetable arrangements. Many teachers find it useful to integrate the teaching of Module A (ICT Tools and Applications) into Teaching Modules B (ICT in organisations) and C (ICT in Society).

What is OCR's opinion of commercial textbooks and teaching schemes?

There are a number of text books and interactive teaching schemes that have been developed for GCSE in Applied ICT in general and the OCR specification in particular. If a text book shows the OCR logo then OCR has endorsed it as covering the specification adequately. On-line and other interactive teaching schemes have not been checked in this way. Whilst many teachers use these schemes successfully to deliver the specification content in an interesting and relevant way it remains the Centre's responsibility to ensure all necessary content is covered and that the assessment is carried out according to the specification requirements. Teachers must not assume that a commercial scheme will automatically and unaided give the guidance necessary for students to achieve the best possible portfolio marks.

What is the Teacher Guide?

This is the Teacher Support document, which contains support material for this specification. It can be obtained from OCR publications, tel: 0870 870 6622, fax: 0870 870 6621, e-mail: publications@ocr.org.uk or from the OCR website, www.ocr.org.uk

Creating Portfolios

I'm approaching an Assessment Unit for the first time. Where do I start?

Pages 51-74 of the Teacher Guidance support document gives useful background information about the Assessment Units and provides some suggested tasks, with candidate instructions, that can be used to guide candidates through the work they need to do to provide the necessary evidence for their portfolios. As with the schemes of work, it is anticipated that teachers might use these as starting points for ideas, and modify and expand them as appropriate for their students.

What is an Assessment Evidence Grid?

There is an Assessment Evidence Grid for each of the Portfolio Units 4873 (Business Systems), and 4874 (ICT Survey). These can be found on pages 62-63 and 70-71 of the Specification document. They give an overall view of what candidates need to do, followed by more detailed information, in grid form, of the evidence required for marks at different levels in a number of different strands.

What are 'strands' and 'bands'?

Strands are the different areas on the Assessment Evidence Grid that need to be assessed for each portfolio. They are labelled a-h in Unit 2 and a-g in Unit 3. Each strand is split into three different mark ranges, or bands. Each band shows the expected achievement of a typical candidate working at specified grades: the lowest band shows grades GG, FF and EE; the middle band DD, CC and BB, the highest band BB, AA and A*A*.

I want to create my own tasks for candidates. Can I check that these will enable my candidates to access all the Unit marks?

Queries on proposed coursework tasks, worksheets etc can be sent to:
ICT@ocr.org.uk

Can Units 2 and 3 be presented as a single portfolio?

Although some of the ICT skills used in the two portfolios may be the same, the context in which they are applied, as outlined at the top of each Assessment Evidence Grid, is quite different. Candidates' work should be submitted, and marked, as two separate portfolios.

How much guidance can candidates be given to help them produce their portfolios?

The main considerations are that:

- The work submitted in the portfolios must be the candidates' own unaided work;
- Teachers may continue to teach and support students whilst portfolio work is undertaken. However, this should not be so specific that it prevents the work submitted meeting the first requirement above;
- Candidates should have access to the Assessment Evidence Grids and any other information that helps them understand what is needed for marks in each strand.

Additional clarification of this point can be found on page 2 of the Portfolio Administration Pack

What do I do if a candidate cannot make any progress without specific assistance?

Teachers may give assistance in these cases but they must record details of the assistance given and this must be taken into account when assessing candidates' work. It may be appropriate to annotate work to explain why a particular mark has been awarded when printed evidence alone might suggest a higher mark. One example of where this might occur would be in the creation of a system in Unit 2. If a candidate is struggling to design and create their own system, it may be appropriate for the teacher to guide the candidate through these stages. This would severely limit marks available in strands e and f, but would allow full access to strand g and h marks, if the candidate is now able to test the system and create user instructions unaided.

Can candidates work together to produce their portfolios?

Candidates may share research information and discuss ideas with each other, in preparation for their portfolio tasks. However, the work presented for assessment must be the individual, unaided work of each candidate. The suggested tasks in the Teacher guide show how initial group discussion and research can be used as the starting point for individual portfolio work.

Can candidates continue work on their portfolios at home?

It is expected that candidates will need to work on their portfolios outside lesson times, including at home if that is appropriate. However, sufficient work must be carried out under supervision to allow the teacher to be sure that the work is produced by the candidates themselves. It may be helpful to ask candidates to describe how particular things were done, to aid verification.

Can I provide writing frames to help candidates produce their portfolios?

Where writing frames provide no more than sets of headings, which might easily be written on a board or given out on a worksheet, OCR has no objection in principle to their use. They may help less able candidates ensure that all areas of a task are attempted. However, they may stifle the creativity of more able candidates and so should be used with care. Where templates and writing frames are provided they should not be so restrictive that they lead candidates to produce identical or nearly identical work.

Is there a limit to the amount of time spent creating the portfolios?

OCR does not stipulate a particular amount of time to be spent on portfolio work but does publish dates by which all marks should be submitted. Centres should provide their own internal deadlines to ensure that all work is marked in time for marks to be submitted to OCR.

Should all a candidate's work be included in the portfolio?

Some centres carry out preparatory activities in preparation for assessment. For example, a class might study the ICT use of an organisation together, before candidates carry out their own studies for Unit 2. Similarly, they may carry out some directed research on a particular topic, before starting Unit 3. This preparatory material should not be included in the portfolios. Additionally, the candidate may use a questionnaire to gain information. It is not necessary to include all completed questionnaires in the portfolio – two or three completed questionnaires, plus a summary of results is adequate.

Can candidates redraft portfolio work after the teacher has marked it?

Because the portfolios each require the completion of a number of tasks it is recommended that teachers set internal deadlines for different tasks within each portfolio. Teachers may comment on candidates' work and return it for redrafting without limit until the deadline for the submission of marks to OCR. Once the mark for the unit portfolio has been submitted to OCR, no further work may take place.

Does all portfolio evidence have to be printed?

It is expected that candidates will use a word processor for written explanations and provide printouts as evidence of what they have done. However, handwritten work will not be penalised and may be the most appropriate way to annotate printouts. Disks, videos and other media should not be submitted and will not be considered by a moderator. Where elements cannot be satisfactorily evidenced on paper, such as sound and animation, these should be documented by the candidate and verified by the teacher.

What is the most appropriate way to present portfolios?

Pages should be numbered by the candidate, then hole punched and tagged in such a way as to prevent pages being separated, yet allowing easy opening to all pages. Treasury tags provide a suitable method. The appropriate Unit Recording Sheet should be filled in and attached to the front of the work, with the Centre and Candidate numbers showing. Heavy/bulky folders such as ring binders should not be used, nor should envelope folders or plastic wallets, which simply add bulk and make handling more difficult. Many centres organise the work in sections, related to the Unit strands, and this is very helpful to moderators as well as helping candidates see what they have done for each strand.

Assessing Portfolios

What is the Portfolio Administration pack?

This is a document containing general advice about portfolio assessment. It also contains the Unit Recording Sheets that are needed on each portfolio. It can be obtained from OCR publications, tel: 0870 870 6622, fax: 0870 870 6621, e-mail: publications@ocr.org.uk or from the OCR website (www.ocr.org.uk)

Are there any specimen portfolios I can look at for guidance?

Example portfolios, with marks and comments, are available to download from the OCR website (www.ocr.org.uk). Additional materials will be provided at INSET sessions and the website will be periodically updated.

What is a Unit Recording Sheet? Where can I find these?

Unit Recording Sheets are the compulsory forms which show the number of marks awarded for each strand in a portfolio. They reproduce the strand requirements from the Assessment Evidence Grids and provide space for teachers to record notes and marks for each strand. Specific Unit Recording Sheets are available for Unit 2 (4873) and Unit 3 (4874). The appropriate sheet must be filled in and attached to the front of every portfolio presented for moderation. Current versions of these sheets will be sent out automatically by OCR to the Examinations Officer in the Centre upon receipt of provisional entries. They are also available, as part of the Portfolio Administration Pack, from the OCR website (www.ocr.org.uk).

Centres are requested to check that the correct centre and candidate number have been filled in on each sheet, and that the individual strand marks have been added up correctly. Errors found by a moderator cause problems and delay the moderation process.

Most boxes on the Assessment Evidence Grid list a number of different things. Do candidates have to show evidence of everything mentioned before awarding a mark in the range for that box?

The level of each strand should be assessed on a 'best fit' approach. It may be appropriate to award a mark where all requirements have not been met. However, it is not appropriate to award a mark just because one particular piece of evidence has been spotted in isolation.

As you read across the three bands there is an increased expectation in the levels of all or some of:

- breadth and depth of understanding;
- coherence, evaluation and analysis;
- independence and originality.

If in doubt about the appropriate band for a particular level, teachers are advised to consider these points in the context of the overall objective of the strand.

Do candidates have to meet all the requirements for earlier bands before moving onto the higher ones?

There is no requirement to check that the objectives for lower bands have been fully met before awarding a mark in a higher band. However, because the objectives are themselves hierarchical it would be unusual to find work that merits a middle or higher band mark without meeting at least the majority of the requirements of the lower band(s).

Is there a way of checking my centre's marking standards before portfolios have to be submitted for moderation?

OCR provides a portfolio consultancy service. Centres may send one or two marked portfolios for each Unit to:

Information Technology Coursework Consultancy
OCR
Mill Wharf
Mill Street
BIRMINGHAM
B6 4BU

Whilst every effort is made to respond to portfolio consultancy requests within three weeks, this is not always possible, especially during moderation periods. Centres are advised to avoid requesting this service during January-February and May-June.

What should I be using to help assess candidates' work?

The main requirements are provided in the Assessment Evidence Grid for the Unit. Additional guidance is given in the exemplification on pages 66-68 and 73-75 of the Specification. Pages 23-30 and 38-44 of this document provide a way of seeing all of this information in layout which teachers may find more useful for assessment purposes, with additional points to note, from the experience gained from the first two assessment series.

What sort of annotation should I add to the portfolios I mark?

Whilst annotation is not compulsory it is requested as it helps the moderator to see where teachers have allocated marks, making it more likely that the moderator will be able to agree with the teachers' assessments. Teachers are advised to ask candidates to number the pages in their work to aid referencing. There is space on the Unit Recording Sheets for teachers to make a brief comment about each strand and to insert the page numbers showing where evidence for the strand has been found. It is helpful where these page numbers are specific and relate to the comment, rather than where the page numbers simply refer to a whole section of work. Some teachers annotate the work itself by adding a letter in the margin to indicate the strand evidenced and/or by adding the occasional comment to indicate why they consider a particular section worthy of a particular mark. This is also very helpful.

Do candidates and/or teachers have to authenticate portfolios as their own work?

Candidate Authentication Statements and Centre Authentication Forms are sent to centres when entries are made. The centre must ensure that each candidate reads and signs one Candidate Authentication Statement for each portfolio to be entered. These statements should then be stored securely at the centre. They do not have to be sent to OCR or moderators unless requested. One Centre Authentication Form then needs to be completed, and signed by every teacher involved in the delivery and assessment of the Unit. In signing this, teachers are verifying that the assessment has taken place according to the requirements of the specification and that all candidates have signed individual Candidate Authentication Statements. The Centre Authentication Form must be sent to the moderator with the sample of portfolios.

Does OCR provide feedback to centres after moderation?

The moderator provides an individual report for each Unit, which is sent to centres when results are issued. Additionally a printed report detailing any adjustments made is also sent. Teachers should ensure they receive this information from their Examinations officer. Additionally the Chief Examiner provides a report detailing any issues that arise from all Units. This is sent automatically to centres that have entered candidates in the session and should be in centres by the end of April (January session) and October (June session).

Written Papers

OCR recommends that candidates take the written paper towards the end of the course. How does this allow for retakes?

OCR's recommendation is based upon the fact that candidates will be best prepared for the written paper after they have completed the whole course, so are likely to obtain their best result at this time. However, if centres wish candidates to have the opportunity to retake the paper before the end of the course there is no reason why candidates cannot be entered in an earlier session.

The written papers seem to be based on a particular organisation. Are centres told in advance what that organisation will be?

The questions in each written paper will be written in the context of a given imaginary business or organisation. This is to allow candidates to consider particular situations in their answers. No specific knowledge of the particular organisation will be required, so centres do not need to give candidates any additional preparation and are not given details in advance.

Further queries

I still have a query about the specification

The subject officer for GCSE in Applied ICT is:

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ADDITIONAL GUIDANCE FOR PORTFOLIOS

This guidance supplements the Assessment Evidence Grids and exemplification from the specification document. It should be read in conjunction with the specification and teacher guide.

General

Candidates should complete work that enables them to meet the requirements of the strands of the Assessment Evidence Grid for the Unit, in the context of the tasks in the banner at the top of the Grid.

Teacher guidance and instructions should be sufficient to enable candidates to understand the objectives they need to meet but should be flexible and open enough for candidates to produce their own, individual work.

Contrived tasks, aimed at producing the absolute minimum for each mark, are to be avoided as they usually result in work that is below the required standard.

Candidates need to be made aware, throughout their portfolio work, of the severe consequences of plagiarism, whether this is from other candidates in the centre or from external sources. Whilst Internet research is required, particularly in Unit 3, all sources should be acknowledged by the candidates.

Unit 2: Business Systems Portfolio

What sorts of organisations are best for candidates to study?

Any organisation that makes at least some use of ICT can be studied. The specification recommends one large and one small organisation but that is not compulsory. Candidates would probably find it useful to study one organisation that uses standard office applications that they may be familiar with. If an organisation uses non-standard hardware, e.g. a factory, this may be interesting for candidates and allow them to write more easily about the hardware, a section that is not well covered by many candidates.

Can all candidates study the same two organisations?

If a centre makes arrangements for visits etc it is likely that all candidates will study the same two organisations. Some centres take one organisation in this way and ask candidates to provide a second, from, for example, part-time jobs, family or work experience placements. If the same organisation is studied by a number of candidates they should be warned of the severe consequences of submitting copied or shared final work.

My situation does not allow candidates to get out and visit real organisations.

Whilst visits provide interesting and motivating ways of acquiring information, they are not the only method that can be used. Other methods include:

- representatives of organisations may be able to come into the classroom to answer questions;
- the teacher may be able to visit the organisation, perhaps with a digital camera, and report findings to the class;
- case study material may be found on the Internet;
- information may be available in books and/or leaflets;
- some commercial teaching schemes for Applied ICT provide case study material;
- The school/college itself could provide a suitable case study, providing administration is studied rather than just the learning environment that is already familiar to students.

Any methods that allow candidates to find out facts about the hardware and software actually used by real organisations can be used.

Is it acceptable to use imaginary organisations?

Although not ideal, a good case study of an imaginary organisation might be indistinguishable from that of a real one. However, it is **not** acceptable for candidates to invent their own organisations and guess at how ICT will be used.

What if candidates only cover one organisation?

The minimum requirement for marks in strand a is that candidates write about the use of ICT in two organisations. If they fail to do this their work cannot be awarded a mark. It is better to submit two partially complete descriptions rather than allowing candidates extra time to finish one piece at the expense of at least starting the second.

What sort of documents should candidates study?

The minimum requirement is that candidates study two documents from each of two organisations. It is expected that candidates aiming for middle and higher band marks will study more. These can be from the same two organisations as studied for strand a, or they might be different ones. There is no restriction on the type of documents studied but they should be complete documents, not blank templates. Personal details included in these documents can be blanked out. Candidates should study the style and content of the writing as well as the overall layout and standard features. This activity is more meaningful if candidates study at least one of each of the type of documents they themselves will go on to produce for strand c. Candidates aiming for the highest strand b mark should study the same type of documents from at least two organisations to enable comparisons and generalisations to be made.

Can all candidates use the same set of documents?

Whilst there is nothing to prevent all candidates studying the same documents this should not be necessary. It is not difficult for a centre to provide a large selection of documents from which candidates can choose, or for candidates to find their own. Independence and originality are encouraged by the use of different documents and candidates can compare and contrast their findings meaningfully if they have studied different documents.

Should the original documents be included in the portfolios?

Yes, marking and moderation is made much more difficult if the original documents are not present. Additionally, many candidates find that an easy way to start this task is to annotate the documents to show the features they have identified.

How many documents do candidates need to produce?

The minimum requirement is that candidates produce one document using each of word processing, DTP and presentation package. There is no automatic advantage in producing more than this, though candidates may find it easier to demonstrate a full range of skills in a package through more than one document. For example, a mail-merged letter might often be quite simple in layout, so an additional multi-page report might be produced to evidence headers, footers, etc.

What evidence is needed to show that a mail merge has been carried out?

Candidates should provide printouts of:

1. the original letter with field names
2. the source data file
3. 2-3 examples of final output

Is it true that as long as candidates produce a mail merged document they can be awarded marks in the top band?

No, it is not correct to base judgement on a single element from a band description. Top band marks in strand c should be awarded for complex documents of a high quality that could be actually used in a business situation. A range of features of all three types of software should be evidenced, one example of which is a mail merge.

How should candidates show that they have checked their documents for errors?

In most cases it will be possible for candidates to produce a first draft for each document, before producing an improved final copy. This first draft can be checked by the candidate, colleagues, family, teacher or end-user and it is usually possible to come up with at least one idea for improvement. Very high quality, error-free documents can be assumed to have been checked, though candidates may like to show how this has been done, by documenting spelling, grammar and layout checking. Candidates who fail to spot or correct all errors, perhaps through poor language skills, can still show what checking they have done by printing out a screen shot of check(s) carried out.

Do candidates need to provide a written evaluation of the documents they produce?

There is no requirement to provide an evaluation of each document produced for strand c. Indeed, some candidates who have attempted to do this have become confused between the requirements for strand b and strand c. However, simple annotation outlining the type of software used and the main features would be very helpful. It would also aid in preparation for the written examination where they may be asked to identify features of particular types of software.

I'm confused about the type of diagram required by strand d. Will any type of flow diagram do?

No, what is required is a data flow diagram. These are often less complex than program flow charts or systems flow diagrams. A data flow diagram essentially shows external entities, processes and storage, with the flow of data between them. Written explanation accompanying a diagram showing a number of processes is needed for higher band marks.

What should the data flow diagram show?

The data flow diagram should show the situation for which the candidate will produce a system. Section d of the portfolio should be the first part that directly addresses the system to be produced. It is expected that teachers will draw data flow diagrams with their students, showing a range of other systems, as preparation for this task but copies of these should not be included in candidates' individual portfolios.

My students draw detailed designs of the system they will produce. Does this count as a design specification?

No, a design specification is not the same as detailed designs. The design specification should be written up before detailed designs are considered. It should include an overall explanation of the problem to be solved as well as the specific statements outlined in the exemplification document. After reading the design specification a marker should have a clear idea of what the candidate is setting out to achieve and criteria by which success can be measured.

What is the best type of system for candidates to produce?

The majority of candidates produce either a database system or one based on a spreadsheet. Both of these allow data to be input, with different output produced. This allows access to all mark ranges for strands f, g and h. Some candidates produce presentations and websites. Whilst these can be accepted as systems it is difficult for candidates to access marks above the lowest band, since specific input and output often cannot be easily shown and/or tested.

Can the same work be marked for strands f and h?

No, these are not the same. Strand f requires candidates to write up what they have done to **create** their system. Strand h requires candidates to produce a guide for someone who wishes to **use** the system that has been created.

Some of my candidates have not written up anything about their system, but they have created one. Can any marks be awarded?

One mark can be awarded in strand f if there is printed evidence that a system has been created. At least some written explanation is needed to gain 2 marks. If the printouts show that at least one part of the system works then 1 mark can also be awarded in strand g. The candidate needs to actively recognise the process of testing in order for 2 marks to be awarded. No marks can be awarded in strand h if the candidate has not specifically addressed the needs of a user as outlined in the exemplification in the specification document.

Unit 2 Detailed guidance strand by strand.

The left hand columns of the following tables contain the wording from the Assessment Evidence Grid (specification document, pages 62-63) for each strand, with the right hand column containing the exemplification from pages 66-68 of the specification. Further guidance in response to situations identified in the first examination sessions is given at the bottom of each page.

A typical candidate will	Exemplification
<p>a1 Identify how the organisations use ICT, the information requirements of some systems and the hardware and application software used.</p> <p style="text-align: right;">0 1 2 3 4</p>	<p>Candidates will list and make brief comments on the organisations' use of ICT, information requirements, hardware and software. To gain 1 mark, candidates must give at least one use of ICT by each organisation, along with the information requirements and the hardware and application software for at least one system.</p>
<p>a2 Describe how the organisations use ICT, the information requirements of most major systems and the hardware and application software used.</p> <p style="text-align: right;">5 6</p>	<p>Candidates will produce several sentences on each of the organisations' uses of ICT, and the information requirements, hardware and application software for most major systems. The quality and completeness of their descriptions will determine whether 5 or 6 marks are given.</p>
<p>a3 Explain why the organisations use ICT and how the hardware and application software used meet the organisations' needs and help them to communicate and function effectively.</p> <p style="text-align: right;">7 8</p>	<p>At this level candidates will be able to recognise the organisations' needs. They will provide cogent explanations why the organisations use ICT to meet these needs and the ICT systems used. Again, the quality and completeness of the explanations will determine the mark awarded.</p>
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>a1 – simple lists/brief comments a2 – fuller descriptions, including most information requirements, hardware and software a3 – an analysis relating the ICT used to the needs of the organisation. This is not possible if these needs are not made explicit by the candidate.</p> <p><i>Ideally, candidates should have carried out their investigation first hand by visits, work experience placements, etc., but the use of case study material is acceptable. A brief introduction describing the organisation and its needs would be a useful starting point.</i></p> <p><i>Candidates frequently omit any specific reference to at least one of hardware, software and/or information requirements. It may be advisable to ask candidates to summarise their findings in table form to ensure all these aspects are covered. If an organisation has a network this is one aspect of hardware that candidates should investigate.</i></p> <p><i>One study is likely to be in greater depth than the other since the specification recommends the study of one large and one small organisation. However, the overall level of response is likely to be in the same band.</i></p> <p><i>Where only one organisation has been studied 0 marks can be awarded.</i></p> <p><i>Where one of the organisations has only been very briefly and poorly referred to, marks are limited to a 1.</i></p> <p><i>If candidates give general descriptions of, e.g., computers in supermarkets, rather than evidence of the study of a particular organisation, marks should be limited to a1. This applies also to candidates who appear to be guessing at what they think an organisation will use rather than evidencing research to find out what is actually done.</i></p>	

A typical candidate will	Exemplification
<p>b1 Describe the content and layout of documents used by the organisations.</p> <p style="text-align: right;">0 1 2 3</p>	<p>Candidates should describe the content and layout of at least two documents from each of the organisations being investigated. Their descriptions should include key features of the documents. This might include the sender's and receiver's addresses, a salutation, a complimentary close etc. on a business letter. The descriptions should also include features of presentation and layout such as the use of colour, columns etc. in a newsletter.</p>
<p>b2 Make informed suggestions about the writing and presentation styles used by the organisations in their documents.</p> <p style="text-align: right;">4 5</p>	<p>Candidates should identify the purpose and target audience for each document. They should suggest how the writing and presentation styles used meet, or do not meet, these purposes.</p>
<p>b3 Draw logical conclusions about the standards for business documents and use these when producing your own documents.</p> <p style="text-align: right;">6</p>	<p>Candidates will need to study documents from a number of different organisations to enable them to draw general conclusions about the standards that are expected in business documents. They will then apply what they have concluded to the production of their own documents.</p>
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>b1 – <i>simple descriptive comments about content, layout and style of the documents studied. This might be in the form of annotation on the documents themselves</i></p> <p>b2 – <i>consideration of the purpose and target audience for each document and how the content, layout and style relate to these</i></p> <p>b3 – <i>a general conclusion about content, layout and style of particular documents and of housestyle across documents of the same organisation, with some evidence that this information has been used in strand c.</i></p> <p><i>Marks in this strand are for review and evaluation of real documents, not blank templates or documents created by candidates themselves. The documents should be of professional quality, so that candidates can use them as guidance for what they will produce themselves. It would be helpful to candidates if they studied the type of documents they will be producing for strand c. Candidates should include copies of documents studied in their portfolios.</i></p> <p><i>Candidates should be given credit whether they use documents from organisations studied in strand a, or from elsewhere. Descriptions of content and layout, and identification of purpose and audience may be in the form of annotation on collected documents.</i></p> <p><i>General conclusions, necessary for b3 marks, cannot be made if only one of each type of document is studied. It is expected that documents from additional organisations will be considered to aid these conclusions. Candidates need to be explicit about the general rules and standards they have noted from their research, and about how these standards have been used in their own documents created for strand c.</i></p> <p><i>Candidates may be credited with a mark for drawing conclusions even if they have not identified purpose and audience.</i></p> <p><i>If candidates fail to provide evidence of the study of two documents from each of two different organisations, no more than 1 mark can be awarded.</i></p>	

A typical candidate will	Exemplification
<p>c1 Produce straightforward business documents that match their purpose and the target audience by making basic use of word processing, publication and presentation software.</p> <p style="text-align: right;">0 1 2 3 4</p>	<p>Candidates will create at least three documents - one with each type of software - to meet straightforward given purposes. These might include a simple business letter, a flyer and a presentation - perhaps to market a product or service - of two or three slides. They will use default settings for page layout but will be able to enter and format text and incorporate clipart and other graphic images. The documents produced should meet their purpose and be appropriate for the target audience. They should show that they can check their work for errors.</p>
<p>c2 Produce more complex business documents that use appropriate writing, presentation and layout styles by making use of more features of word processing, publication and presentation software.</p> <p style="text-align: right;">5 6 7</p>	<p>The documents produced by candidates might include business reports, newsletters and more extensive presentations. They will use document formatting features such as:</p> <ul style="list-style-type: none"> • headers, footers and bullet points; • copy, paste and move text to improve the readability of documents; • incorporate tables; • wrap text around images and objects. <p>They should check their work and correct obvious errors.</p>
<p>c3 Use what you have learned from studying organisations' documents, and the full range of software facilities to produce business documents that meet their intended purpose, are appropriate for the target audience and that are accurate, clear and consistent.</p> <p style="text-align: right;">8 9</p>	<p>Candidates should produce documents of near professional standard. These documents will exhibit a <i>house style</i>. The documents will clearly meet their intended purpose and be appropriate for the target audience. Candidates will use a range of facilities to produce documents such as mail-merge facilities to produce a mail shot. The documents produced should be virtually error free.</p>
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>c1 – simple documents using basic templates</p> <p>c2 – more extensive, appropriate documents, at least some created using a variety of software techniques, not relying on templates and/or wizards provided with software</p> <p>c3 – error-free documents of a professional standard, demonstrating the use of a wide range of features in each type of software.</p> <p><i>Failure to meet the basic rubric of producing one document using each of word processing, publishing and presentation software limits candidates to 1 or 2 marks.</i></p> <p><i>Marks should not be awarded too generously for basic documents. Single sheet flyers or business cards, short presentations, and single letters, produced using default settings and templates fall in the lowest mark band. For 4 marks they should be fit for purpose, checked for errors and appropriate to the target audience. Candidates whose work overall fits into the lowest band can be credited with a mark for the use of house style.</i></p> <p><i>To gain c2 marks candidates will have created, for example, a multi-page business report or newsletter combining different data types; and more extensive, non-linear or multimedia presentations, demonstrating the range of software skills they have acquired. The range of features can be shown across the three documents and do not need to be repeated in each. Features listed in the exemplification are examples and not requirements.</i></p> <p><i>Some features, e.g. copy and paste, can be evidenced by printing out draft and final copies of a document, with annotation outlining the features used.</i></p> <p><i>Several copies of a letter or invoice, together with a copy of the original file with fill points, and the source data file will evidence use of mail merge.</i></p>	

A typical candidate will	Exemplification
<p>d1 With help, identify the information flows in a simple system and produce a dataflow diagram.</p> <p style="text-align: right;">0 1 2 3</p>	<p>Candidates will require considerable help to identify the information flows in a system. A suitable system for study might be the video loan system mentioned above. Having been helped to identify the information flows, candidates should then be able to produce a simple dataflow diagram to represent them. The mark awarded will depend on the amount of help needed and the accuracy of the diagram produced.</p>
<p>d2 Investigate the information flows in a system and produce a dataflow diagram.</p> <p style="text-align: right;">4</p>	<p>Candidates will be able to identify the information flows in similar systems for themselves and produce a suitable dataflow diagram.</p>
<p>d3 Analyse the information flows in a system and produce a comprehensive dataflow diagram.</p> <p style="text-align: right;">5 6</p>	<p>Candidates will need to analyse more complex systems to identify the information flows. The dataflow diagrams they produce should clearly show all the information flows in the system.</p>
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>d1 – a data flow diagram produced with help. The diagram need not be completely accurate</p> <p>d2 – a simple but accurate data flow diagram produced without help</p> <p>d3 – a data flow diagram covering more than one process, and written description about the flow of data through the system.</p> <p><i>Candidates must produce data flow diagrams not flow charts. Flow charts may gain marks in d1 for identifying information flows but a level 1 data flow diagram is necessary to access the higher bands. Written Analysis is necessary to move into d3. Dfd's should relate to the system designed by the candidate. Complex involves more than one process.</i></p> <p><i>More detailed guidance about data flow diagrams can be found on pages 31-33. The diagram on page 31 is an example worth up to 3 marks, dependent upon the amount of help given. A simpler flow diagram may gain 1 mark. Addition of a table as on page 33 might gain 4 marks. A more comprehensive diagram, as shown on page 32 might be worth 5 marks, rising to the full 6 marks if the diagram is accompanied by a written description of the information flows.</i></p> <p><i>A succinct description of the symbols used in a data flow diagram is given in textbooks such as Successful I.T. Projects in Excel, P.M. Heathcote, Payne-Gallway Publishers or Successful I.T. Projects in Access, P.M. Heathcote, Payne-Gallway Publishers.</i></p> <p><i>Diagrams produced using templates provided by the teacher fall into the lowest mark band. It might be appropriate to create a number of data flow diagrams as a group but for marks above d1 candidates must create their own diagrams for the systems they are going to create.</i></p>	

A typical candidate will	Exemplification
<p>e1 Produce a basic design specification for a system.</p> <p style="text-align: right;">0 1 2</p>	<p>A basic design specification will include simple statements that:</p> <ul style="list-style-type: none"> • identify the user requirements; • indicate from where information will be obtained; • identify inputs, process and output required; • identify the type of application software needed. <p>The system itself will be a simple one that can be implemented using one type of application software.</p>
<p>e2 Produce a detailed design specification for a system.</p> <p style="text-align: right;">3</p>	<p>A detailed design specification will:</p> <ul style="list-style-type: none"> • clearly state the user requirements; • clearly specify sources of information; • describe in detail the input, process and output required; • identify the type(s) of application software to be used. <p>The design specification should also include some indication of how the system will be tested. The system may be more complex, integrating features of more than one type of application software.</p>
<p>e3 Produce a comprehensive design specification for a system.</p> <p style="text-align: right;">4</p>	<p>A comprehensive design specification will include details of all aspects of a complex system, including a detailed specification for testing the system.</p>
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>e1 – a short outline of the task, which may be a simple system, covering the bullet points in the exemplification</p> <p>e2 – fuller descriptions, plus some reference to testing. The system needs to be complex</p> <p>e3 – comprehensive coverage of the bullet points for a complex system, plus a complete testing plan, covering a range of types of data.</p> <p><i>A complex system may be one requiring the use of more than one piece of software, or may carry out a range of tasks using a single piece of software, e.g. a database with two or more tables in one-many relationships, or a complex multi-sheet spreadsheet.</i></p> <p><i>Even a basic design specification should make clear what the purpose of the system is and what the intended output is. These points are necessary for assessing strands f and g.</i></p> <p><i>Detail is the key to higher marks. Candidates need to be specific in saying what their system will do and what the desired outcomes will be. A testing plan can be credited even if it is located in a different section of the portfolio.</i></p> <p><i>The design specification itself does not carry many marks but it is vital that candidates give sufficient detail to allow them to gain good marks in the succeeding strands.</i></p> <p><i>Candidates should be given guidance on choosing a task that will stretch their capabilities but at the same time will not be beyond them. Where a single problem/situation is set to a whole group there should be room for candidates to make individual decisions, leading to final systems that are not identical.</i></p>	

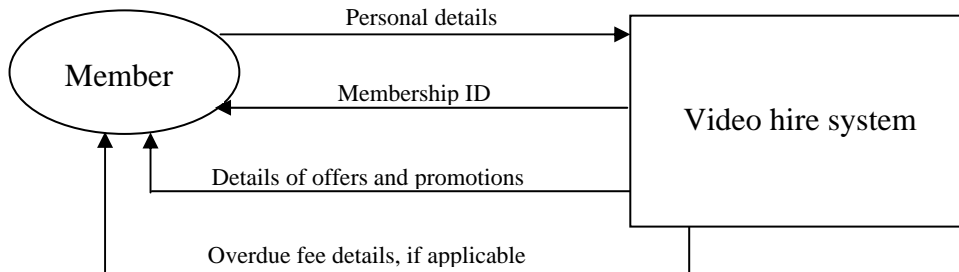
A typical candidate will	Exemplification
f1 Produce brief records of the implementation of the system. 0 1 2	Candidates must produce sufficient records to show that they have implemented the system. This may include a list or diary of the steps carried out, along with examples of input data and the output obtained.
f2 Produce clear records of the implementation of the system. 3 4	Candidates should describe clearly what they have done to implement the system, including screen prints and examples of input and output.
f3 Produce comprehensive records of the implementation of the system. 5 6	The comprehensive records that candidates produce should enable someone else to recreate the system.
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>f1 – <i>evidence that a system has been created</i></p> <p>f2 – <i>description of how the system has been created, with screen prints and some evidence of use</i></p> <p>f3 – <i>full description of implementation, covering all aspects, in sufficient detail for someone else to recreate the system.</i></p> <p><i>One mark can be awarded if there is evidence that a partially or fully working system has been created. Brief descriptions of how this has been done are needed for 2 marks.</i></p> <p><i>For 3 and 4 marks there should be appropriate screen prints demonstrating how the system has been created, with at least one example showing how input to the system creates some desired output. In a database system this may be evidence of a query carried out for a stated purpose, and the results of that query.</i></p> <p><i>For 5 and 6 marks there should be evidence of a range of input and output, demonstrating the way the system meets the needs identified in the design specification. The records do not need to specify every key and icon to press – it can be assumed that the reader has a working knowledge of the software – but it should give details about all the stages involved in the implementation, and the structures and data entered. The assessor should be able to recreate the system from the documentation, without making any decisions/judgements.</i></p>	

A typical candidate will	Exemplification
g1 Carry out simple tests to check that the system meets the design specification. 0 1 2	Candidates should provide evidence in the form of screen prints or printouts to show that the system produces the required output for some inputs.
g2 Test the system under a range of conditions to ensure that user requirements are met. 3 4	The tests carried out should include normal, abnormal and extreme inputs.
g3 Carry out a detailed evaluation of the system, which checks the outcomes against user requirements, and produce records of any modifications and improvements made. 5 6	Candidates should fully test the system as indicated in their test specification both during implementation and after it is completed. They should keep a record of any modifications or improvements they make as a result of testing.
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>g1 – some testing has been carried out g2 – thorough testing, including normal, abnormal and extreme inputs g3 – thorough testing following a test plan, with a written evaluation and evidence of at least some modifications made as a result of testing.</p> <p><i>Testing should check outcomes against user requirements as well as data input.</i></p> <p><i>1 mark can be awarded if there is evidence of at least some output created by the system. This increases to 2 marks if the candidate shows an understanding that testing is taking place, and carries out at least two different tests.</i></p> <p><i>Testing using normal, abnormal and extreme data is needed for middle and upper band marks. With a database this may involve testing validation checks. However, for 4 marks a range of tests for output meeting user requirements is also needed.</i></p> <p><i>The evaluation needed for g3 marks could be a separate section, or it might be found in the record of implementation.</i></p>	

A typical candidate will	Exemplification
h1 Produce a basic user guide to the system. <p style="text-align: right;">0 1 2</p>	Candidates will produce a simple list of instructions that tell a user how to: <ul style="list-style-type: none"> • open the software; • input data; • obtain output; • print the output; • save and exit.
h2 Produce a detailed user guide to the system. <p style="text-align: right;">3 4</p>	The user guide will include detailed instructions, along with some screen prints of menus, input screens etc.
h3 Produce a comprehensive user guide to the system that would allow a novice user to use the system efficiently. <p style="text-align: right;">5</p>	The user guide will use a range of techniques including extensive use of annotated screen prints. It will provide detailed instructions on using the system in non-technical language.
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>h1 – <i>brief instructions for the user of the system, with or without illustrations</i></p> <p>h2 – <i>instructions include reasonable written descriptions and relevant screen prints</i></p> <p>h3 – <i>comprehensive instructions suitable for a novice user including annotated screen prints and examples of use.</i></p> <p><i>The user guide should be on the use of the system created by the candidate and not a manual for the software used. If this is not done h1 marks may be available, as some of the points from the bulleted list may have been covered.</i></p> <p><i>One mark can be awarded if at least some of the points from the bulleted list are included, but all must be addressed, albeit briefly, for the award of 2 marks.</i></p> <p><i>Three marks can be awarded for good descriptions with relevant screen prints if just one of the points from the bulleted list in h1 is missing. All are needed for 4 marks.</i></p> <p><i>For h3 marks the user guide should cover all major uses of the system appropriate to the user requirements. The presentation of the guide should be of a high quality and the instructions clear.</i></p> <p><i>NB: Even if the software carries out some tasks automatically (e.g. saving on MS Access) this can still be documented by the candidate.</i></p>	

Definition of a data-flow diagram

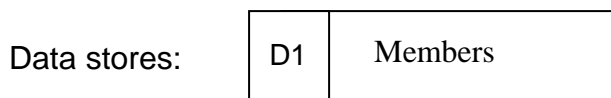
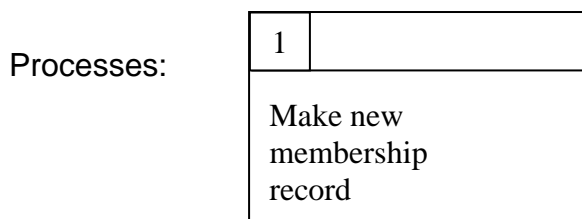
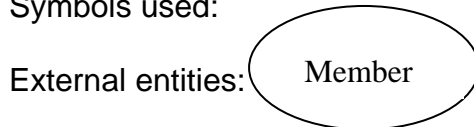
A context diagram (DFD0) shows the nature and direction of the information that passes between the system and the external entities with which it interacts. An example of a context diagram for a video hire system is shown below.



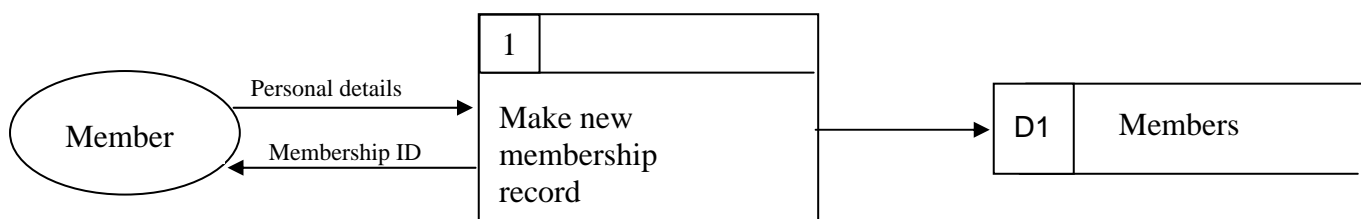
A level 1 data flow diagram (DFD1) shows:

- the flow of data through the system – its sources and destinations
- the processes which the system performs
- the data stored by the system.

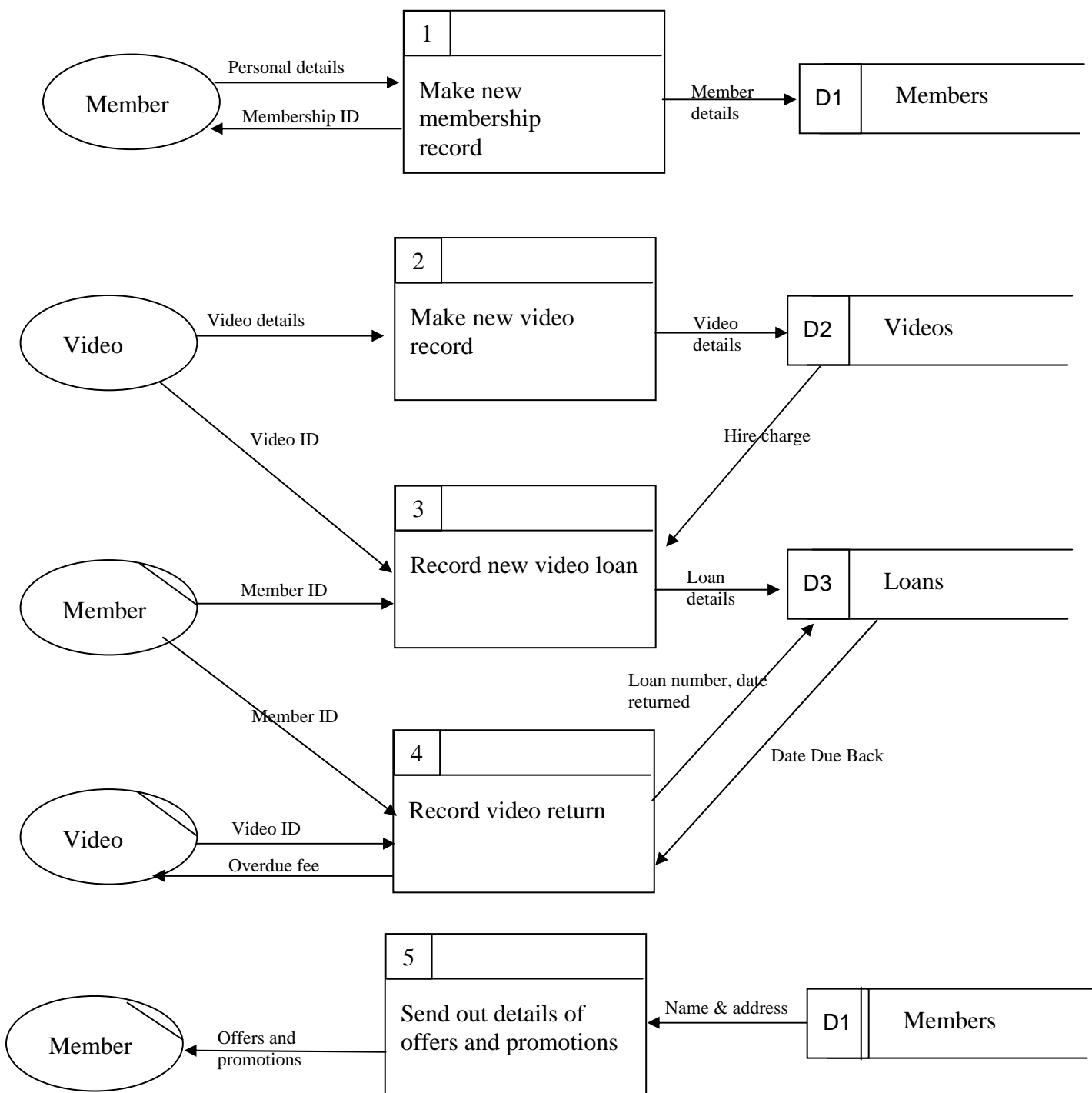
Symbols used:



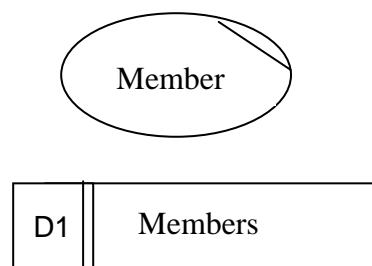
An example of a level 1 data flow diagram for one process in a video hire system is shown below:



A more complex level 1 dfd, showing all the main processes in a video hire system is shown below:



Where an entity or store is referred to more than once the diagram may be clearer if this element is repeated rather than drawing additional arrows to the same item on the page. An extra line is added to the symbol to show that the item is repeated



It may be helpful preparation to create a table such as the one below:

Process	Process description	Input	Processing	Output	Store
1	Make new membership record	Personal details	Creates a new membership record and allocates a unique membership ID	Membership ID	Members file
2	Make new video record	Video details	Creates a new video stock record and allocates a unique video ID	Video ID	Videos file
3	Record new video loan	Membership ID, video ID	Create a new video loan record		Loans file
4	Record video return	Membership ID, video ID	Looks up video loan record using membership ID/video ID, checks if video is overdue and writes the date video returned	Overdue fine, if applicable	Loans file
5	Send out promotional details		Look up names and addresses of members and produce labels/letters	Address labels/letters for offers and promotions	

Unit 3: ICT Survey Portfolio

What information do candidates have to look for in strand a?

The whole of this portfolio focuses on research. Candidates should provide evidence of how they have found information, and list the sources they have used, for the rest of the portfolio – the investigation of technologies and the work on the effects of ICT.

I've found a good website that gives all the information needed for strands e, f and g. Is it OK if my candidates just use this?

There are an increasing number of resources available that have been specifically created to provide support for this specification. Whilst they are a useful starting point, if they are used as the sole source of information for the portfolio the candidates will be unable to demonstrate the level and variety of independent research needed for marks above the lowest band for strand a. It is also difficult to justify high marks for strands e-g if there is little variety in the groups/individuals studied, for example, if they are all examples taken from a single community/geographical area.

My students will carry out a survey involving a questionnaire going to a variety of people. Does this count as information from a variety of sources for strand a?

The essence of strand a is the use of a range of techniques. Whilst questionnaires might be one source of information it is necessary to show evidence of searching the Internet for marks even in the lowest band, and of using book resources for middle and higher band marks.

The exemplification for strand b doesn't mention a survey. Can my students create a database on any topic?

No, the exemplification on pages 73-75 of the specification needs to be read in conjunction with the Assessment Evidence Grid on pages 70-71. This makes it clear that the focus of the database is the analysis of results of a survey. It would help to consider the main focus of strand b as the analysis of survey results rather than the creation of a database.

Can candidates produce a simple database using a program such as Microsoft Excel?

Lower band marks in strand b are accessible if candidates analyse their survey results using a single table database. If they use the database facilities of software such as MS Excel, e.g. searching and sorting, this is acceptable.

What sort of survey results need analysing in a multi-table database?

This could be research into a form of technology and its users. For example, investigation into mobile phone usage might lead to a table of users, including the type of handset or call plan they have, with a table of details of the various handsets or call plans available. This would allow candidates to ask questions about, for example, the age and gender of people using different facilities. The relationship between the tables must be one to many in order for middle band marks to be considered for strand b.

Why do candidates have to analyse data using a spreadsheet as well as a database?

The data analysed in the spreadsheet can be the same as or different from the data analysed in the database. Many candidates copy and paste data from a database table into the spreadsheet, then create formulas and graphs. Candidates need to demonstrate skills in using both pieces of software for the analysis of data. Centres might like to approach this as a comparison of the relative strengths of each package.

Do candidates have to use absolute cell referencing to gain top band marks in strand c?

Absolute cell referencing is just one example of a feature that might contribute to evidence of a spreadsheet of suitable complexity for higher band marks. Other features might include a range of COUNTIF, MAX, MIN, AVERAGE etc statements, multiple sheets, complex cell and page formatting. The most important requirement of the top mark band is that candidates need to integrate their spreadsheet results into a coherent written report summarising their findings.

Can candidates combine the reports for strands b and c?

It is acceptable to produce one report for both strands, giving results and conclusions from the data analysis. For marks to be awarded in both strands there must be clear evidence of results from both database and spreadsheet analysis.

What topic should the multimedia presentation be about?

This needs to be on a topic relating to part of the Unit content – either the investigation into technologies or the work about the effects of ICT. Sources of information should be documented as part of strand a.

Should candidates produce disks of their presentations?

Candidates must produce all their evidence on paper. Disks are not required, and if sent will not be considered by moderators. It is important therefore that candidates annotate their printouts to show features such as interactivity, routes through their presentations, sound and animation/video.

Can candidates cover strands e, f and g together?

It is quite possible to cover the requirements for strands e, f and g in a single coherent piece of work, either a presentation or written report. However, it is important that in each area considered they specifically consider all three requirements – effects on groups/individuals of the use of ICT, needs and benefits met by the use of ICT and the consequences to groups/individuals of little or no access to ICT.

Do candidates have to write about 20 groups/individuals for strand e?

Not necessarily. It is acceptable to write about 4 different groups/individuals in each of the 5 areas, which would involve up to 20 groups. Alternatively, it is equally acceptable to write about a minimum of 4 groups/individuals, providing all 5 areas are covered overall in some detail. A good starting point might be to write about people working in one or both of the organisations studied in the Unit 2 portfolio, then one relative and one person with disabilities. Evidence of research carried out, using questionnaires, interviews, websites, email, textbooks should be included in the work for strand a.

What is the difference between needs and benefits?

Meeting a need is defined as satisfying a basic requirement, either personal or corporate. A benefit is an advantage of being able to meet that requirement in a particular way. For example, candidates might write about the advantages of using email as a form of communication. At a higher level they might first give details of the particular needs that are met by email – keeping in touch with families, sending short messages between businesses... and then identify some of the advantages of using email for these purposes.

Is strand g about the disadvantages of using ICT?

No – for marks to be awarded in strand g it is necessary for candidates to specifically consider the problems of people and groups who have limited or no access to ICT. For example, if they write about the uses Person X makes of email, and the advantages this brings they could then consider the effect on a similar person who does not have email access. It is important that candidates should consider the *consequences* of this limited access, which is more than simply saying they don't have the advantages. For example, if a family member does not have access to email they miss out on quick and easy communication with other family members. Consequences of this might be that they become more isolated from their families or that they have to spend more time and money keeping in touch.

Unit 3 Detailed guidance strand by strand.

The left hand columns of the following tables contain the wording from the Assessment Evidence Grid (specification document, pages 70-71) for each strand, with the right hand column containing the exemplification from pages 73-75 of the specification. Further guidance in response to situations identified in the first examination sessions is given at the bottom of each page.

A typical candidate will	Exemplification
<p>a1 With help, identify suitable resources and carry out straightforward searches of the internet to find specific information, listing the sources used. 0 1 2 3</p>	<p>Candidates will need considerable help to identify suitable resources. Their searches of the Internet will be limited to searching for a particular topic within a given site. They will produce a simple list of the titles and websites used.</p>
<p>a2 Independently identify a range of suitable resources, carry out searches to locate information efficiently on the internet and produce a detailed list of all sources used. 4 5</p>	<p>Candidates will be able to identify a range of resources for themselves. This may include individuals whom they can e-mail for information. The teacher may still identify some resources. Candidates will be able to enter appropriate criteria to gain meaningful results from their searches of the Internet. They will use facilities such as <i>bookmarks</i> and <i>favourites</i> to enable them to return to previously located pages. They will list titles and authors of books, along with the page numbers where information was found. They will also list the URLs of any websites used.</p>
<p>a3 Identify and use a comprehensive range of resources selectively; use complex techniques to refine searches on the internet and check the information found for accuracy and bias, correctly acknowledging all sources used. 6 7</p>	<p>Candidates will be able to select a wide range of resources without assistance. They will select from the resources only information that is relevant. They will be able to use advanced search techniques to find the precise information they require from the Internet. Where possible, they will compare information from different sources to ensure accuracy. They will produce a full bibliography of all the sources they use.</p>
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>a1 – some evidence of sources, including websites, for at least one part of the portfolio</p> <p>a2 – evidence of relevant use of search engines, favourites and a list of sources including websites and books, covering the whole portfolio</p> <p>a3 – a wide range of different resources, covering all aspects of the portfolio. Evidence of complex searches and some check on accuracy or bias.</p> <p><i>For a1 marks there does not have to be evidence of the use of Internet search engines but candidates should find their own information from the websites and books to which they may be directed. For 3 marks there must be a list of a minimum of two websites and two books that have been used for at least part of the portfolio, with some indication of the information found.</i></p> <p><i>For middle and higher band marks the candidate must produce a bibliography that contains at least some websites, and page numbers of written sources used. This should include sources on available technologies and for the impact of ICT developments in the specified areas. Failure to list the sources used in all areas of the portfolio limits marks to a1.</i></p> <p><i>Evidence of searches could include annotated screen shots showing purposeful and useful searches relevant to the task of collecting information for their portfolio. Candidates might then list other searches in table form, listing the information required and the search criteria used. A screen shot of the advanced search front page from "Google" or an equivalent search engine is insufficient to show candidates can use it effectively.</i></p> <p><i>For a3 marks there must be at least some evidence that candidates have attempted to check for accuracy and/or bias by considering the source of the information or by comparing alternative sources. Evidence of the use of an advanced search is insufficient.</i></p> <p><i>Full marks in a2 and a3 should be awarded only when there is evidence of everything listed in the exemplification. If most has been achieved then 4 or 6 marks would be appropriate.</i></p>	

A typical candidate will	Exemplification
b1 Set up a simple database, enter data collected and display results of basic processing. <p style="text-align: right;">0 1 2 3</p>	Candidates will set up a single table database, enter and edit data, sort data and carry out simple searches. They will be able to display the results as tables and using default report formats.
b2 Set up and use a database with related tables to enter and process collected data and display results. <p style="text-align: right;">4 5</p>	Candidates will set up a database with at least two related tables, enter and edit data, sort data and carry out both simple and complex searches. They will be able to produce database reports using data from more than one table.
b3 Use the facilities available in database software to analyse the results of a survey and produce reports. <p style="text-align: right;">6 7</p>	When setting up their relational database and entering data, candidates will create forms for data input. They will apply validation rules for different types of data, e.g. text, currency, date. Candidates will be able to customise the report format, so that database reports produced meet their intended purpose and are appropriate to the target audience.
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>b1 – a simple database set up and some relevant output produced</p> <p>b2 – the database has at least two related tables and searches and sorts have been carried out to obtain useful results</p> <p>b3 – there is a summary report using database output and the relational database has validation and data input forms.</p> <p><i>Teachers should ensure that candidates start their survey with clear aims, objectives or hypotheses so that their survey report has some focus. If there is no evidence of any purposeful sorts or searches then no more than 4 marks can be awarded, regardless of the complexity of the database.</i></p> <p><i>There are no marks for documenting the database but sufficient evidence should be provided to show the use of features, for example, sorting, simple and complex searches, data input forms and the application of validation rules. Printouts should be annotated by the candidate if this is necessary to show what has been done.</i></p> <p><i>Candidates who simply set up a database, without carrying out any searches or sorts, should be awarded 1 mark only.</i></p> <p><i>One to many relationships between tables are required for marks in the middle and top bands. This is not possible unless data is obtained from different sources. For example, if all the data is obtained from a set of questionnaires, it will be most effectively stored in a single table. A common example of data from different sources is a survey amongst users of mobile phones in one table, related to details of phone tariffs from a shop, magazine or the www in another.</i></p> <p><i>For marks in b3 candidates must produce a report analysing the results of their survey. This report could be linked to the report in strand c. The word 'report' here does not refer to the feature of database software that produces formatted output of search/sort results</i></p> <p><i>Candidates may be credited with a mark for producing a coherent report with analysis of results from a single table database, making 4 marks possible from such a database.</i></p>	

A typical candidate will	Exemplification
<p>c1 Set up a simple spreadsheet, enter data collected and display results of basic processing.</p> <p style="text-align: right;">0 1 2 3</p>	<p>Candidates will create a simple spreadsheet and enter textual and numeric data. They will be able to apply suitable cell formats such as currency. They will enter simple arithmetic formulae such as +, -, * and /, using relative cell references. They will be able to replicate a formula in a row or column. Candidates will be able to produce a chart or graph and print this out as well as the spreadsheet.</p>
<p>c2 Set up and use a more complex spreadsheet to enter and process collected data and display results.</p> <p style="text-align: right;">4 5</p>	<p>The spreadsheet created will include features such as a title, suitable column and row headings, arithmetic formulae involving more than one operator and simple functions, e.g. SUM, AVERAGE. Candidates will be able to format cells to match data types and edit the spreadsheet by cutting, copying pasting and moving data between cells, rows and columns and by inserting and deleting rows and columns. They will be able to produce different types of charts and graphs, suitably labelled, e.g. axis titles and legends.</p>
<p>c3 Use the facilities available in spreadsheet software to analyse the results of a survey and produce reports.</p> <p style="text-align: right;">6 7</p>	<p>Candidates will be able to use features such as absolute cell references in their spreadsheets. They will be able to layout and format the spreadsheet to display results accurately and clearly. They will select a specific area to print. They will combine sections of their spreadsheet and charts or graphs obtained from it in a coherent report.</p>
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>c1 – a simple spreadsheet with at least one graph</p> <p>c2 – a reasonably well organised and formatted spreadsheet containing some formulas involving functions (more than just SUM), and more than one type of graph</p> <p>c3 – a summary report containing graphs and figures obtained from a well-organised and formatted spreadsheet containing a variety of formulas.</p> <p><i>The spreadsheet might use data transferred from the database, or it may contain related data collected and entered separately. Again, candidates should start their survey with clear aims, objectives or hypotheses so that their analysis has a focus. Teachers should check that the data collected by candidates lends itself to spreadsheet analysis and will provide useful data for a report.</i></p> <p><i>For 1 mark there must be evidence of data in a spreadsheet, which has been used to create a graph with some obvious meaning. A printout of the spreadsheet showing formulas is needed before more than 1 mark can be considered.</i></p> <p><i>The functions listed in the exemplification are examples only. What is necessary is that there should be evidence of the appropriate use of a range of formulas, including functions (not just SUM) before middle band marks are awarded. For 5 marks the production of different types of graph, suitably labelled, is required.</i></p> <p><i>A spreadsheet making appropriate use of both absolute and relative cell referencing, a range of functions such as lookups, countifs, features such as pivot tables or cross-referenced multiple sheets would be sufficiently complex to consider c3 marks. However, candidates need to produce a coherent report analysing the results of a reasonably complex spreadsheet before these highest marks can be awarded.</i></p> <p><i>Where candidates produce a spreadsheet that is insufficiently complex for top band marks to be considered, they may be credited with a mark for producing a report summarising the analysis of the data.</i></p>	

A typical candidate will	Exemplification
<p>d1 Produce a linear multimedia presentation of two or more pages that includes at least two types of media.</p> <p style="text-align: right;">0 1 2 3 4</p>	<p>As a minimum, candidates will create two pages incorporating two types of media such as text and graphics. The pages will simply follow one after the other. To obtain a higher mark, more pages and/or more types of media may be used. Candidates are likely to find ready-made components, particularly images. They will combine these with their own text to create pages, using suitable backgrounds. They will combine these pages to create the presentation.</p>
<p>d2 Produce an interactive multimedia presentation of several pages that enables the user to take different paths through it.</p> <p style="text-align: right;">5 6 7</p>	<p>Candidates will develop a structure for their presentation and plan navigation routes through it. This may be done using a storyboard or structure diagram. Users will be able to interact with the presentation and select their own route through it using control buttons and hot spots. Candidates should use at least three types of media, such as text, images and sound.</p>
<p>d3 Combine different types of media to produce a comprehensive multimedia presentation, editing the components and the final presentation to produce a high quality product.</p> <p style="text-align: right;">8 9</p>	<p>Candidates will use a variety of media such as text, images, sound, animation and/or video in their presentation. They will create their own media components, as well as find and use existing ones. They will use appropriate software to edit these components as well as the final presentation, so that the final product is of high quality.</p>
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>d1 – a simple presentation with at least two pages, containing at least two media, relevant to a topic within the Unit</p> <p>d2 – clear evidence of interactivity in a more extensive presentation using at least 3 media</p> <p>d3 – a well planned and structured interactive presentation, making appropriate use of text, graphics, sound and animation. At least one non-text element will have been created/edited to make it appropriate for the purpose.</p> <p><i>Candidates must produce a minimum of two pages, including two media, such as text and graphics, before any marks can be awarded. It is not necessary to produce full A4 printouts of every slide or web page; smaller versions are sufficient as long as they are legible.</i></p> <p><i>The range of marks available in the lowest band allows credit to be given to good quality linear presentations. Quality should be judged by the effective use of appropriate styles of text and graphics as well as by the length of the presentation.</i></p> <p><i>Marks above the lowest band should only be awarded where candidates produce an interactive presentation that allows a user to take different routes through it. Candidates need to include a storyboard, structure diagram or clearly annotated printouts that show the possible routes. Simplistic interactivity, consisting only of 'forward' and 'back' buttons or of menu pages with no way of going back to the menus, limits marks to 5. For 7 marks there should be evidence of a significant continuous interactive presentation that allows the user to revisit pages using a variety of routes. It must contain clear evidence of the use of at least 3 of text, graphics, sound and animation. Buttons, hotspots, animation, sound and video are poorly evidenced on paper and need to be highlighted in some way. Where candidates fail to do this, teachers should submit detailed witness statements as evidence.</i></p> <p><i>For d3 marks candidates must produce and edit their own media components. Presentations relying solely on sound and animations provided by the presentation software for slide transition or as clip art do not meet this criterion. Successful work could involve the use of a digital camera and graphics package to take and edit relevant photographs and/or video clips, a microphone to add commentary, and the addition of background music if appropriate. At this level candidates should be able to produce high quality presentations using more advanced software features and combining media from a range of sources.</i></p>	

A typical candidate will	Exemplification
<p>e1 List possible groups and individuals affected by developments in ICT in at least some of the areas identified.</p> <p style="text-align: right;">0 1 2 3</p>	<p>To gain one mark, candidates must identify and provide brief comments on at least two groups or individuals affected by developments in ICT. This must cover at least two of the areas of:</p> <ul style="list-style-type: none"> • business; • working styles and employment opportunities; • personal communication; • community activities; • people with special/particular needs. <p>A higher mark can be awarded if candidates are able to identify more groups or individuals and/or include those affected in more areas.</p>
<p>e2 Explain possible effects on groups and individuals of developments in ICT in most of the areas identified.</p> <p style="text-align: right;">4 5</p>	<p>Candidates must provide explanations for the possible effects on at least three identified groups or individuals of developments in ICT in each of three or four of the areas identified.</p>
<p>e3 Review and assess possible effects on groups and individuals of developments in ICT in all of the areas identified.</p> <p style="text-align: right;">6 7</p>	<p>Candidates must provide a comprehensive review and assessment of the possible effects on at least four identified groups or individuals of developments in ICT in each of the five areas identified.</p>
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>e1 – some groups/individuals affected by developments in ICT are identified e2 – the effects are explained for at least three groups/individuals in at least three areas e3 – a full discussion of effects on at least four groups/individuals covering all areas.</p> <p><i>This strand continues the broad Unit theme of research. Candidates should give specific information found from their research, rather than writing from their general knowledge. The strand may be addressed through the content of the presentation produced for strand d, or through a written report, or a combination of the two. If the content of the presentation is relevant the candidate must ensure the text on the printouts can be read by the moderator.</i></p> <p><i>The groups or individuals required relate to people. This requirement is not met by writing in general about, for example, supermarkets, banks, call centres and ICT help desks, without specific reference to their staff and/or customers. Candidates writing in such general terms without identifying specific groups or individuals are limited to e1. Groups often successfully considered include teenagers, people with specific disabilities and the elderly.</i></p> <p><i>Candidates who fail to satisfy the minimum requirement of commenting on at least two groups or individuals affected by developments in ICT in at least two of the areas cannot be awarded marks.</i></p> <p><i>Middle or higher band marks require fuller explanations as well as coverage of more groups/individuals in more areas. Some centres use a grid to identify groups/individuals covered. This is helpful but the quality and depth of explanation should also be considered when choosing the most appropriate mark band.</i></p> <p><i>There are some on-line and other resources available that give details appropriate to this and the following two strands. Whilst these provide useful starting points, candidates need also to identify their own resources and ensure they consider a wide range of groups and individuals, otherwise they will be limited in their marks for these strands and for strand a.</i></p>	

A typical candidate will	Exemplification
<p>f1 Identify the benefits available from using ICT in at least some of the areas identified.</p> <p style="text-align: right;">0 1 2 3</p>	<p>As a minimum, candidates must identify and provide brief comments on at least one benefit available from using ICT in each of at least two of the areas identified.</p>
<p>f2 Define some of the needs that are met through the use of IT in most of the areas identified and describe the benefits available.</p> <p style="text-align: right;">4 5</p>	<p>Candidates must define, i.e. describe clearly, at least one need that is met through the use of ICT in each of three or four of the areas identified. They must also describe at least two benefits available through the use of ICT in each of these areas.</p>
<p>f3 Analyse and interpret the needs that are met and the benefits available through the use of ICT in all of the areas identified.</p> <p style="text-align: right;">6 7</p>	<p>Candidates must provide a detailed analysis of at least two needs that are met and at least two benefits available through the use of ICT in each of the five areas identified.</p>
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>f1 – brief comments about some advantages f2 – clear descriptions of needs and benefits in at least three areas f3 – full discussions of needs and benefits in each area.</p> <p><i>Unlike the work for strands e and g, descriptions in this strand can be in general terms for each area, without reference to specific groups and individuals. However, candidates may find it easier to consider specific groups/individuals where needs can be identified more clearly.</i></p> <p><i>Candidates who merely identify benefits/advantages without considering needs should be awarded marks in f1.</i></p> <p><i>Meeting a need is defined as satisfying a basic requirement, either personal or corporate. A benefit is an advantage of being able to meet that requirement in a particular way. For example, candidates might write about the advantages of using email as a form of communication. At a higher level they might first give details of the particular needs that are met by email – keeping in touch with families, sending short messages between businesses... and then identify some of the advantages of using email for these purposes.</i></p>	

A typical candidate will	Exemplification
<p>g1 List possible consequences to individuals or groups who have restricted or no access to ICT in at least some of the areas identified.</p> <p style="text-align: right;">0 1 2 3</p>	<p>To gain one mark, candidates must provide brief comments on at least one consequence to groups or individuals who have restricted or no access to ICT. This must cover at least two of the areas of business, working styles and employment opportunities, personal communication, community activities and people with special/particular needs. A higher mark can be awarded if candidates are able to comment on more consequences and/or include those affected in more areas.</p>
<p>g2 Explain possible consequences to individuals or groups who have restricted or no access to ICT in most of the areas identified.</p> <p style="text-align: right;">4 5</p>	<p>Candidates must provide explanations for the possible consequences to groups or individuals who have restricted or no access ICT in each of three or four of the areas identified.</p>
<p>g3 Review and assess possible consequences to individuals or groups who have restricted or no access to ICT in all of the areas identified.</p> <p style="text-align: right;">6</p>	<p>Candidates must provide a comprehensive review and assessment of the consequences to groups or individuals who have restricted or no access to ICT in each of the five areas identified.</p>
<p><i>A broad 'feel' of each mark band could be summarised as:</i></p> <p>g1 – recognition of some effects of little or no access to ICT g2 – explanations of significant consequences in at least three areas g3 – full discussion of significant consequences in all areas.</p> <p><i>The requirements of this strand are frequently misinterpreted by centres as being either general disadvantages of using ICT, or advantages of people with disabilities using ICT. Neither of these approaches meets the requirements.</i></p> <p><i>It is unlikely that marks will be earned in this strand unless candidates are guided to specifically consider the effects on groups and individuals of little or no access to ICT. This could be the same/similar groups/individuals as considered for strand e, or different ones.</i></p> <p><i>Candidates writing in general terms without reference to specific groups or individuals will be limited to g1.</i></p> <p><i>The work of candidates at the lowest level is often limited to statements that those with restricted or no access to ICT don't have the benefits that they have identified in the previous strands. For middle and higher band marks there must be fuller explanations of the consequences of this.</i></p> <p><i>For example, in the area of communications those with no access to computers and the Internet will not have the advantages of email – quick and easy communication with friends and relatives. This type of statement falls into g1. Further explanation that this might result in people becoming more isolated, left out of activities, losing contact with friends over time... is required before middle and higher band marks can be considered.</i></p>	

GCSE in Applied Information and Communication Technology (Double Award)

Selected Teacher Resources

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RESOURCES FOR TEACHING MODULE A

- 6.2.1 Using ICT applications
- 6.2.2 Investigating how ICT is used in organisations
- 6.2.3 Developing business documents
- 6.2.4 File management and standard ways of working

6.2.1 Using ICT Applications

- Induction activities
- practical activities using software
 - word processing
 - word processing - 20 things to find out
 - How to
 - spreadsheet
 - IF statement and testing
 - databases
 - Car Dealer flat file databases
 - Class flat file database
 - Relational database – John Smith owns more than one car
 - Relational versus flat file

Unit 4874

Note: One to Many relationships between tables are required for marks in the middle and top bands

Activity 1: Multi-Media Presentation

Task

Find information about a specific topic and create a presentation, using suitable software. The presentation should be aimed at the rest of the class and present clearly the findings from the investigation.

Key Issues

- Independent research
- Time management and action planning
- Software tools selection
- Meeting deadlines
- Presentation skills
- The audience
- A variety of software skills dependant on the software employed

Introduction

In this activity pupils work in small groups in order to research a specific topic. Each group could present back on the same topic or research and present into different areas. Suggestions for the focus of the presentation are made below:

- What is a responsible ICT user
- How is ICT used in your school?
- What is the Vocational GCSE?

Assessment criteria can be written for this task as this provides a good opportunity for the students to evaluate their success on a specific task. This activity provides an excellent opportunity for students to write their first evaluation using the material provided.

Breakdown of tasks for pupils

1. Using the topic you have been given, make a list of all the places that you can find information from in order to produce your presentation.
2. In your group decide who will find out each part of the information and agree a deadline when you will have collected it all.
3. In your group decide which software program(s) you will use and how your information will be displayed for the audience, (the other members of your class).
4. In your group decide on what needs to be completed in order to finish the presentation, and agree a deadline to have it completed. Remember you will have to practice the presentation before giving it to the rest of the class.
5. Produce the presentation making sure that you keep a record of the problems you had, and the way in which you solved them.
6. Give the presentation to the rest of the class in the lesson.
7. Evaluate how well your group has performed in this task. Use the list of problems and solutions you have completed and discuss the main points of the evaluation in your group.

Activity 2: Page Set-up (Good practice skills)

Task:

Evaluate a handout (teacher to provide example of poorly laid out document) - 'how not to do' and discuss the issues relating to bad practice, demonstrated by the handout.

Key Issues:

- Pagination
 - Automatic
 - Manual (inserting and deleting)
- Headers and Footers
 - Adding authors name (for ownership)
 - Date
 - Filename
- Print Preview

Introduction:

The pupils are issued with an example of a document that illustrates a number of examples of 'bad practice'. They should be encouraged to study the example document. There should then be a teacher led discussion on some of the problems demonstrated by the document; i.e. who printed it, when, what is the file called if they need to amend the document in the future, are the page breaks in the correct place?

The merits of using headers and footers, page breaks and print preview can then be evaluated and discussed.

Teacher led demonstration of skills relating to headers/ footers, page breaks, and using print preview.

Breakdown of tasks for pupils

1. As part of the class discussion exercise the pupils evaluate the 'bad practice' example document.
2. The pupils then use their skills (utilising accompanying help-sheet) to reformat the document to a format that demonstrates 'good practice'.

Activity 3: Obtaining Information

Task:

Create a user guide on how to get text and images from the Internet.

Key Issues:

- Cutting & Pasting
 - Saving resources to file
 - Text
 - Images
 - Copying from the internet
 - Copyright
 - Bibliography
- Screen shots
 - Screen dumps
 - Cropping within paint
- Switching & Copying between software

Introduction:

Pupils are going to produce a document showing good practice of how to copy and store various images and text for use into their own portfolio. They need to show how to cut & paste, copy and file, screen dump and crop (copy into paint and crop).

Breakdown of tasks for pupils

- 1 Produce a labelled screen shot along with instructions of the keys required to cut and paste both images and text into a word/publisher document.
- 2 Produce a labelled screen shot along with instructions of the keys required to copy an image from the internet and save it into a file (called resources) ready for future use.
3. Produce a labelled screen shot along with instructions of the keys required to screen dump an image into word/publisher/paint
 - a. Produce a labelled screen shot of how to crop a screen dump in word/publisher
 - b. Produce a labelled screen shot of how to crop a screen dump in paint.
4. Remember that all images and text have been created by someone else (copyright) if you are going to use their work you must specify where it came from this could include the website address or the name of the author

Using Word - 20 things to find out

Some of these things are not too difficult and you may be able to do already. For some of the others you will have to look hard to find out how to do them.

Write a reminder in the 'notes' column whenever you have to look up how to do something.

When you have found out something new, show someone else what you have found.

Feature	Notes
1. Centre a line or lines.	
2. Make text fully justified, with a straight right-hand margin like the paragraph at the top of this page.	
3. Change the font style and size. Choose a font and size that is clear and easy to read, that you will use for all your written work. Note down that font and size in the next column.	
4. Highlight word(s) using italics, underlining, bold	
5. Change the margins, for the whole document or just a part	
6. Add a picture, move it and change its size. Make text wrap around the picture.	
7. Use Word Art to add text on a curve etc	
8. Spell check - just a word or the whole document. Investigate the thesaurus for finding words with similar meanings.	
9. Alter the space between lines	
10. Alter the scale of the page on the screen so that you can see the whole page	

11. Move and copy a block of text from one part of a document to another.	
12. Put a table into your work	
13. Put borders around text, graphics and/or tables. Add shading inside the border. Change the thickness and pattern of the lines in the border.	
14. Make a numbered list like this one, without having to put the numbers in yourself. Make a bulleted list.	
15. Create a bar chart or pie chart to go into your page	
16. Put your text into two or more columns, either the whole text or just part of it.	
17. Use the Search and Replace function to search for every occurrence of a particular word and replace it with another.	
18. Add headers and footers, including page numbers, to the top of every page in a long document	
19. Sort a list of items into alphabetical order.	

produce Dropped Capitals at the beginning of a paragraph or page.

How to.....

This is a list of features that you may have come across in your work so far.

In Word, create an annotated guide to carrying out these tasks:

- Use Bullet Points
- Use numbered lists
- Insert a picture
- Use the wrap tool
- Create a table
- Merge two cells in a table
- Colour cells in a table
- Format Font
- Undo
- Header and Footer, inc. Page number, etc.
- etc.

Q's

1. What is the difference between the usage of a Word Processor and a Desk Top Publishing package?
2. What do the terms generic and integrated mean?
3. <http://www.bbc.co.uk/schools/gcsebitesize/ict/> read the section on software

The IF Statement and Testing.

In life, we make decisions.

For example:

IF I have more than £7, THEN I will go to the cinema, ELSE I will stay at home.

We can program these decisions into a spreadsheet.

For example:

	A	B	C	D
1	Balance	£ 8.00		
2				
3	=IF(B1>7,"Go to Cinema","Stay at home")			
4				

In cell B1, we have your balance – the amount of money you own.

In cell A3, we have an IF statement which will tell us if we have enough money to go to the cinema.

How does it work?

The IF statement is broken down into three parts, separated by commas.

=IF(*Comparison* Then *do this if it is true* Else *do this if it is false*).

=IF(B1>7 , "Go to Cinema" , "Stay at home")

Comparison

You need to have a comparison to make a decision. In the example above, we are comparing our balance to how much it costs to go to the cinema.

=IF(B1>7

B1 has our balance in it, therefore the comparison is 'is our balance greater than 7?'

Then do this if it is true

If the comparison is true, then do the following. In our example, If our balance is greater than £7 then 'go to Cinema'.

Else do this if false

What happens if our balance is less than £7? What do we want the computer to return (say) then? In our example, if the comparison 'is our balance greater than £7?' is false, then we 'Stay at home'.

The function

=IF(B1>7,"Go to Cinema","Stay at home")

Should now make sense.

Notes:

- Text has quotation marks "" around it, Numbers and cell references do not.
- Don't forget the commas between the three parts of the function.

TASKS.

1. In Excel, recreate the above example.
2. Test your example:
 - a. NORMAL TESTING – Type in a balance of 6 and a balance of 8. Does the IF statement return what you expect it to return?
 - b. EXTREME TESTING – Extreme tests test the limit of what the spreadsheet should accept. Type in balances of 7 and 7.01. Does the IF statement return what you expect it to return?
 - c. ERRONEOUS TESTING – Erroneous tests test the function to see what happens when a wrong answer is entered. Type in balances of ‘Six Pounds’. Does the IF statement return what you expect it to return?
3. In word, create a report called ‘IF FUNCTION’. Using a screen shot, explain the If function you have created, and what it does. Use =IF(Comparison Then do this if it is true Else do this if it is false) to help your explanation.
4. In your report, comment on the need for testing. Explain the three types of test, and the results of the testing you have done. Explain why 7 and 7.01 are examples of extreme testing, and why the results of the erroneous test were surprising.
5. In Excel, Create an IF statement to carry out the following comparison:
IF the weather is sunny, THEN I will go to the beach, ELSE I will go to town.

	A	B
1	Weather	Sunny
2		
3		

Screen shot the if statement and place in your report.

Create a Normal Test and an Erroneous test using the forms below:

NORMAL TEST to test the If statement		
Test Data	Expected Output	Actual Output

ERRONEOUS TEST to test the If statement		
Test Data	Expected Output	Actual Output

6. Create an IF statement to carry out the following comparison:
IF speed > 70, THEN you are going too fast, ELSE you are within the speed limit
 In your report create Normal, Extreme and Erroneous tests.
7. Create an IF statement to carry out the following comparison:
IF Temp > 100 THEN Boiling, ELSE Liquid
 In your report create Normal, Extreme and Erroneous tests.
 For your erroneous test, try –26. If the comparison was about water, then the return is wrong. Why?
8. Nested IF.
 To solve the problem above, where you have three possible answers, you could use a nested IF statement, which is basically an IF statement placed in the else part of the function to give a further two options.
IF Temp > 100 THEN Boiling, ELSE (IF Temp < 0, THEN Frozen, Else Liquid)
 Look carefully at the above function. Follow the logic through using the following temperature values:
 101 would return Boiling
 -20 would return Frozen
 50 would return Liquid.
 Try programming this example, and explain it in your report.

Databases

A database holds information.

This information can be:

- Searched
- Sorted
- Calculated (i.e. Age can be found from Date of Birth).

i.e. Doctors Surgery has on average 10,000 paper records. Fill in the table below to compare the existing system (paper database) with a computer database.

Paper Database	Computer Database
Size: Takes up a whole room that has to be constructed, heated and lit.	
Search Speed: A receptionist can take up to 1 minute to find your record. This costs – An extra receptionist costs an extra £10,000 pa.	
Complex search: To find all asthma sufferers would be almost impossible. A list would have to be created by going through each of the 10,000 records.	
Portability: Paper records can only be sent in the post. This takes time: 1 day for England, x days for the rest of the world. Could be a problem if information is needed quickly, i.e. during an emergency.	

Why do doctors still use paper records?

HINTS:

Cost / Benefit Analysis – We can see the benefits from above, but what about costs? NHS stands for NATIONAL Health Service. How much would it cost to build a national database? Would it work? What would happen if it didn't work?

Car Dealer Flat File (one Table) Database.

If this is your first attempt at an Access database, your teacher will guide you through the tasks.

Setting up a Report

In Word, set up a report for the car dealer database task below. Save the blank report. The header should contain your name, 'Car dealer Database' title and your teacher's name. The footer should contain the page number, the filename and path, and the date.

Write an introduction explaining that you are creating a database to hold car details for a car dealer. Explain why it would be an advantage to the car dealer to have data stored on a computer database.

Setting Up the file

Load Microsoft Access. Choose the Blank Access Database option. You will be asked to save your database. Call your database 'Cardealer'.

Creating a blank Table

In 'Tables' create a new table in Design View, using the following field names.

Field	Data Type	Notes
MAKE	Text	Length 2
MODEL	Text	Length 20
YEAR	Number	Integer
REGISTRATION	Text	Key Field, Length 7
COLOUR	Text	Length 15
NUMBER OF DOORS	Number	Integer
PRICE	Number	Currency, 0 decimal places.

Add the following validation rules:

FIELD	Validation rule
YEAR	Between 1995 and 2005
NUMBER OF DOORS	Between 2 and 5
PRICE	Between 3000 and 15000

Note - the valid ranges for year and price have been decided by consulting the car dealer about the range of car stocked.

Take a screenshot of the table design and place it into your report. Explain what you have done. Explain why the Registration field is the Key field.

Entering Test Data

Enter the following data using the following code letters for information in the MAKE field:

CT CITROEN
MB MERCEDES BENZ
FD FORD

MAKE	MODEL	YEAR	REGISTRATION	COLOUR	NUMBER OF DOORS	PRICE £
MERCEDES BENZ	C180	2004	YK04VFM	RED	4	16799
MERCEDES BENZ	C180	2002	NY52HTY	SILVER	4	13299
MERCEDES BENZ	A170	2003	PB53GLK	SILVER	5	11599
CITROEN	XSARA	2004	HY54WVY	SILVER	5	11099
FORD	GALAXY	2004	OV04GWV	GREEN	5	10999
FORD	FOCUS	2004	KP04TzM	SILVER	5	9599
FORD	FOCUS	2003	FE53UYZ	SILVER	5	9299
MERCEDES BENZ	A140	2003	EJ53UDL	BLACK	5	8799
MERCEDES BENZ	A140	2003	RK53DDC	SILVER	5	8799
FORD	FOCUS	2004	ML53UYD	SILVER	4	8299
FORD	FIESTA	2003	XY53LTN	SILVER	5	7999
FORD	FIESTA	2003	JE53VTN	RED	5	7899
CITROEN	XSARA	2003	LF53WZJ	BLACK	5	7799
FORD	FIESTA	2004	DN04FAP	BLUE	5	6999
FORD	FUSION	2003	DS53VTE	SILVER	5	6899
CITROEN	C2	2004	UN54ABA	RED	3	6799
FORD	FUSION	2003	BF03KNF	SILVER	5	6399
CITROEN	C3	2003	KA53UAW	BLUE	5	6199
CITROEN	BERLINGO	2001	RW51KPO	BLUE	5	5699
CITROEN	C3	2002	GY52XDB	SILVER	5	5699
CITROEN	SAXO	2001	UE02MFT	SILVER	3	4499

Copy and paste the completed table into your report. Explain what you have done. Explain why it is a good idea to use codes for the Make field.

Correcting Errors

Some errors have been found with the data entered:

a The CITROEN C3, GY52XDB, colour should be YELLOW not SILVER.

b The price of the FORD FIESTA, DN04FAP is £6799 not £6999.

Make the necessary changes.

Copy and paste the altered table into your report. Using the Highlighter in Word, Highlight your changes. Explain what you have done.

Deleting and Adding Records

The CITROEN BERLINGO has been sold. Delete all details for this car from the database.

A new car has arrived at the garage it is a FIVE DOOR, MERCEDES BENZ C200, 2003 registered LM53VUG, it is BLACK and the price is £16599.

Add this record to the file.

Copy and paste the altered table into your report. Using the Highlighter in Word, highlight your changes. Explain what you have done.

Sorting on one Field

Sort the file into ascending order by YEAR.

SORT	
Year	Ascending

Copy and paste the altered table into your report. Explain what you have done using the diagram above.

Sorting on Multiple Fields

Create a Query to sort the file into ascending order of MAKE followed by descending order of PRICE. Show all the fields

SORT	
FOLLOWED BY	
List all fields	

Save the Query with an appropriate name, then run it.

Copy and paste the sorted records into your report. Take a screenshot of the query design and place it into your report. Explain what you have done by completing the diagram above.

Simple Search (One Field)

Create a query to search the file for all cars which were registered in 2003 or later. Show all fields.

SEARCH	
FIELD	CRITERIA
Year	>=2003
List all fields	

Note: Criteria start with a condition such as =,<,>,<=,>=. If you are searching a text field, you put the value in ". I.e. Model = "SAXO" If you don't put a condition, Access assumes you mean =.

Save the Query with an appropriate name, then run it.

Copy and paste the selected records into your report. Take a screenshot of the query design and place it into your report. Explain what you have done using the completed diagram above.

Complex Search (Multiple Fields)

Create a query to find all the records for FORD cars which cost more than £7000. Show only the information for MAKE, MODEL, REGISTRATION and PRICE fields.

SEARCH	
FIELD	CRITERIA
AND	
LIST	Make, Model, Registration, Price

Copy and paste the selected records into your report. Take a screenshot of the query design and place it into your report. Explain what you have done by completing the diagram above.

Search and Sort

Create a query to find all cars that cost £10000 or less. Sort them into Price descending order. Show all fields.

SEARCH	
FIELD	CRITERIA
SORT	
LIST	ALL FIELDS

Copy and paste the selected records into your report. Take a screenshot of the query design and place it into your report. Explain what you have done using the completed diagram above.

Adding a Sold Field

The owner of the garage would like to amend the database to include the following field:

Field	Data Type	Notes
SOLD	Boolean (Yes/No)	Yes = sold /No = not sold

Alter your Table design accordingly.

The following cars have been sold:

- HY54WVY
- RK53DDC
- DN04FAP
- NY52HTY

Alter your records accordingly.

Copy and paste the altered table into your report. Using the Highlighter in Word, Highlight your changes. Explain what you have done.

Complex Search using AND

Create a query to list all Mercedes Benz cars that have not been sold. Show just the model, registration number and price.

SEARCH	
FIELD	CRITERIA
AND	
LIST	Model, Registration, Price

Copy and paste the selected records into your report. Take a screenshot of the query design and place it into your report. Explain what you have done using the completed diagram above.

Complex Search using AND and OR

Create a query to list all Citroen or Ford cars that have not been sold. Show just the model, registration number, price and sold fields.

SEARCH	
FIELD	CRITERIA
OR	
AND	
LIST	Model, Registration, Price, Sold

Check that the query has selected the correct records. If not, then go back to the design view of your query and try to work out what has happened and what you need to do to put the query right.

Copy and paste the selected records into your report. Take a screenshot of the query design and place it into your report. Explain what you have done using the completed diagram above. If you had to amend your query to get the right result, write this up too, explaining the alteration you had to make and why you had to make it.

Print your report.

Class Flat File Database

You need to create a database

The database will need to hold information on students who have paid for a school trip. A typical record may contain:

Name:	A. Smith
Class:	8G
Amount Paid:	£9
Consent Given by Parents:	Yes
Telephone Number	0121 387 4456

The total due is £9. Students may have paid £0, £4.50 or the full £9.

1. Create the database in Access. Note that 'Name' is not a good field name. You can break it down further, as you can 'class' if you really think about it. You will also need a key field.
2. Add test data – 10 students in 8Y, and 10 students in 8T. 12 students have paid the full £9, 6 students £4.50 and 2 students have not paid anything yet. 14 parents have signed the consent form.
3. The 8Y Form Tutor needs a list of all students who have paid the full amount in his class. Create a report with just these records.
4. The 8T Form Tutor needs a list of all students who have not paid the full amount. Create a report with just these records.
5. The head of year needs a record of all the students whose parents have not yet given consent, in ascending alphabetical order of surname, so they can be telephoned. Create a report with just these records, showing name, class and telephone number.

John Smith owns more than one car Relational Database.

This project uses two tables to stop data redundancy. It is an example of a relational database.

Introduction

A small garage carries out car repairs and servicing. The garage needs to store details of its customers and the cars it owns. You are going to set up a database for this garage, storing customer details and car details in two linked databases.

In Word, set up a report for the garage database task below. Save the blank report. The header should contain your name, 'Garage Relational Database' title and your teacher's name. The footer should contain the page number, the filename and path, and the date.

Write an introduction explaining that you are creating a database to hold details of cars and customers for a car dealer.

Data Dictionary

Copy and complete the following DATA DICTIONARY into your Word report, showing the two tables that are needed. Identify the Key Fields, and the Foreign Key Fields.

CUSTOMER TABLE

Field	Data Type	Length / Notes
Customer ID		
Title		
First name		
Surname		
Address line 1		
Address line 2		
Town		
County		
Post code		
Telephone number		

CAR TABLE

Field	Data Type	Length / Notes
Make		
Model		
Registration Number		
Colour		
Customer ID		
Date last Serviced	Date/Time	Short Date

Open Access

Load the Microsoft Access application and create a new database called 'Garage'.

Tables and Relationships

Create the Tables **Customer** and **Car** in Access, following the plan in your data dictionary. In the CAR table, use the Lookup Wizard to link the CAR.Customer_id to the CUSTOMER.Customer_id.

Go to the 'Relationships' View, and check that your two tables are visible, with a one to many relationship between CUSTOMER.Customer_id and CAR.Customer_id.

Take a screen shot of the relationships, and paste it into your report. In your report explain that **one** customer can have **many** cars. In your report describe how you linked the two tables together using the Lookup Wizard.

Forms

From Forms, select 'Create form using a Wizard' and create a form to enter data into the Customer table.

Create another form for the Car table.

In your report, paste screen shots of the Customer and Car forms you have created.

Test Data

Using the customer form, add five customers - two of whom live in Sutton Coldfield, three of whom live in Erdington.

Using the car form, add 10 Cars. Some Cars should be Fords and Rovers. The Date last serviced should be between 0 and 12 months ago. Some customers should have more than one car.

In your report, copy and paste the Car and the Customer data in **Table view**.

In your report, describe how the pull down list in the Car form was used to give a car an owner. Describe how by picking a customer from a pull down list, you did not have to type in the data twice, thus saving DATA REDUNDANCY.

Putting The Data Together

Under Queries, go to 'Create Query in Design View'. Add both tables, then add the following fields:

Customer id, Title, First name, Surname, Make, Model, Registration Number

Save the Query as 'Customers all' and run it. Note that the data that was entered into two separate tables is now put together.

Copy the records from the query into your report, and explain that a query can be used to put data from different tables together.

Parameter Query - Asking A Question

Perhaps you want the details for just one customer. You can get the computer to select one customer by using a parameter query.

Copy and paste the 'Customers all' query you have just created. Rename it 'Ask for Customer'.

SEARCH	
FIELD	CRITERIA
Customer ID	Parameter query - [Enter customer id]

Open it in design view, and under the Field 'Customer id' in the criteria box add

[Enter customer id]

The square brackets allows you to enter the customer id you want, then filters the database for the correct customer records.

Run your query. It should ask you for a customer ID. Enter an appropriate one to see that customer's record.

In your report, add screen shots of the query you have just created, the question dialogue box asking you to 'Enter Customer id' and copy and paste the results of the query.

In your report, explain what a parameter query does, and why it is very useful in databases.

Parameter Query - Town You Live In

Create a query that lists all of the Customer table fields, asks the user to enter a town, then lists only those customers who live in that town.

SEARCH	
FIELD	CRITERIA
	Parameter Query -

Copy and paste the selected records into your report. Take a screenshot of the query design and place it into your report. Explain what you have done using the completed diagram above.

Search and Sort, Report View

Create a query to find all customers with Ford or Rover Cars that are due a service in the next two months. Sort them into Descending order of Date

SEARCH	
FIELD	CRITERIA
OR	
AND	
SORT	

In Reports, create an Access report from this query. Reports are used to create printed documents.

OPTIONAL - Amend the Access report in design view to include your name.

Print the Access report.

Explain what you have done to create the Access report, and give some benefits of using reports in this way.



Print out your completed report from Word.

Relational v Flat file

Relational databases stop you having to type in data more than once.

Flat databases only have one table, so you often end up repeating yourself.

Consider a Library database – One Borrower can borrow many books at one time.

A FLAT FILE database solution would be:

BOOKS BORROWED

Accession number

Title

Author

Borrower id

First name

Surname

Registration

Date Borrowed

Number of days to borrow for?

For each book borrowed, the Borrower data has to be entered again and again and again.....
Spreadsheet software can be used for Flat file databases - each row would hold one record.

A RELATIONAL solution would be to split the above table two or more tables, with each one being about a separate entity (or 'thing').

Borrower details such as name and class can be typed in once in one table. Books can be typed in once into another table. If a book is borrowed, a link is made between the Borrower and book.

BORROWER

Borrower id

First name

Surname

Registration

BOOK

Accession number

Title

Author

Borrower id

Date Borrowed

Number of days to borrow for?

In the BOOK table, each book in the library has a unique Accession number, which is called the **KEY FIELD**. This is guaranteed to be different for each book. Title and Author is also filled in.

Until the book is borrowed, the Borrower id, date borrowed and Number of days to borrow for are left blank, indicating that the book has not been borrowed.

When the book is borrowed, these details are filled in. When it is returned, these details are deleted.

To link a borrower to a particular book, we fill in the Borrower id in the BOOK table. Because this is a key field in the BORROWER table, and its made its way into the BOOK table as a link, we call it the **FOREIGN KEY**.

Even if the borrower borrows 20 books, his/her details (name and class) are only ever entered once. If we only ever type in data once, we do not have a problem with **DATA REPETITION** (repeating yourself, sometimes called data redundancy) or **DATA CONSISTENCY** (data entry errors causing inaccuracies in some of the data – i.e. a borrower whose name is 'Poxon' might be entered in one record as POXON, in another as POXEN).

Task:

Answer the following questions:

1. Using the example above, define a Flat file database (hint – highlights in blue)
2. Using the example above, define a relational database (hint – highlights in yellow)
3. What are the advantages of a relational database over a flat file database?
4. What is a key field - why and what makes them important?
5. What is a foreign key and what is its purpose?
6. Copy out the Library example below:
7. Draw an arrow to show how the two tables will be linked.

Flat file solution -**BOOKS BORROWED**

Accession number

Title

Author

Borrower id

First name

Surname

Registration

Date Borrowed

Number of days to borrow for

Relational solution:**BORROWER**

Borrower id

First name

Surname

Registration

BOOK

Accession number

Title

Author

Borrower id

Date Borrowed

Number of days to borrow for

-
- 6.2.2 Investigating how ICT is used in organisations**
 - 6.2.3 Developing business documents**
 - 6.2.4 File management and standard ways of working**
-

Scheme of work

This scheme of work is included as one example of what one Centre has done and it may be useful as a starting point but there may be other ways to deliver the Teaching Module.

The scheme of work on the following pages covers a term and is used by the school to cover 6.2.2, 6.2.3 and 6.2.4 with two teachers, one taking 6.2.2 and the other, with more time, taking 6.2.3 and 6.2.4.

Some of the work, and resources, move into 7.2.1 (How and why organisations use ICT).

Topic (from syllabus)	Lesson Content (coverage of syllabus)	Possible T/Learning Approaches	Differentiation	Opportunities for use of ICT/Literacy	Common Homework
<p><u>6.2.2</u></p> <p>✓ <i>Investigating how ICT is used in Business Organisations</i></p>	<ul style="list-style-type: none"> Introductory lesson to the impact of ICT on businesses: gentle intro into a variety of industries and how ICT has transformed them. 	<p>Teacher led introduction - could put students into groups and give them 2/3 industries (use of flipchart paper etc) and encourage them to "thought shower" how ICT is used eg, a bookshop, a library and so on. Group feedback and discussion.</p> <p>Could also ask students to log on to several different web sites and find out how ICT is encouraging businesses to develop/transform - guided worksheet. Teacher plenary.</p>	<p>Through group work and teacher facilitation.</p> <p>by task here</p>	<p>use of web sites here is possible.</p>	<p>very 1st lesson - leave homework until next week.</p>

<p><u>6.2.3</u></p> <p>✓ Developing Business Documents</p>	<ul style="list-style-type: none"> • Introductory lesson to business documents – students will be largely unfamiliar with these. • Students to peruse in groups given documents and to comment on what the document is, its purpose and its target audience, making comment on its effectiveness 	<p>Teacher led intro – could put template of letter on OHP and use Q/A to discuss its layout etc or have 2 letters on a worksheets and in groups students to identify the “good design points” and “bad design points” – group feedback.</p> <p>Students to be given different documents in 5 groups of 3 eg, an invoice, a flyer, a memo, a web site URL, a fax, a powerpoint show on the Business Studies web site. Issue each group with a worksheet to identify audience and so on. Ensure that links made to TJO work re: images, clipart etc.</p>	<p>group work here on the documents and teacher facilitation.</p>	<p>synthesising data and commenting on business documents</p> <p>use of web site URL and power point on Business web page.</p>	<p>students to collect one business document for next weeks lesson – document to be pasted on to A3 paper and a report beside it on its effectiveness – individual work!!</p>
<p><u>6.2.2</u></p> <p>✓ <i>Investigating how ICT is used in Business Organisations</i></p>	<ul style="list-style-type: none"> • Linking to school office visit by TJO. • discussion on how the use of ICT benefits the school • link to a small case study on use of ICT within a travel agent. 	<p>Q/A here to link to TJO visit to the school office. Supplemented through mini-worksheet on “School problems – What is the ICT solution?”</p> <p>Case study (eg, Times Ed, or use travel brochure and set scene and encourage discussion around given questions)</p>	<p>by depth of the scenario or alter the case study to stretch more able and meet needs of less able.</p>	<p>Case study work here and use of specialist ICT terms.</p>	<p>A worksheet based around a given scenario involving use of ICT.</p>

Topic (from syllabus)	Lesson Content (coverage of syllabus)	Possible T/Learning Approaches	Differentiation	Opportunities for use of ICT/Literacy	Common Homework
<p><u>6.2.3</u></p> <p>✓ Developing Business Documents</p>	<ul style="list-style-type: none"> writing style and tone practical work here to consolidate TJO presentation of info and business document. developing practice for Unit 2 portfolio 	<p>Students to be given a scenario regarding a business situation. They have to choose the most appropriate document eg a letter and then prepare a letter (using the template given in Week 1) and data in scenario incorporating TJO's input via 6.2.1.</p> <p>Teacher circulating and advising on output.</p>	<p>through nature of the scenario given and teacher input.</p>	<p>Preparation of formal business document (could be displayed) and word processing.</p>	<p>Students to revise previous work for mini test next week!</p>
<p><u>6.2.2</u></p> <p>✓ <i>Investigating how ICT is used in Business Organisations</i></p>	<ul style="list-style-type: none"> mini test Relate to RSA visit Work based case study from Times Ed Case Studies. 	<p>Teacher led mini-test eg, name the business document that.... state 3 formatting methods allowed by Word..</p> <p>Times Ed Case study or newspaper articles involving ICT for each group, some in service based and some in manufacturing. Preparation of discussion questions – gently relate to some key terms eg, CAD, graphic software ..</p>	<p>mini test here – some higher v lower order questions.</p> <p>Group composition here – onus is on discussion and learning from each other. Teacher to facilitate discussion – Groups to feedback – could use OHP.</p>	<p>use of newspaper, case study to read and synthesise – speaking during presentation.</p>	<p>Students now have to source 3 separate business documents – could be anything – MUST be different and MUST contain colours and images. These will be used in next week's lesson!! SHA remember some back ups!!</p>

<p><u>6.2.2</u></p> <p>✓ <i>Investigating how ICT is used in Business Organisations</i></p>	<ul style="list-style-type: none"> • Relate here to Accountancy office visit – software used, purposes and effect. 	<p>Prepared worksheet similar to exam question (needs redrafting) to test depth of understanding on use of software in Accountancy firm – also use this as an intro into exam technique and how to explain.</p> <p>Further scenario based work.</p>	<p>Depth of worksheet – encourage expression and scaffolds used to develop exam technique – staged worksheet.</p>	<p>Scaffolds to develop exam technique.</p>	<p>Formal worksheet to consolidate exam technique input.</p>
<p><u>6.2.3</u></p> <p>✓ Developing Business Documents</p>	<ul style="list-style-type: none"> • presentation style and tone • link to TJO work on 6.2.1 – presentation and WP software. 	<p>Class activity based on the 3 documents brought to the lesson – discuss purpose, target, style and tone. Focus on presentation style – what the features, are they appropriate and so on.</p> <p>ICT based activity using presentation software – prepare a flyer etc using colour, images and so on.</p>	<p>Use of Q/A – level of worksheet to focus on the 3 documents.</p> <p>Level and ability of students will dictate complexity of flyer etc.</p>	<p>Power point, word.</p>	<p>If not finished – to complete flyer etc for display in the room.</p>

Topic (from syllabus)	Lesson Content (coverage of syllabus)	Possible T/Learning Approaches	Differentiation	Opportunities for use of ICT/Literacy	Common Homework
<p><u>6.2.3</u></p> <p>✓ Developing Business Documents</p>	<ul style="list-style-type: none"> Accuracy, clarity and consistency 	<p>A nice proof reading exercise – students to call up a saved document not only with spelling but with unclear expression, punctuation and so on. How many can you find?</p> <p>Students to then alter the above document to ensure it is accurate, clear and consistent.</p> <p>Discuss what a house style is and how it aims to achieve, A,C and C!!</p>	<p>Use of software facilities and students can print off a copy for those with difficulty reading from screen. Easier version to be used if needed.</p> <p>Examples of house style documents to be used to ensure understanding.</p>	<p>Very literate here!! Use of spell and grammar checks</p>	<p>Business document, work involving documents.</p>

<p><u>6.2.3</u></p> <p>✓ Developing Business Documents</p> <p><u>6.2.4</u></p> <p>File Management and Standard Ways of working</p>	<ul style="list-style-type: none"> link to TJO work here re: students to prepare an invoice in Excel – look at a variety of examples, think of layout. Must incorporate formulae from 6.2.1. Students to make up their own scenario eg a music shop invoice to help gauge their own interest Students to prepare a fax template Students to ensure all work is saved appropriately named and in same file Prepare a back up file 	<p>Very much a student owned lesson – board work at beginning eg, a prepared invoice template (blank) or Q/A “What should be in an invoice”. Give students 2/3 egs to look at.</p> <p>Individual work here and teacher to facilitate.</p> <p>Discuss need for filenames, back up and so on. Demonstration if needed on preparing a back up folder. Observe all student folders.</p>	<p>a structured task can be prepared for those who need to follow – emphasis on being creative and following the principles:</p> <p>purpose; target; style/tone etc from the criterion.</p> <p>Demonstration if needed.</p>	<p>Must involve Excel for invoice and word for fax.</p>	<p>A crossword of ICT terms!!</p>
<p><u>6.2.2</u></p> <p>✓ <i>Investigating how ICT is used in Business Organisations</i></p>	<ul style="list-style-type: none"> Relate here to presentation and visit. Case study based work this lesson on the organisation 	<p>This could be based around preparing a mini-presentation on given outcomes eg, How does BOC ... What are the benefits? Students given opportunity for discussions and then group work on the presentation.</p>	<p>Group based work here and teacher facilitation.</p>	<p>Student choice – power point?</p>	<p>Continued business document work</p>

Topic (from syllabus)	Lesson Content (coverage of syllabus)	Possible T/Learning Approaches	Differentiation	Opportunities for use of ICT/Literacy	Common Homework
<p><u>6.2.4</u></p> <p>✓ File Management and Standard Ways of working</p>	<ul style="list-style-type: none"> Working Safely (posture, ventilation, health and safety etc - see specification Crossword or word search to consolidate learning. methods of keeping data secure preventing data loss DPA 	<p>Use leaflets from organisations to teach on health and safety. Issue poster with health issues - students to identify and discuss remedies.</p> <p>Poster on posture - issue and discuss with students.</p> <p>Teacher led discussion and Q/A on how businesses can keep data secure eg, use clip art ie, saving against fire and so on.</p> <p>Interactive worksheet on the DPA web site.</p>	<p>teacher assistance here - a nice friendly lesson.</p>	<p>ICT health and safety issues.</p> <p>DPA web site.</p>	<p>Some consolidation homework on all content so far</p>
<p><u>6.2.2</u></p> <p>✓ <i>Investigating how ICT is used in Business Organisations</i></p>	<ul style="list-style-type: none"> Further work here on BOC visit or newspaper office visit. Scenario based work eg, architects office or manufacturer. 	<p>Very much dependent on content of the visits - emphasis is on how the ICT is used and its benefits. Feed in again to exam technique.</p> <p>Use of mini case scenarios to solicit quick answers and one developed answer.</p>	<p>structured worksheet and one question to stretch all students, involving extended writing.</p>	<p>Discussions using specialist terms.</p> <p>scaffolds used to aid in exam technique.</p>	<p>Formal worksheet.</p>

<p><u>6.2.3</u></p> <p>✓ Developing Business Documents</p>	<ul style="list-style-type: none"> • Other business documents eg, database reports, a financial plan eg, looking at final accounts of a business, web sites with data capture forms. • Further practice 	<p>Students to research other web sites eg, those allowing orders to be placed (need to be supervised).</p> <p>Further document practice to consolidate learning.</p>	<p>Teacher input and level of practice task.</p>	<p>Use of web sites.</p>	<p>Formal worksheet.</p>
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Resources referred to in Scheme of Work

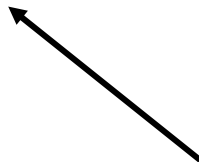
Welcome to the world of ICT - an introduction

ICT has a huge impact not only our working lives but also our social lives. ICT is all around us. You may not see it but it affects you when you go shopping, it helps book holidays or cinema tickets. It even helps organise meals in hospitals!!

You are doing an Applied GCSE in ICT and you really need to have a very thorough knowledge of how and why ICT is used in businesses.

Think of all the different ways that 2 industries use ICT. Complete the following "thought showers". I have completed one of the arrows for you.

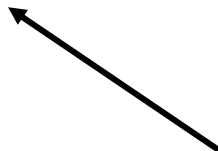
checking flight times



ICT in the airline industry



using bar codes
at the checkouts



ICT in a supermarket



Now some research - Work in small groups and then log on to:

www.tesco.co.uk or www.britishairways.co.uk or www.jmc.co.uk or www.uci.co.uk

Look through the web site and then answer the following questions:



1 What facilities does the web site allow you to use or perform? List 2/3.

.....

2 State 2 **benefits to the company** through creating the web site for customers.

i)

ii)

3 State 2 **benefits to the customer** from being able to use the company web site.

i)

ii)

4 Name 2 airline companies that sell most of their tickets on-line.

.....

5 What do you think of the web site? I identify some strong and weak points.

Strong points

Weaker points

_____	_____
_____	_____
_____	_____
_____	_____

6 Companies eg, esure.com and amazon.co.uk only sell goods and services over the internet. Why do you think that more people are prepared to shop on-line?

i)

ii)

Table 1 - Looking at the wider impact of ICT on different industries:

<u>Business name</u>	<u>Give 2 examples of how ICT is used within the business</u>
Tesco	1 2
Lunn Poly	1 2
Virgin Cinemas	1 2
Broadfield Library	1 2
Elephant.co.uk (insurance company)	1 2
Easy Jet	1 2
Lloyds TSB Bank plc	1 2
Ford (car manufacturing)	1 2

During the next few months you will go on different visits to businesses to investigate how ICT is used to help run the business more profitably. The purpose of today's lesson is to give you an introduction to the many ways that firms use ICT.

Lastly - 2 key terms for the day:

C _____

A _____

D _____



&

C _____

A _____

M _____



YEAR 10 APPLIED ICT - ICT WITHIN THE SCHOOL OFFICE

You visited the school office 2 weeks ago, so what did you learn? I would like you to complete the following questions based on your visit.

Please try to write in sentences when asked!!

1 Explain TWO ways that the school office uses ICT.

i _____

ii _____

2 I have listed below 3 different pieces of software. Below each one state 2 different ways that the school is likely to use it.

Word-Processing

Spreadsheets

Databases

3 What benefits are there for the school to keep details of pupils on a database?

4 The school uses ICT to process the registers taken by form tutors.

i) What is the benefit from using ICT to process the register? _____

ii) Why do you think form tutors have to shade the "lozenges" on the registration form? _____



a lozenge is the area that needs to be shaded using a pencil/black pen

5	[0] [10] [20] [30] [40] [50] [60] [70] [80] [90] [100] [200]
A	[0] [1] [2] [3] [4] [5] [6] [7] [8] [9] [A] [N5]
20	[0] [10] [20] [30] [40] [50] [60] [70] [80] [90] [100] [200]
	[0] [1] [2] [3] [4] [5] [6] [7] [8] [9] [A] [N5]

- iii) The registration form is then scanned by a special piece of computer hardware. This is called:

O _ _ i _ _ l Ma _ _ Re _ _ gn _ _ io _ . (OMR)

Other examples of using this includes the national lottery (Lotto).

- 5) Our school now uses video conferencing to teach some subjects to students. This is where students will actually sit in a classroom at our school but will be taught by another teacher in another school

or

a teacher from the school will teach their own class but students from another school will be able to watch and take part in the same lesson.

Video-conferencing involves using communication technology.

- i) What are the benefits to the school of using video-conferencing?

- ii) Companies such as BT use video-conferencing. This means instead of business executives having to fly around the world, they can have a "virtual" meeting sitting in their own office but they will be able to see and hear other executives using the new technology.

What do you think are the 2 main benefits to businesses from using video-conferencing?

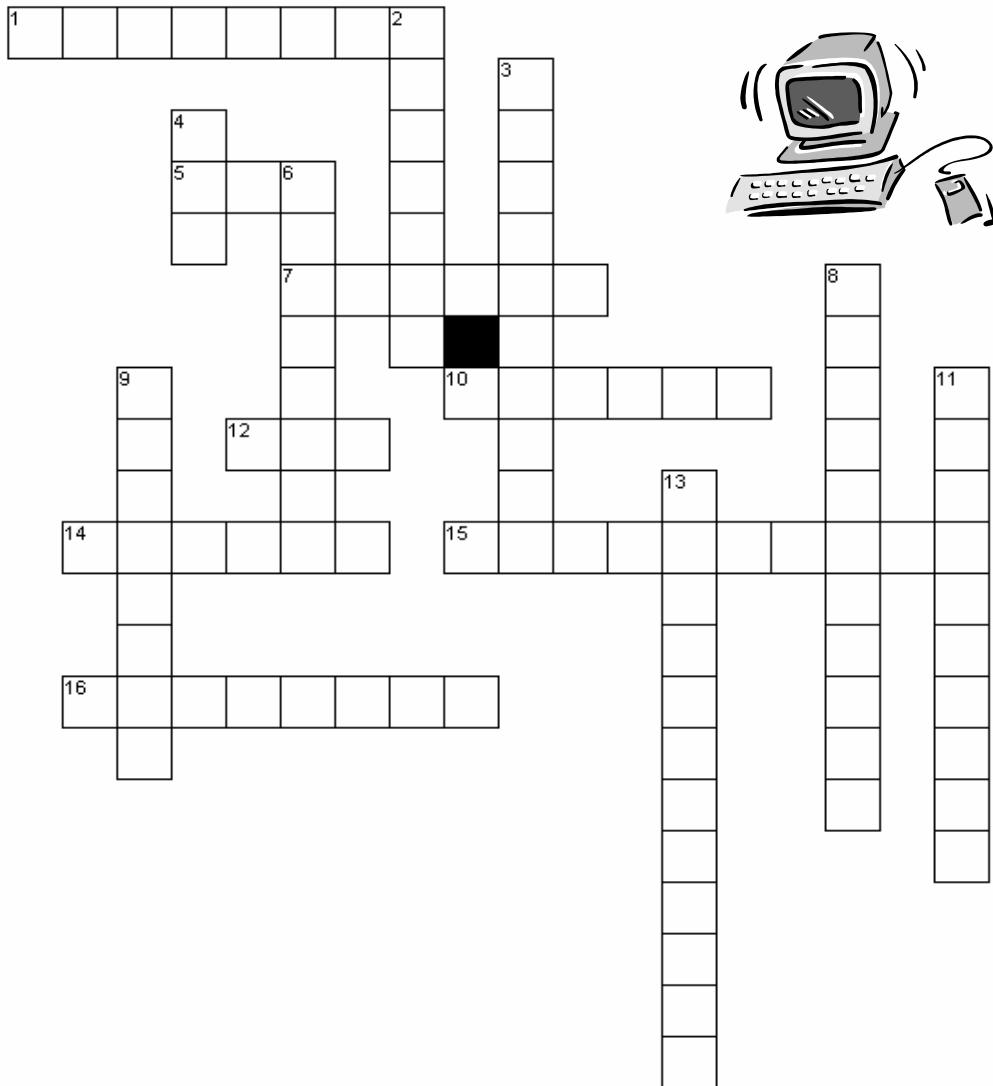
- i) _____
- ii) _____

WORDSEARCH

D	A	T	A	B	A	S	E	R	J	K	J	E	X	R
X	Z	J	Q	A	W	R	P	I	W	U	Q	M	E	W
R	Q	D	V	R	Y	O	K	B	O	U	L	A	Q	I
I	G	V	S	C	A	N	N	E	R	E	L	I	C	T
N	G	J	W	O	F	L	U	O	P	T	L	N	E	I
T	Z	O	J	D	Q	I	Y	O	I	H	D	F	M	N
E	Q	U	E	E	V	N	H	M	F	A	A	R	X	P
R	E	P	R	B	K	E	E	W	E	K	H	A	D	U
N	C	F	L	E	G	N	M	E	X	C	A	M	Y	T
E	E	Z	X	A	Y	L	V	B	V	L	R	E	X	D
T	E	X	C	E	L	P	Y	S	S	D	D	M	R	E
G	W	I	D	X	I	M	F	I	R	L	W	U	O	V
P	D	W	B	P	C	W	P	T	J	H	A	Y	C	I
F	S	O	F	T	W	A	R	E	C	P	R	G	E	C
R	U	S	T	I	C	K	Y	P	A	G	E	S	C	E

There are 14 terms related to ICT in the above word search. Can you find them all?

So you know your ICT?



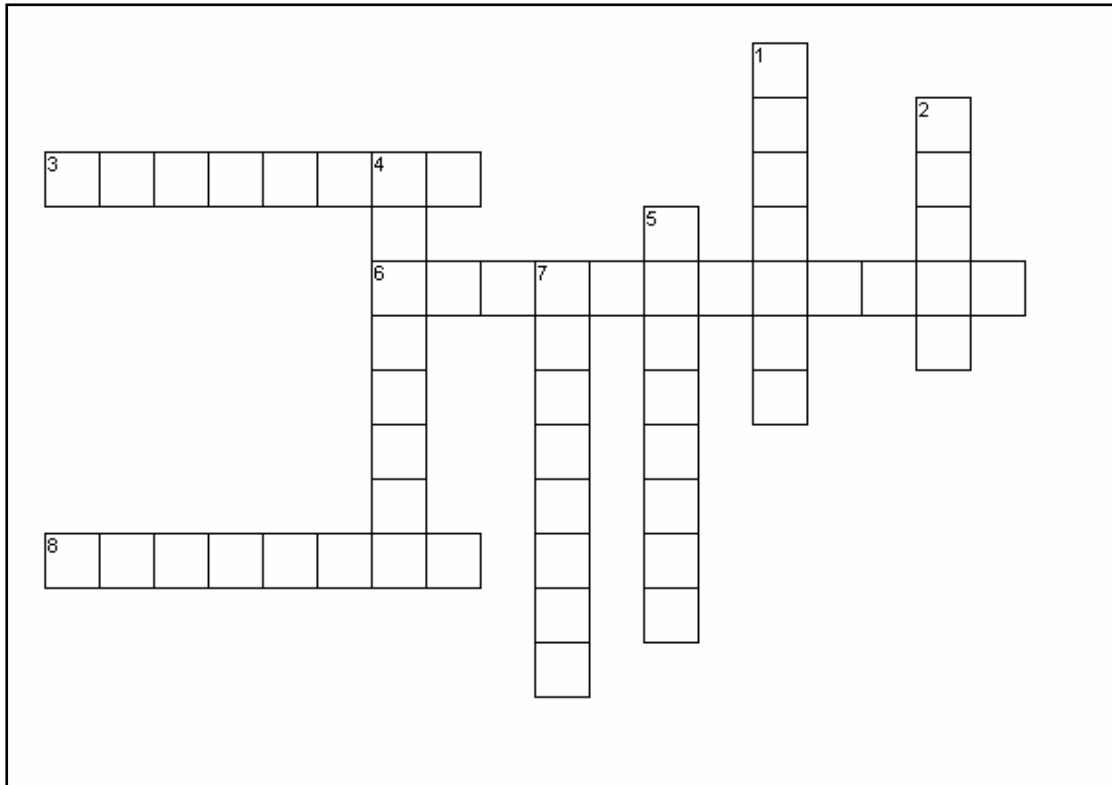
Across

1. - Adding these usually improve the appearance of documents.
5. - Using ICT to help the design process.
7. _____ audience - These are the people that the documents are aimed at.
10. - These web pages need glue?
12. - A document that is sent via a machine through a telephone line?
14. - This business document has a formal layout and a special heading.
15. - A brief document that stays inside the business?
16. - These systems automatically update data that is used eg, booking air travel.

Down

2. - Examples of these involve using ICT to control temperatures and traffic?
3. - This is where businesses have a standard format for all their documents.
4. - Shorthand for I nformation C ommunications T echnology.
6. - An electronic filing cabinet.
8. - Software that is used for graphs and calculations.
9. - Websites live here?
11. - Changing the font, colours and size of text is an example of this.
13. - The process of checking spelling and layout.

ICT at the travel agents



Across

3. This word describes the letters and other documents that the agency will use. Are they all the same? (Clue: _ _ _ nd _ _d)
6. This has to be checked before the holiday can be booked?
8. Using ICT helps travel agents to improve this for their customers?

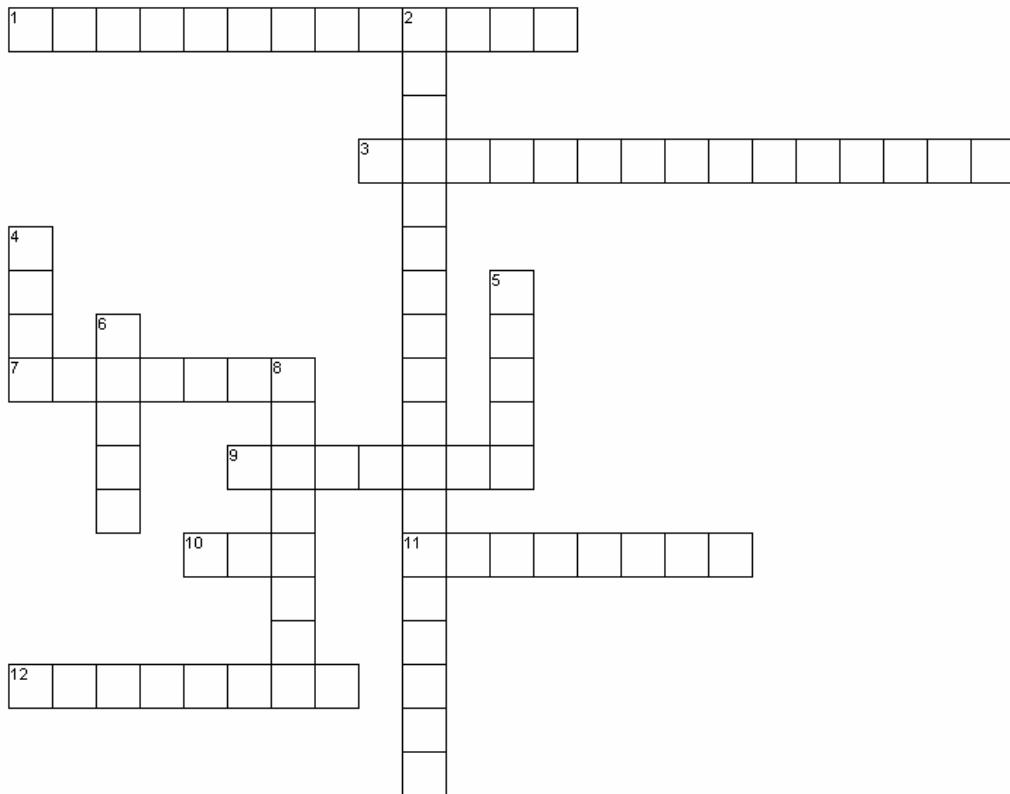
Down

1. Some agents have their own web sites where customers can book _____.
2. Travel agents can produce these using spreadsheets - it is similar to an estimate?
4. The systems that the agents use are called this.? (This is when system are 100% up-to-date).
5. All the holidays stored on the travel agent's computer are in a d _ _ _ b _ _e?
7. Web sites are found here?

Definitions of some of the key terms:

1. _____
2. _____

ICT and stock control



Across

1. The new advanced method of labelling used by Safeway.
3. The amount of stock that is bought in by the business.
7. A piece of hardware used in stock control.
9. This is scanned so the item and price is shown.
10. Shorthand for what you are studying?
11. This is used to keep a record of all the items sold by the business.
12. This is needed for on-line selling.

Down

2. This system is able to order in stock automatically.
4. Electronic Point of Sale?
5. This is saved when the computer is in charge of stock control?
6. This is the piece of hardware that is used to scan the barcode.
8. The ability of a system to provide accurate and up-to-date information.

YEAR 10 APPLIED ICT



Homework – answer all questions

- 1 Explain two reasons why the finance department of a business might use spreadsheet software to help them complete their work. 4
- 2 Identify 2 benefits to a small business of using word processing software to prepare promotional leaflets. 2
- 3 What software is often described as an “electronic filing cabinet”? 1
- 4 What is a barcode? 2
- 5 How do barcodes help supermarkets to monitor how much stock they need to order from their supplier? 2
- 6 Identify 2 uses of a database in a doctor’s surgery. 2
- 7 Explain two benefits to a business of taking regular back ups of their work. 4
- 8 State 3 ways that businesses can protect their information from viruses or unauthorised access. 3
- 9 What is the meaning of the term “real time processing”? 2
- 10 Explain, using an example, of how a business might use publications software. 3

Total 25

YEAR 10 APPLIED ICT



ICT at Marks & Spencer.

- 1 What are big companies dominated by? _____
- 2 Systems have gone from _____ to _____.
- 3 EPOS stands for _____.
- 4 Barcodes and scanners are connected to _____.
- 5 The server connects the M & S store to H_ _ _ O _ _ _ _ _.
- 6 What is a Hand Held Terminal (HHT)?

- 7 All the store computers are connected to a _____ in the ICT centre. These are called _____.
- 8 How does the use of the computers help M & S control stock?

- 9 What is a distribution centre?

- 10 How many stores are connected to the mainframe? _____
How many suppliers are M&S connected to through ICT? _____
- 11 How does the use of ICT control the production of the trifles at Eden Vale?

- 12 How many sortation centres does M & S have? _____

13 What is "ISOTRAK"?

14 How does ISOTRAK help M & S save on fuel costs?

15 What does the abbreviation "UPC" stand for?

16 When do the products with the following codes go on the shelves?

1 _____ 2 _____ 3 _____

17 What is a "drop plan"?

18 How much time has the use of the drop plans saved M & S?

19 At the end of the video, what are the 2 main drawbacks that are given due to the use of ICT within the supermarket industry?

1 _____

2 _____

“Wakey, wakey there’s a traffic jam out there”

Please answer the questions below:

- 1 What does the “smart” alarm clock do?
- 2 What are the 4 pieces of equipment used to operate the smart alarm clock?
- 3 According to Mr Hunt, what type of world do we live in?

Other questions to think about:

- 4 Some cars now have navigation software and hardware installed in the dashboard.
 - i) How will drivers use this new technology?
- 5 Traffic is actually controlled through the use of ICT. Sensors are used to monitor the flow of traffic and relay messages to the traffic control centre.
 - i) Name 2 benefits to drivers and the public from using ICT to control the traffic flow
 - ii) Name 2 other areas where sensors might be used.

Working with Business Documents

You will need to know:

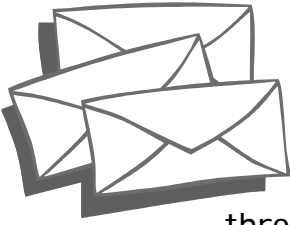
What the document is

its purpose

its target audience

its writing style and tone

its effectiveness



Business document task.

You will be given a business document of your own - look through it and complete table 1 and then table 2.

Table 1 - outline data

What is the document?	
What is its purpose?	
Who is its target audience?	
What is its writing style?	
What is its writing tone?	
Is the document layout and formatting effective? Why?	
How could it be improved?	

Table 2 - How has ICT been used to produce the document?

What type of software has been used to produce the document?	
What type of hardware has been used to produce the document?	

Task 3

I would like you to load up "Publisher" and have a look at the "wizards" that are available to help people and businesses to design documents. Please answer the following:

- 1 What is a 'wizard'?
- 2 List 4 examples of the 'wizards' that are available.
- 3 Explain TWO benefits to small businesses from using the "wizards" in publisher.

I would like you to load up "Powerpoint", and then answer the following.

- 1 What is a slide-show?
- 2 State 3 ways that a business might use "Powerpoint".
- 3 Explain TWO benefits a business will gain from using "powerpoint".

YEAR 10 – APPLIED GCSE ICT:

Research and Business Letter task

I imagine you work for a travel agency in Crawley High Street. A regular customer telephones the office and asks you to find the following information:

- 1 The cost of travelling to Los Angeles from Heathrow on a BA flight – date of departure Oct 6th 2002 and returning on Oct 12th 2002 (www.britishairways.co.uk) on economy class.

Log on to the web site, find and record the data below:

Time of the departing flight _____ and time of return _____. Cost _____

- 2 The customer also wishes to go on holiday during November and is looking for a late deal. They are not too bothered about where they are going but he does not want to spend more than £800 per person.

Log on to a suitable website eg:

www.jmc.com/www.tvtravelshop.com/www.skyholidays.co.uk

Find 3 different holidays and record them below:

Holiday One: Destination _____ Date of Departure _____

Cost _____

Holiday Two: Destination _____ Date of Departure _____

Cost _____

Holiday Three: Destination _____ Date of Departure _____

Cost _____

- 3 You now have to prepare a letter to send to the customer -

- The travel agent's address is Lunn Poly, 5 High Street, Crawley, RH11 7BG 01293-555555
- The customer's address is Mr P Mitchell, 5 Overture Gardens, REIGATE, RH5 9IO.

Tasks:

- prepare a letter head for the travel agent's using the address above.
- using the same font and font size and making sure that all the details are on the left hand side, prepare a letter for the customer advising them of what you have found. Follow the eg overleaf to help you.

(Put your letterhead here)

Ref: MI T/(put your own initials here)

19 September 2002 (put today's date here)

(customer name here)

(address here)

Dear Mr Mitchell,

FLIGHT AND HOLIDAY DETAILS

Thank you for your telephone call yesterday and I am pleased to provide you with the following details:

FLIGHT TO LOS ANGELES

The time of the departing flight from LHA is _____ and returns from LAX on _____. The cost is _____.

HOLIDAY DURING OCTOBER

Details of the 3 best deals I could find within your budget for travel within November is:

<u>Destination</u>	<u>Date of Travel</u>	<u>Cost</u>
--------------------	-----------------------	-------------

Please let me know whether you wish me to book the flight or holiday for you. I look forward to hearing from you soon.

Yours sincerely

(your name here)

Travel Advisor

Year 10 Applied ICT - your homework for next week.

I would like you to go home and ask your parents (or you may have some of your own) to let you have a business document that they have received. It could be a letter, an invoice, a leaflet or some direct mailing information.

Score out any information to protect their confidentiality!!!

Glue the document on the other side and then complete the tasks below:

1 Complete the following table:

What is the document?	
Who is the target audience?	

2 List 5 formatting features that are shown on the document and indicate where they are. I have given you an example - use "bubbles" if you want!!

Example: underlining is used where the business address is shown

-
-
-
-
-

3 List 2 improvements that you would make to the document.

-
-

4 Do you think the document is well designed? Explain one reason to justify your answer.

Applied GCSE ICT - worksheet 2

Task One

I have attached an actual example of a letter received by one of my neighbours. On the space provided at the bottom of the letter make critical comments on the design of the letter.

Task Two

Using word-processing software, I would like you to re-design the letter using the correct layout for a letter and using a range of styles eg, fonts, formatting (bold, underline etc) and clipart (if you wish to). Proof-read your new letter, print it off and then stick it on the A3 sheet next to the old one!!

Year 10 Applied ICT – your homework for next week.

Please answer the following questions:

- 1 Copy out and complete the following table: 7

What is an invoice?	
State 3 pieces of data stored on an invoice.	
Name the most likely piece of software used to produce invoices.	
State 2 advantages of using computerised invoices	

- 2 Apart from an invoice, name 3 other business documents. 3
- 3 Explain why it is important that a business thinks carefully about its target audience when it designs its documents. 3
- 4 What is meant by **document layout** and **formatting** when designing business documents? Make sure you write about both parts of the q. 3
- 5 Thinking of the video that we watched on Marks and Spencer, use your video worksheet to describe 2 ways that M&S use ICT to help them reduce their costs. Eg, ISOTRAK. Make sure that you give 2 ways. 4
- 6 State ONE way that finance and ONE way that sales might use ICT software. 2
- 7 Why is CAD or CAM a benefit to a business that manufactures goods? (Give an example of how it is used when you write your answer, eg, relate to your visit to BOC Edwards). 3
- 8 I identify 2 ways that a business can look after the health and safety of the employees who use ICT. 2

Total 27

Year 10 Applied ICT – further work on Documents

Task 1 – Look at the attached example of an invoice and list below 5 different formatting features that have been used:

-
-
-
-
-

Task 2 – I imagine you work in the Accounts department of a local stationery office. Invoices are currently hand written and now you have been asked to prepare a computerised version of the invoice using Excel.

What are the benefits of using computerised invoices?

- 1
- 2
- 3

Your manager asks you to prepare an outline of an invoice. Look through the other examples of invoices that we have in order to think about what should be included eg, the name and address of the business, the date, invoice number and so on.

- Draft an outline of the invoice, think of formatting details and so on.
- Ensure that you use formulae for subtotals and discounts etc.
- Print your draft invoice.
- Now try out your invoice:

Customer details are: Mr B Wrong, Supreme Tyres Ltd, 15 Brook Rd, Crawley, RH11 8PP
He bought 5 reams of A4 paper, code A5416 @ £8.50 each,
20 print cartridges, code A4561 @ £17.99 each,
12 notepads, code A3452 @ £5.99 each,
20 post-it notes, code A4357 @ £3.49 each.

This customer gets a discount of 10%.

6.2.4 Activities on File Management

Activity: File Management

Create a file management system based on a scenario. Planning how the folders will be created and the hierarchy needed in order to ensure that all work is organized and can be easily located.

Key Issues

- Creating folders
- Re-naming files and folders
- Deleting files and folders
- Organizing files and folders
- Good practice in file management
- Creating back-ups of files

Introduction

In this activity pupils work individually or in small groups to design and produce a file management system. They should design the structure on paper before putting it into practice. The necessary skills can be taught before or during the activity, on a 'need to know' basis.

Breakdown of tasks for pupils

1. You are going to plan a file management system based on the scenario below. Read this description and make a list of the different files that will be needed.

I imagine you have just been bought a PC at home for the first time. You are a badly organised person – and you have made a resolution that you are going to use the PC to help you organise your life for a change!

Although you do your homework – you are always losing bits of it – or saving it on the school system and forgetting the file names you have used. Last term you did a great piece of English and couldn't find it! All your work in different subjects are mixed up.

You have a great music collection – but friends are always borrowing CDs and tapes and you do not know who has got what – and mixed in with your collection are some CDs you have borrowed – but was it from Lisa or Asif?

You have loads of friends – but can't remember their addresses when it comes to sending birthday cards. Having been a visitor to the Man U. website for sometime, you would like to download information on your favourite players but you're not sure you will be able to find it again.

All the pictures you have cut out from magazines are all mixed up with some pop posters, some history notes and your music magazines and stuffed under the bed.

You want to keep a personal diary - but you don't want your parents to read it!

Plan yourself a File Management System. You may design your system for another purposes as well as the ones suggested by the information above.

THINGS YOU NEED TO KNOW

FOLDERS: These are places on your system where you can keep groups of FILES or other FOLDERS.

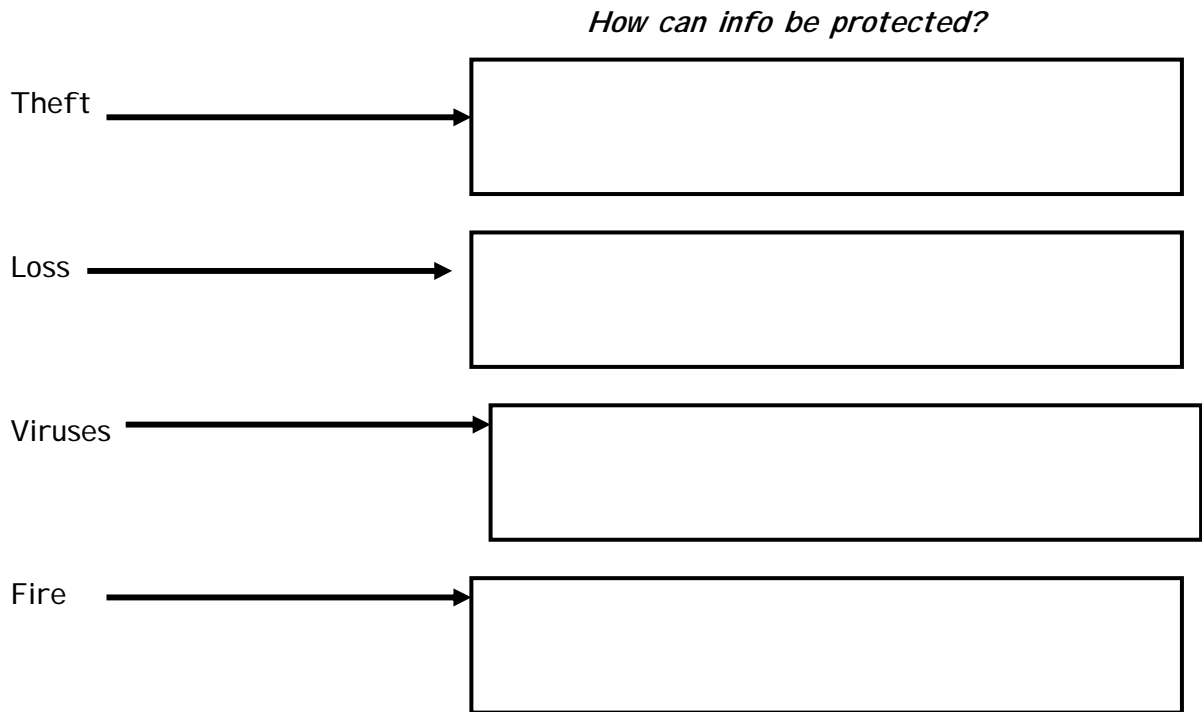
FILES: These are individual documents, sets of data or images.

2. Now you have a list of all the folders you will need in you system start to plan how they will link together. Start with the main folder for each area and then add the folders that will be in each one. Sketch this in pencil so you can make changes as you go along.

3. Can you design a file management system for yourself aged thirty. Think about the bills you will need to pay and what information you will need to store for your job. Some of the folders and files may be the same as the ones you created as a student.

FILE MANAGEMENT AND STANDARD WAYS OF WORKING:

Businesses that use ICT have to make sure that they can keep information securely. This can be from:



What is the main law that governs what a business can do with the data that it holds on its computer systems?

_____. This law means that a business can share the held information without the permission of the individual concerned.

This brings us into the area of confidentiality. How does a business ensure that there is restricted access to the information that it holds on individuals or groups?

-
-
-

RESOURCES FOR TEACHING MODULE B

7.2.1 How and why organisations use ICT

The emphasis in this teaching module should be on first hand experience and research. There are no resources provided here, but 7.2.1 relates to resources in the section for 6.2.2, 6.2.3 and 6.2.4.

7.2.2 Main components

Candidates will need a good understanding of hardware including input, output and storage devices as well as operating system and applications software for both the examination and the portfolio work

7.2.3 How ICT systems are designed and implemented

There are two resources on data flow diagrams and one example on setting up a system. Centres should note that the example on setting up a system is for teaching purposes only and should not be used for assessment evidence.

7.2.2 Main components

What is Hardware?

Use a computer supplier website to find a specification of a computer, like the one below:

PC Packages

EMACHINES
INTEL CELERON 1.8GHZ
PC & 17" MONITOR
PACKAGE
EMACHINES 37



 Enlarge image

To check stock, add to basket.
£599.00 inc VAT

An electricity surge can happen at anytime. Sudden increases in power can damage valuable electrical devices or lose data. To protect yourself against this, when you purchase this product, you have the option to buy a PowerSurge Socket for only £13.99 Web Offer Only , saving £6 from usual instore price (£19.99)

Product Features	Product Specification	More Information	PC Performance
Product Features			
Intel Celeron 1.8GHz			
256Mb DDR RAM			
60Gb Hard Drive			
DVD / CDRW			
17 inch Monitor (15.7 inch VIS)			
Packard Bell 1200 Flatbed Scanner			
PC Line DC2 Digital Camera			
Epson C42+ Inkjet Colour Printer			
PC Line 1.8M USB Cable			
Includes FREE 1 Year On-Site Warranty			

If your computer system does not have a printer or a scanner / digital camera, find one and add it to your system specification. You will also need an operating system and a standard generic software package such as Office, which combines Word processing, Spreadsheets, Databases, and Presentation software.

Please note this example was posted March 2003. You will notice that even after a few months, technology moves on, and computer you find may have a higher specification than the one listed.

In Word, copy and paste a graphic of your computer and specification. For each line of the specification:

- Explain its meaning;
- Identify the various alternatives to your chosen specification;
- State whether or not this specification is bottom of the range, mid range, or the latest technology.

To help you describe your system, research the following site:

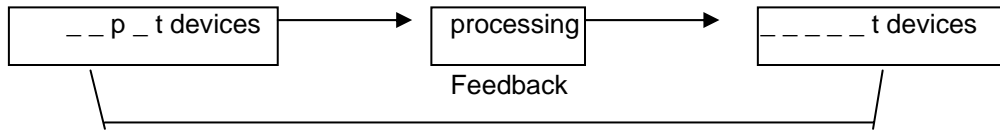
<http://www.bcentral.co.uk/technology/buy/default.asp>

Your teacher may discuss the Hardware buyers guide before you start.

NOTE: A specification is a word we use to describe the bits and pieces that make up a computer system. A computer system is the hardware and the software you get with it.

ICT SYSTEMS

Complete the blank spaces in the following diagram showing a simple ICT system:



What is an input device? _____

_____. Give 3 different examples:

What is an output device? _____

_____. Give 3 different examples:

What is a storage device? _____

_____. Give 3 different examples:

What is the name given to a computerised system that connects a variety of computers together?
_____. To connect one computer to the actual network it also needs a **network interface card**. Access to the Internet may also require a **modem**.

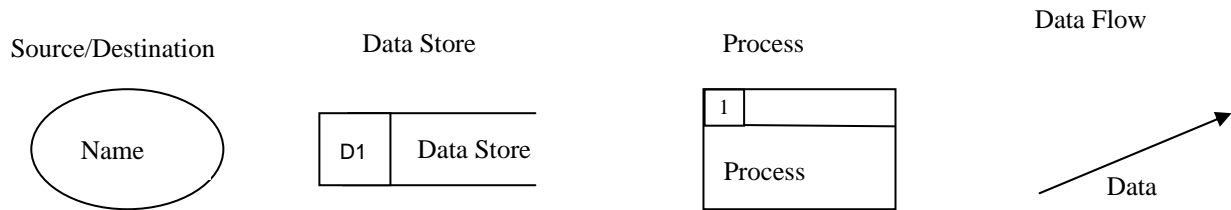
7.2.3 How ICT systems are designed and implemented

GCSE Applied ICT

Dataflow Diagrams

Dataflow diagrams (DFD) are a method of showing the flow of data through a system. A dataflow diagram concentrates on **the flow of data**. They show where the data comes from and what data is needed for the processes in the system.

We use the following symbols in dataflow diagrams:



Source/destination - e.g. the user / Secretary / Clerk / Manager / ...

Data Store - e.g. Database / spreadsheet / floppy disk / hard disk / ...

Process - e.g. Search / produce a graph / perform calculation / ...

Data Flow - e.g. shows movement of data / letter / ...

TASK 1:

For the following activities, create separate dataflow diagrams to show the steps involved.

i) Show how a Secretary in a Company produces a report for a Manager

GCSE Applied ICT

Dataflow Diagrams

ii) Show how a Librarian produces a letter for overdue books



iii) Show how a Doctor produces a diet sheet for a patient

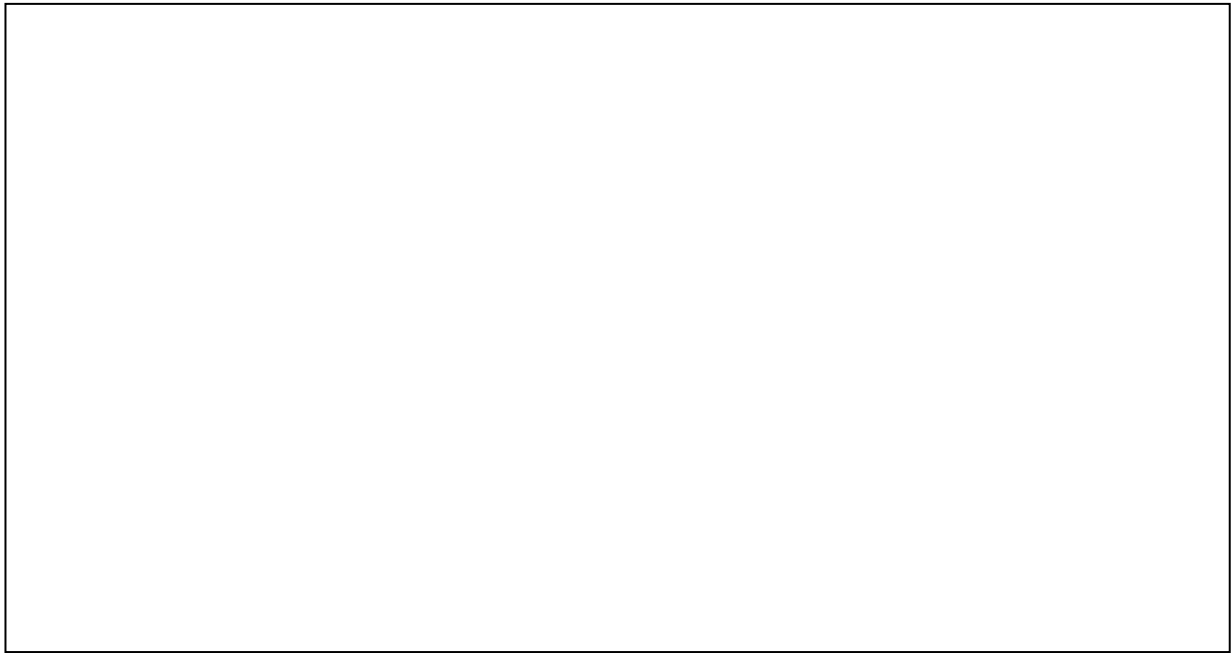


GCSE Applied ICT

Dataflow Diagrams

EXTENSION TASK:

For your own small organisation identify 2 activities and draw the corresponding Data Flow diagram

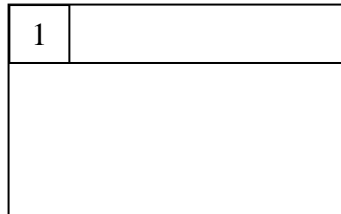


Describing Inputs, Processing and Outputs with Data Flow Diagrams.

In computing, we like to look at things logically. If we can, we like to draw pictures and diagrams, which look very technical, to describe what we are doing - or trying to do. One of the best techniques we like to use is **DATA FLOW DIAGRAMS**, or DFD's which describe the Inputs, Processing and Outputs of systems.

Processes.

A process is an action. It is something that happens, or changes some information into some other information.



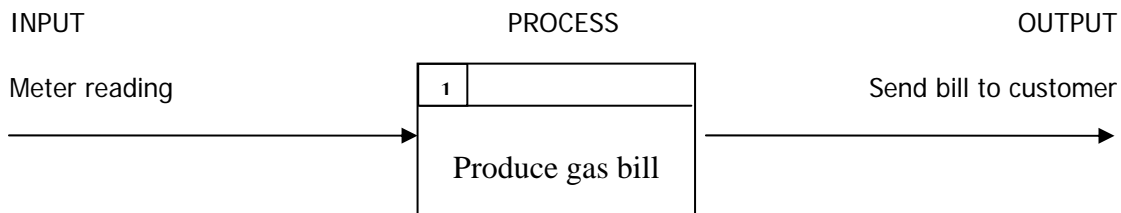
Inputs and Outputs. →

Inputs are information or data that goes into a process to make it work, and outputs are information or data that comes out of the process.

Consider a gas supply company.

Every three months a meter reader will come around to your house, read your gas meter, then the following week your parents get a gas bill. Some process happened in between. The information gathered by the meter reader has been processed into a bill.

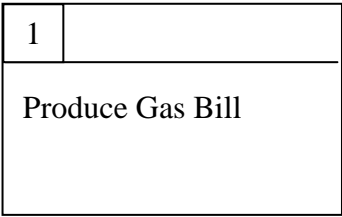
Remember – in IT we like to draw pictures, so here goes:



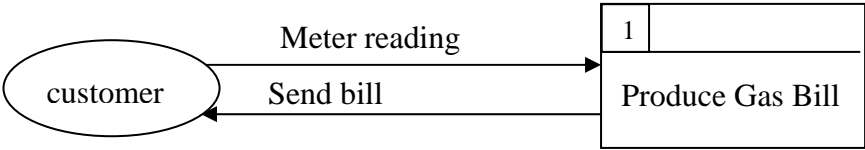
Notes:

The Input and Output data are represented by DATA FLOW ARROWS. They show the data, and the direction in which it goes.

The PROCESS is shown by a rectangle. The number in the top right hand corner shows the position of the process in a complex operation. In the above diagram, the Process box does not explain how the bill is produced – it does not need to. All we need to know is that a bill is produced.

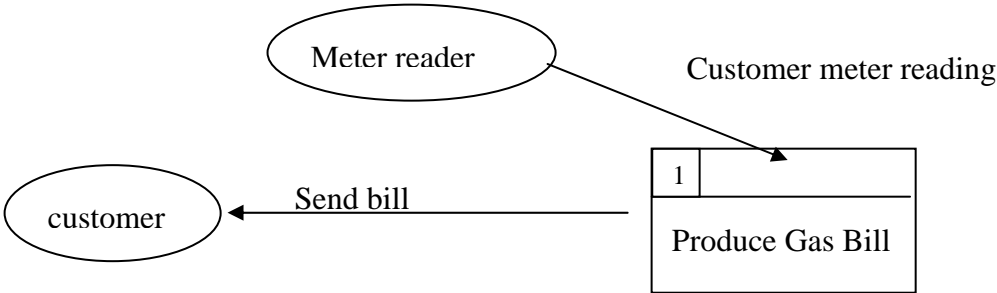


So far so good, but where did the arrows come from or go to? We need to show the customer who uses the gas. This customer is known as an Entity – A real thing that exists, that interacts with the process. Customers are Entities, and are shown by ovals.



But the customer does not take the meter reading – the meter reader does.

So we need to include the meter reader in our DFD:



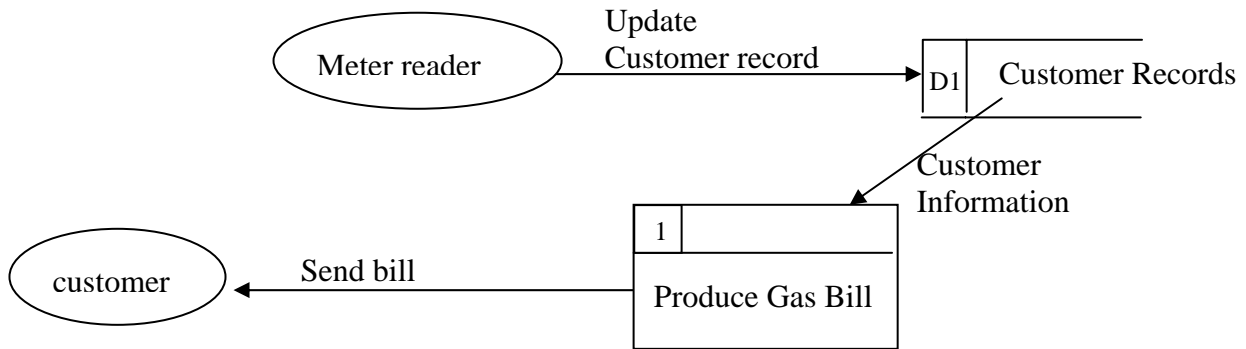
The system above looks good, but does not show where the customer information needed to produce the gas bill is stored.

The gas supply company need a database which has at least the following information about the customer:

Name, Address, Payment method, Previous gas reading, new gas reading, amount of gas used (New - Previous reading), charge per unit of gas, Total amount owed.

We will call this database 'Customer records'

In reality The meter reader does not go back to an office and produce the gas bill as the above diagram suggests. All the meter reader does is update the customer record. The gas bill is produced automatically by the 'system'.



Note: FILES are drawn as open boxes. in our diagram.



D1 shows that this is the first data store

So that's it. Except what happens if a customer is out? Or if the customer thinks the bill is wrong? Or if the customer refuses to pay?

The DFD could be expanded to describe all of these situations.

More Notes:

There are only four types of object in a DFD – all of them are shown above.

A DFD is not a flow chart. It does not describe the steps in which a process happens. It is more like a road map. It shows all of the possible routes that data can take. If we expanded the above DFD to do everything a gas company does, the customer may have the gas meter read, or they may complain about the bill, or they may refuse to pay, or they may call out a gas technician to fix their boiler, **or they may not**. My road map shows me how to get to Swindon, but chances are I will never need to go there. It just shows possibilities.

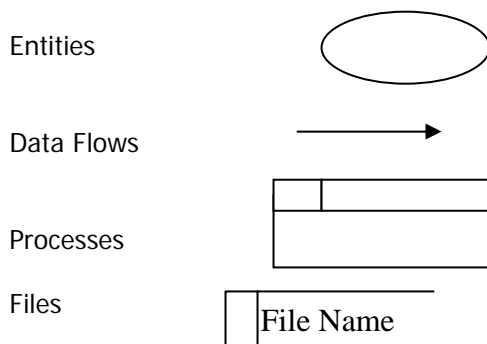
TASKS

1. Under the title 'Data Flow Diagrams', answer the following questions:

1. What is a System?
2. What are DFD's?
3. Why do we use them?
4. Draw out the Gas supply company example.
5. How are Inputs and Outputs shown?
6. What are processes and what do they look like?
7. What are Entities and what do they look like?

2. Mini World Task:

Create a DFD that shows the following system describing how a new customer applies for a subscription to the magazine 'Mini World'.



- Customer posts off an application form for 'Mini World'.
- Mini World Processes the Application Form and sends a reply back to the customer stating they have received the application form.
- The Application form has the customers name and address, and also the customers direct debit bank details.
- The Customer's details are added to the Customer file.
- The Customer's bank details are Credit Checked to make sure the correct details have been filled in, and the customer does not have a bad credit history.
- After the customer details have been credit checked, the Customer File is updated to say that the customer can start receiving magazines.
- Every publication, using addresses from the Customer File, a Set of Mailing Labels are created.
- The label is attached to the Magazine, which is posted to the Customer.

3. From your main Mini World DFD, Create a DFD to show:

3.1 A customer cancels a subscription.

Notes:

- Firstly you need to identify the **Process** that is happening here. What does the Customer want to do? Draw out the identified Process.
- Secondly, you need to identify how the process connects to the rest of the DFD. A process cannot happen without inputs and outputs. Consider **Inputs**. In this case, the CUSTOMER has asked to cancel a subscription, therefore we need a data flow arrow from the customer to the process. What do we need to write on the arrow?
- Thirdly, we need to identify the **outputs** from the process. Show how a letter gets sent from the process to the customer stating the subscription has been cancelled. Do we need an output to delete the customer details from our customer file? If so, draw it in an label it.

3.2 Show how Mini World could send letters out to all of its customers.

- Identify the Process
- Work out the inputs into the Process and where they link to.
- Work out the outputs from the process and where they link to.

3.3 Mini World also sells goods to customers.

- Identify the Process
- Work out the inputs into the Process and where they link to.
- Work out the outputs from the process and where they link to.

Note: You have now created a road map of everything a customer can do in Mini World. This DFD shows at a glance the routes a customer can take to carry out different tasks or processes.

Extension Tasks

Gas supply company Task:

Go Back to your Gas supply company example, and create a DFD to illustrate the following:

1. The customer thinks the bill is wrong.

(Remember Process, Inputs, Outputs)

2. The Customer is out. – In this case, the meter reader leaves an Estimate card which the customer fills in and sends to the gas supply company. The card is read, and the estimate is used to update the Customer File.

Your Life Task:

Every day you carry out Processes. Whether it is being taught at school or going to a football match. Think of a few processes you carry out and create a DFD for them.

The Tramuntana Voyages mini-project

The following pages contain details of a 'practice' project that can be undertaken to give students experience of what is involved in the analysis, design, implementation, testing, evaluation and documentation of a system. This includes the creation of a data flow diagram, writing a design specification and writing up the implementation and testing of the system, so covering the skills that will be needed for strands d, e, f, g and h of the Business Systems Portfolio.

Centres should note that the prescriptive nature of this set of tasks makes it unsuitable for assessment purposes, indeed to give this amount of guidance would constitute malpractice as the banner of the Assessment Evidence Grid states that candidates must cover the design, implementation, testing, evaluation and user documentation of an ICT system. Candidates should be given a task for assessment that is broad enough to allow for individual decisions and creativity, ensuring that candidates' individual work is distinctive. However, individual creativity is put to best use when students have a clear idea of what is expected of them, and previous experience of a collaborative project such as the one described here could be very useful preparation for assessment.

Tramuntana Voyages

Introduction.

Tramuntana Voyages are a small leisure craft company based in Port de Alcudia in Majorca. It is owned and operated by Vijay and Julie Renuka, Ex British Patriots who moved from Birmingham to Alcudia in 1997.

They started out in 1997 offering sailing trips around the coast on their 50 foot yacht "Tramuntana I". Paying guests form the crew, who sail along the North Majorcan coast on day trips. At lunch time the yacht drops anchor in a small bay where the crew enjoy a barbeque, before heading back to port.

The company has expanded over the years and now includes a glass bottomed boat "Mazara de Vallo" and a submersible "Valldemosa", both of which offer trips to paying customers, twice daily.

The company hopes to expand to include a water sports division operating off the seven mile Alcudia beach.

Tramuntana Voyages operate out of a small hut on the quay, where they take bookings.

The computer system currently in use was installed when the company first opened in 1997. Over the past few years it has become apparent that the age of this computer system prevents it doing many of the tasks that Tramuntana Voyages would like it to do.

After investigating the Majorcan computer market, the Renuka's found that no company offered English software versions, which the Renuka's needed. As the Renukas often return to England out of the Tourist season in Winter, they decided to commission an English based company 'Inca Systems' to handle the design and installation of the new system.

You are employed as one of their systems analysts and have been asked to handle the Tramuntana Voyages project.

Note: What is a 'System'?

A computer system includes hardware and software, used together to perform tasks. The office staff in school has a computer system on which they word process, keep records databases, and use spreadsheets. This system involves the computer hardware and software plus the ways in which these are used to carry out the jobs.

For this project you will use the hardware and software available to you, and will set up an organised way of using these to help solve some of Tramuntana's problems.

Task:

In Word Create a header and footer for the Tramuntana Voyages Project.

Put the title 'Tramuntana Voyages Company Overview'

Write a page describing what Tramuntana Voyages do, and what you have been asked to do.

Add that you will carry out the following steps:

Analyse	You will work out exactly what the company want from their new systems.
Design	You will design systems based on your analysis.
Implement	You will create the systems – Install hardware and program software.
Test	You will test the systems to make sure they work.
Evaluate	You will evaluate the systems against what you found out in the Analyse stage.
Document	You will produce documentation to help the company use your system

Analysing a system using a Data Flow Diagram

Interview with Julie Renuka, Marketing Manager and Yourself.

Before you can start designing a computer system for Tramuntana, you must first analyse the situation. In this activity, we will analyse the tasks carried out by Tramuntana.

Convert the following system as described by Julie Renuka into a Data Flow Diagram.

On a blank sheet of paper, put the title 'Analysis - Tramuntana Voyages Customer DFD', then draw out a Data Flow Diagram (DFD) which best describes this system. Help comments are on the left. DFD objects you should use are highlighted in **Bold**.

<p>Yourself: Can you describe the way customers go about finding out, booking then going on one of your cruises? What Process do they follow? Could you start with describing how customers find out about the cruises?</p>	
<p>Julie Renuka: Well, first off they have to know about the company, and the trips we offer. We do this in four ways –</p> <ul style="list-style-type: none"> ○ We place leaflets in the foyer of all the major hotels in Alcudia; ○ We advertise in the local free 'Whats On' English newspaper, ○ We have signs on our hut and on the sides of our boat advertising our cruises; ○ We have a deal with Cosmos, the holiday company. They advertise our tours and take bookings for us. 	
<p>YS: So once customers find out about your company, how do they book?</p>	<p>SELLING TICKETS part of the DFD</p> <p>1. In the centre of your page, draw out the Entity 'Customer'.</p>
<p>JR: Apart from the Cosmos bookings, the customers come down to the hut when we are open between 8am and 10pm. We then book customers onto sailings.</p>	<p>Ignore Cosmos for the moment.</p> <p>2. Draw and name this Process. Link it to the Customer entity using a data flow arrow.</p>
<p>YS: How do you create a booking?</p>	
<p>JR: We put the customers details on the passenger list, a data file held on the computer.</p> <p>The computer then prints a ticket for the appropriate sailing, which is given to the customer. The ticket acts as their receipt.</p>	<p>3. Draw and name the Computer File. Link it to the process with a data flow arrow.</p> <p>4. The Ticket is represented by a data flow arrow. Draw this arrow on your DFD.</p>
<p>YS: So apart from the Cosmos Bookings, Customers can buy tickets at the hut for Tramuntana I – which offers a sailing experience and barbeque; Mazara de Vallo – a glass</p>	

bottomed boat trip and Valldemosa – the submarine trip.	
YS: What about the Cosmos Bookings?	
JR: The Valldemosa submarine and crew are hired out to Cosmos every Tuesday at a cost of e7400 (Approximately £5000).	COSMOS part of the DFD 1. Draw the Entity 'COSMOS' .
YS: Who issues the tickets?	
JR: Cosmos reps sell their own tickets in the hotels. We do not have anything to do with issuing tickets or creating passenger lists for Cosmos.	2. Draw and name this Process . 3. Draw a data flow arrow between the COSMOS entity and this Process. 4. This process needs connecting to the main DFD with a data flow arrow . Work out where on the main DFD this arrow should come from. Hint: Cosmos sells tickets to customers. We already have an entity called customer, so we don't need to produce a new one.
YS: Then what happens?	
JR: On the day and time of the trip, customers arrive at the boat and show their ticket to board. We Check the ticket against the passenger list, and tick them off. We are required by law to know exactly who is on our boats.	Boarding the Boat Part of the DFD Draw and name the Process described here. Link it using data flow arrows to the entities and outputs you feel are involved in this process.
YS: Is there any feedback from your customers about their trip?	
JR: After the trip the customers fill in a questionnaire about the level of services and if they have enjoyed the trip or not. The Questionares are filed in a filing cabinet and read at the end of the week. We take note of what our customers have to say.	Questionnaire part of the DFD Identify the Process and File described here. Link them together, and to the main DFD using dataflow arrows .
YS: Where do you get the stock for the boats?	EXTENSION WORK Create a new DFD on a separate sheet to describe the following situation:
JR: We order the goods from “El alimento es nosotros” warehouse. We create an order using an order form, send it to the warehouse, then they deliver the food and drink to the boats twice a week. When they deliver the food and drink, they produce an Invoice which we store in a filing cabinet.	Separate DFD. Food and Drink DFD. Identify the Processes, Entities and Outputs described here.

Tramutana Identifying Needs and Design Specification for a System

Analysis: Identifying Needs

In this part of the project you will identify Tramutana's needs from the new system, and design how those needs will be met.

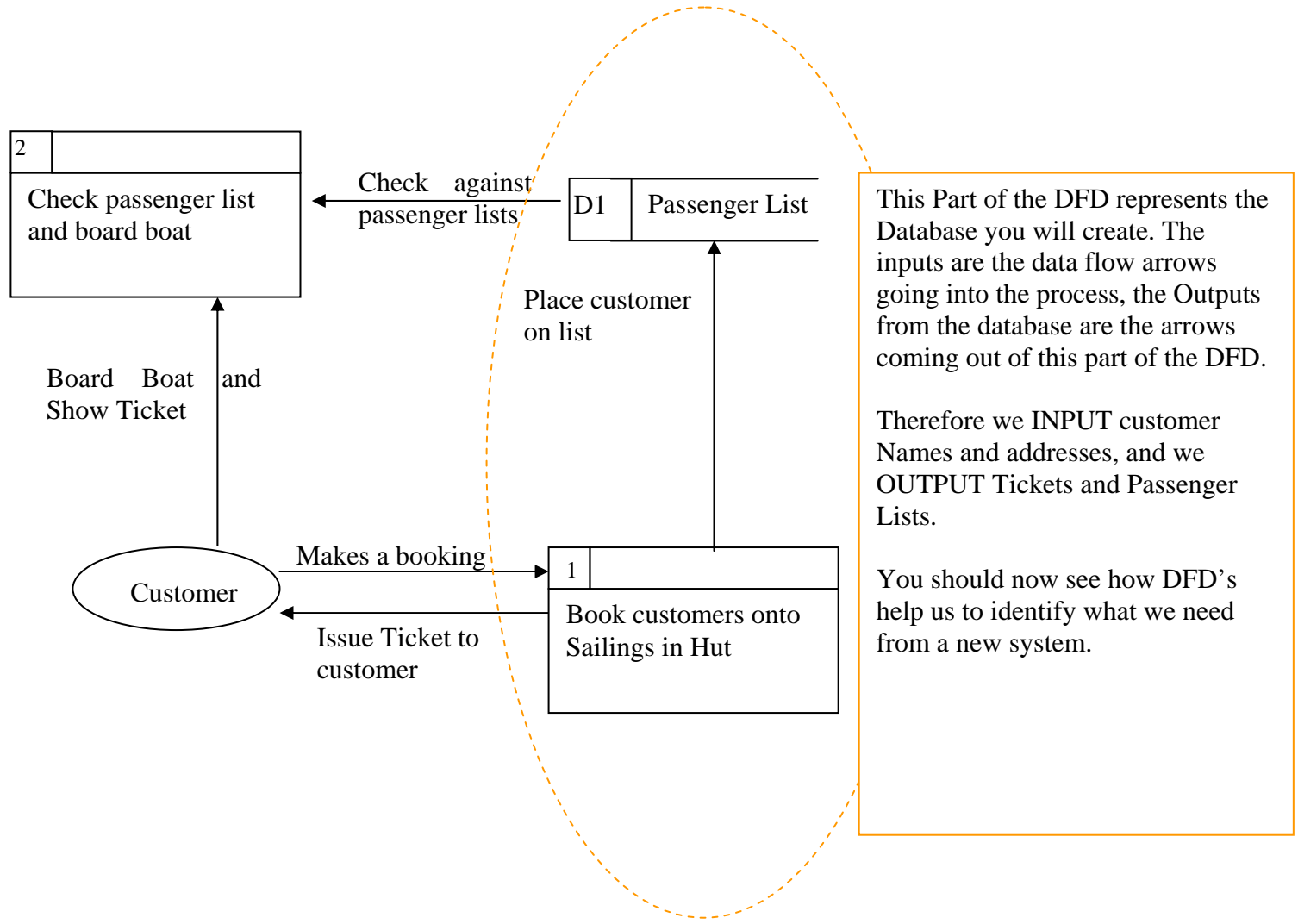
Interview with Julie Renuka.

1). Identifying Passenger List Requirements.
<p>YS: We identified in our last interview what the customer does when booking onto the sailings, and I have created a Data Flow Diagram which explains what we have talked about. We can use it to help us identify some of the things we would like the new system to do. Shall we take a look at the 'Passenger List' part of the DFD, showing customers making bookings and customers boarding the boat?</p> <p>From this I can see that we need to create a database which inputs customer details, and outputs tickets and passenger lists.</p>
<p>JR: Yes, that would be correct. That is exactly what the database should do.</p>
<p>YS: To help us design the new database, can you tell me how you used to create the passenger lists?</p>
<p>JR: Well it was quite simple really. The Passenger lists were just hand written lists on a paper form. I remember one time we lost a list and had no idea who was on the boat. That was really dangerous. Another problem was that we just kept the list in a filing cabinet. If I wanted to know what the most popular trips were by looking at the number of customers on each sailing I had to go through each form and count up the number of passengers by hand. This took ages.</p>
<p>YS: What about the Tickets?</p>
<p>JR: The tickets were just pre printed cards with the name of the boat on them. We hand wrote the date of sailing and time to board. They did not have the customer name or how much they paid on them. They do not look very professional.</p>
<p>YS: You have identified three areas where a computer database would have real benefits over the old system:</p> <ul style="list-style-type: none"> • The passenger list would be stored on the computer. This could be printed out before each sailing and used as a boarding list. There is less chance of the list being inaccurate or lost if it is kept on computer and you back up your database every night. • The database could do statistical analysis – count the number of passengers on each trip for you. You could then see if the trip is popular or not. • Tickets could be produced from the database. They could have the Name of the Boat, Sailing Time, Name of Customer, How Much paid on the ticket. This would look very professional.
<p>JR: Yes, That would be great if you could do that.</p>

TASK.

Complete the 'Needs Identification Form', identifying the needs of the Passenger List Database.

TRAMUNTANA PASSENGER LIST PART OF DFD



This Part of the DFD represents the Database you will create. The inputs are the data flow arrows going into the process, the Outputs from the database are the arrows coming out of this part of the DFD.

Therefore we INPUT customer Names and addresses, and we OUTPUT Tickets and Passenger Lists.

You should now see how DFD's help us to identify what we need from a new system.

Needs Identification Form:

Identified Need:	
Current Method Used:	
Proposed New Method:	
Benefits of new system over old system:	
Information that is needed to run the new system (inputs):	
Information that will come out of the system (outputs):	
Software Needed:	

Design Specification

You now need to think clearly about what a new system for Tramuntara needs to be able to do. You have outlined the main ideas on the needs identification form but now you need to write these up in more detail under the following headings:

- User requirements
- Where information will be obtained from
- Output required
- Inputs required
- Processes required
- Software needed
- How the system will be tested to make sure it works and meets all requirements.

Suggestions

User requirements

It is very important that you begin by stating clearly what it is you are trying to achieve. You should be able to find this information from your completed 'Needs Identification Form'. Read through the interview with Julie Renuka again, and make sure you have covered everything she asks for.

Where information will be obtained from

The information about the boats will come from Julie's existing paper records, then information will need to be obtained from passengers as they book trips.

Output required

At first sight you might think that the order of 'output', 'input', then 'processing' seems a bit odd. However, this is the correct way to approach the task. First you need to define clearly what the user wants to get **out** of the system, then you can start to think about what data you will need to put **in** to the system to get the required output, finally you need to think about the **processes** needed to turn that input into the required output.

At the end of the interview we identified three areas where a computer database would have real benefits over the old system. These are three clear outputs. List them here. Give details of each one, including the information that needs to be displayed.

Input required

Here you need to think about the data you will need to input and store in your system. You will need to input and store details of boats and booking details for passengers when they come to book a trip.

Make a list of the details you will need to store about boats, then another list of the details you will need to store about passenger bookings.

Think about the best way to input data into a database. Write about what you will need to create for this.

Processing required

Make a list of any sorts, searches, printed reports, calculations you will need the system to carry out to produce the output you need.

Software needed

Here you simply say the type (eg database) and name of software you are going to use. Give a brief explanation of why it is suitable – the features (things it allows you to do) which will be especially useful.

How the system will be tested

Normally you would plan the testing when you create the design specification. For this example we will leave the testing until later, so you can see how it is logically thought out. When you come to create your own system you should be able to use the test plan you will use later in this example to help you plan your own testing.

DESIGN SPECIFICATION - CHECK

As we are going to create and test this system together you first need to check that your design specification contains the following, which will be used to test the system later.

Outputs

1. Create a ticket that includes all information about the boat and trip and the booking details, and also the total cost to pay.
2. Create a passenger list for each sailing that is in surname alphabetical order.
3. A count of the number of passengers on each boat

Inputs

1. Boat information to include Name of boat, sailing times, description of trip, cost per adult, cost per concession.
2. Have a form for entering Boat information
3. Booking information to include Surname, name of boat, date of trip, number of adults, number of concessions.
4. Have a form for entering the booking information.
5. Have a main menu switchboard that provides links to the Boat form, Booking form, Ticket report and Passenger List report.

IMPLEMENTATION.

In your report, put the title 'Implementation Diary', This will be a log of your progress in creating the database.

NOTE: The implementation log should state what you have done, not how you did it. It should only include screen shots of finished tables, forms, etc. and is not a 'how to' guide.

1 Create a Database

Open up Access and create a blank database called Tramutana.

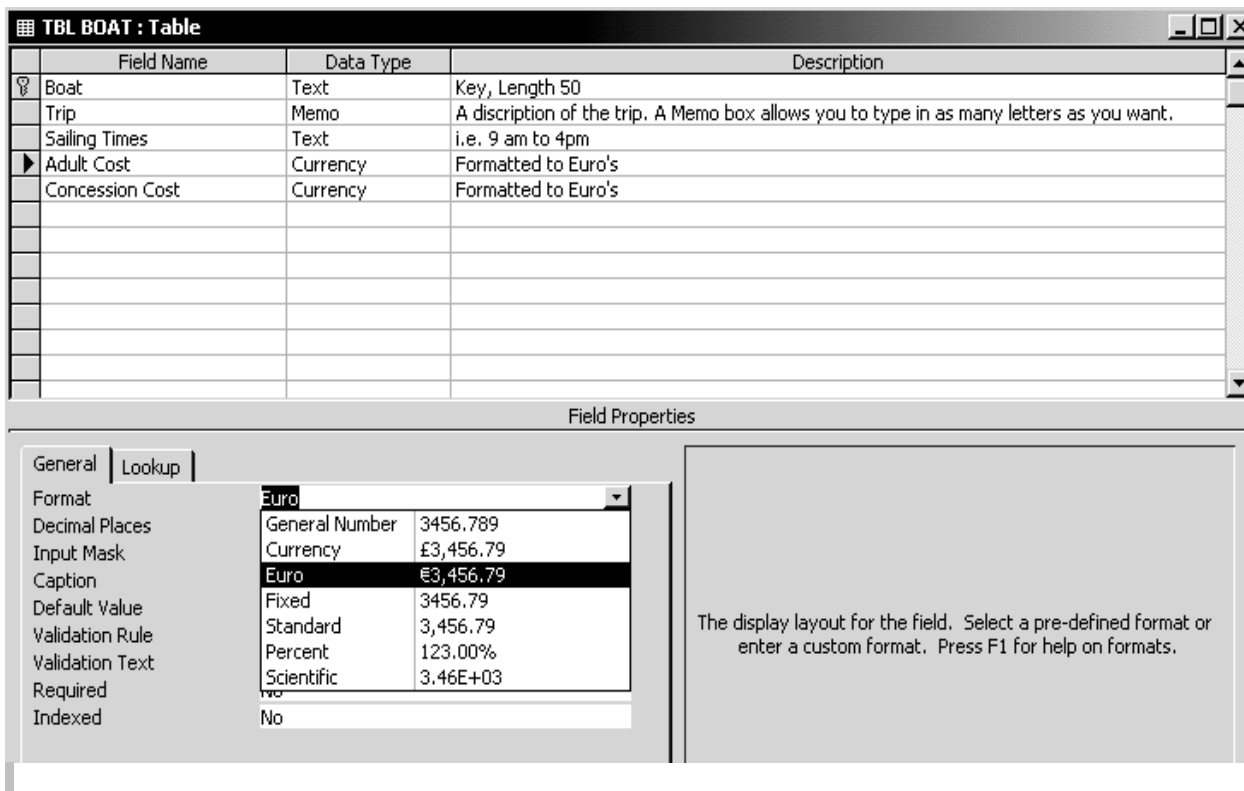
In your report, state that you created a blank database called Tramutana.

2 Create Tables

Create two tables as shown below.

Why do we use two tables? – We split repeating data up. In this case, the data about the boat (name, times of sailings, ticket prices, etc.) will be the same for many bookings made, and you would have to type it in every time you make a booking. If we have two tables, we could enter the booking details which are going to be different every time, (Persons' Name, Hotel, room number, number of tickets), then just pick the boat details from a pull down list.

2.1 Boat Table. Create a table to hold the Boat information. Save it as TBL BOAT.



In your report under the title ‘Boat table’ add a screen shot like the one above.

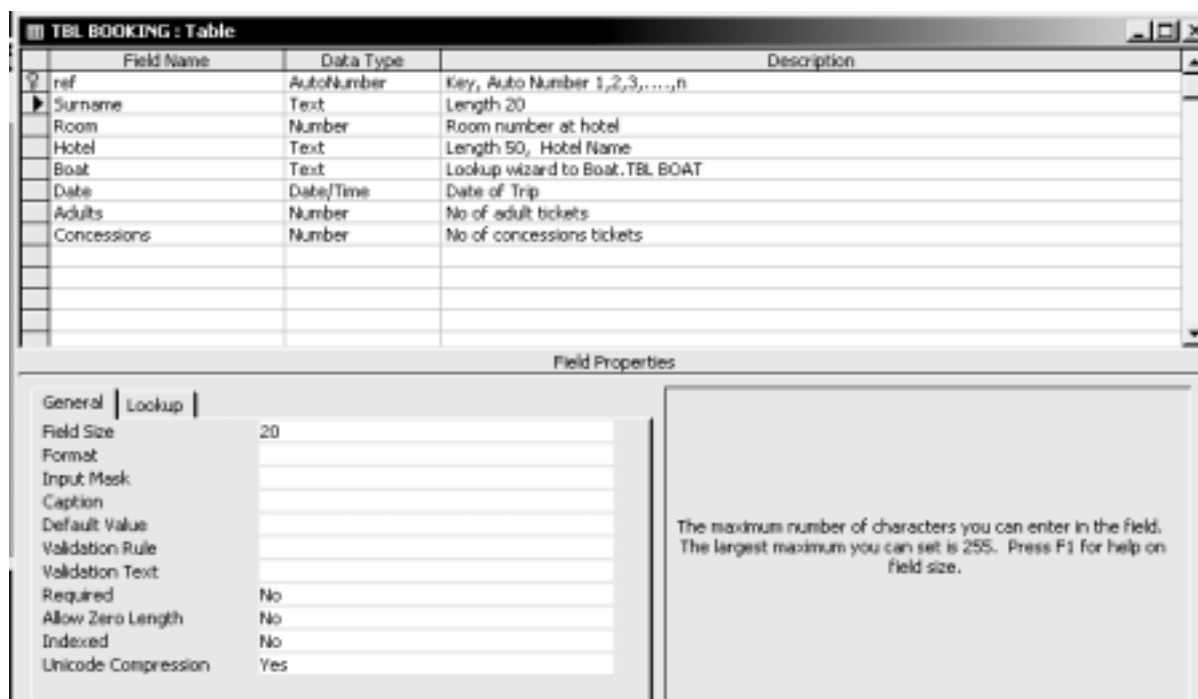
2.1.1. Enter Boat Test Data.

Copy the following test data into your boat table.

Boat	Trip	Sailing Times	Adult Cost	Concession Cost
Mazara de Vallo	Glass bottomed boat trip around Alcudia bay, viewing the marine life through the unique glass viewing gallery.	12am to 4pm	€10.00	€5.00
Tramuntana I	Sailing trip around Alcudia Bay, stopping off at the Sun Wing Hotel for a Barbeque.	9am to 5pm	€18.00	€9.00
Valldemosa	Sail on a real submarine!, On our trip around the bay, we stop off at Pollencia for lunch.	10am to 4.30pm	€22.00	€12.00

Add a screen shot or print of your table into your report under the heading ‘Boat test data’.

2.2 Booking Table. Create a table to hold the Booking information. Save it as TBL BOAT.



In your report under the title ‘Booking table’ add a screen shot like the one above.

2.2.1. Enter Booking Test Data.

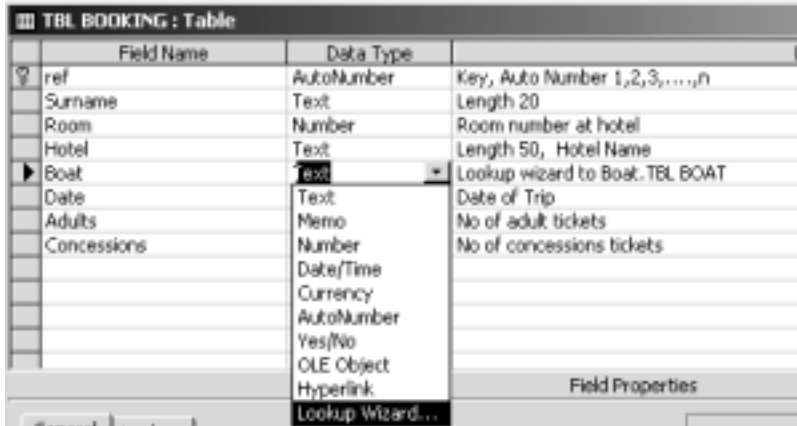
Copy the following test data into your booking table.

ref	Surname	Room	Hotel	Boat	Date	Adults	Concessions
1	Garner	205	Delfin Park	Mazara de Vallo	01/08/2004	2	0
2	Jones	416	Reo De Mar	Tramuntana I	01/08/2004	1	1
3	Smith	678	Sun Playa	Mazara de Vallo	01/08/2004	2	2
4	Smith	679	Sun Playa	Mazara de Vallo	01/08/2004	2	2
5	Bradley	203	Sun Wing	Valldemosa	01/08/2004	5	7
6	Watt	542	Reo De Mar	Valldemosa	01/08/2004	2	1
7	Hackerson	714	Sun Wing	Tramuntana I	01/08/2004	2	0
8	Hackerson	658	Sun Wing	Tramuntana I	01/08/2004	4	2
9	Clinch	106	Delfin Park	Mazara de Vallo	02/08/2004	2	4
10	Gino	334	Sun Wing	Mazara de Vallo	02/08/2004	1	0
11	Fell	460	Playa De Porto	Mazara de Vallo	02/08/2004	6	0
12	Fell	462	Playa De Porto	Mazara de Vallo	02/08/2004	2	2
13	Morton	542	Sun Wing	Valldemosa	02/08/2004	2	4
14	Rudd	220	Sun Wing	Valldemosa	02/08/2004	2	0
15	Rudd	340	Sun Wing	Valldemosa	02/08/2004	4	2
16	Glenn	344	Playa de Mar	Mazara de Vallo	02/08/2004	2	0

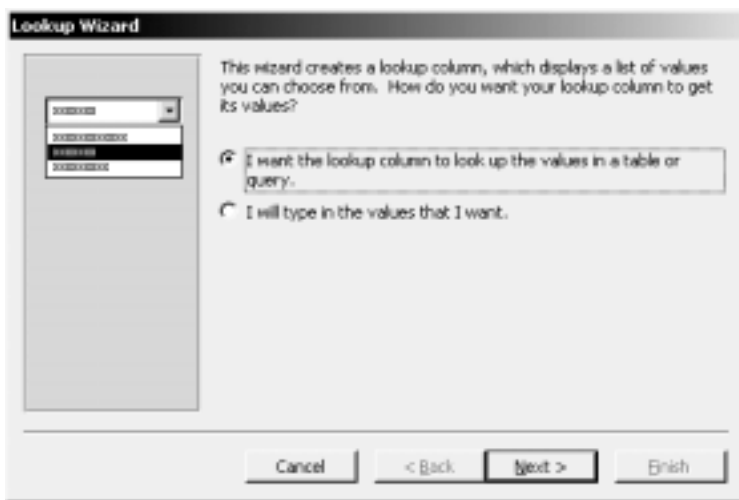
Add a screen shot or print of your table into your report under the heading ‘Booking test data’.

2.3 Link the tables together.

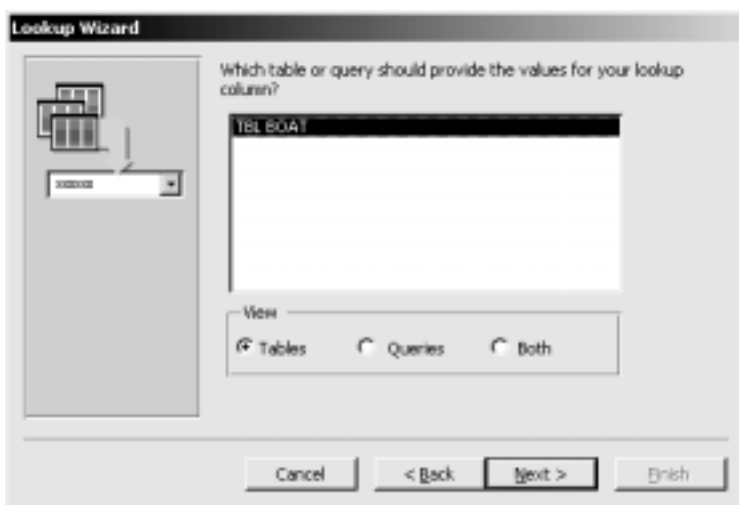
Use the Lookup wizard to link the foreign key 'Boat' in the booking table to the key 'boat' in the boat table. This will allow us to pick a boat when we fill in the booking form.



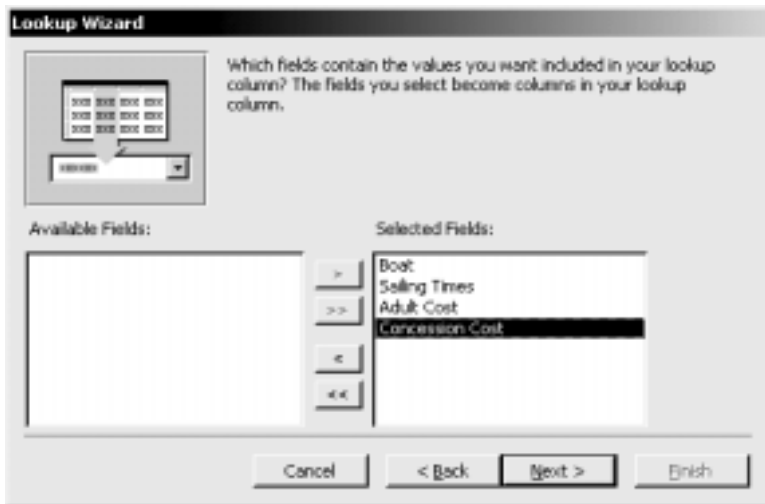
Select Lookup wizard on the BOOKING. Boat field.



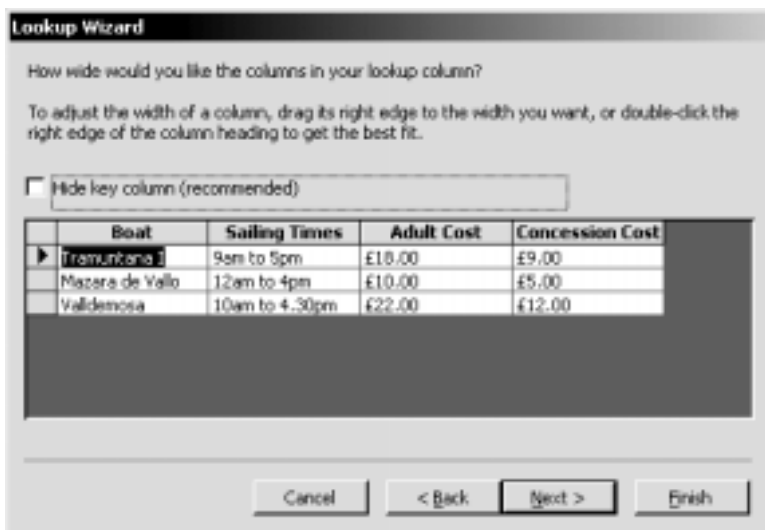
Pick look up values from another table.



The table we want data from is the Boat table.



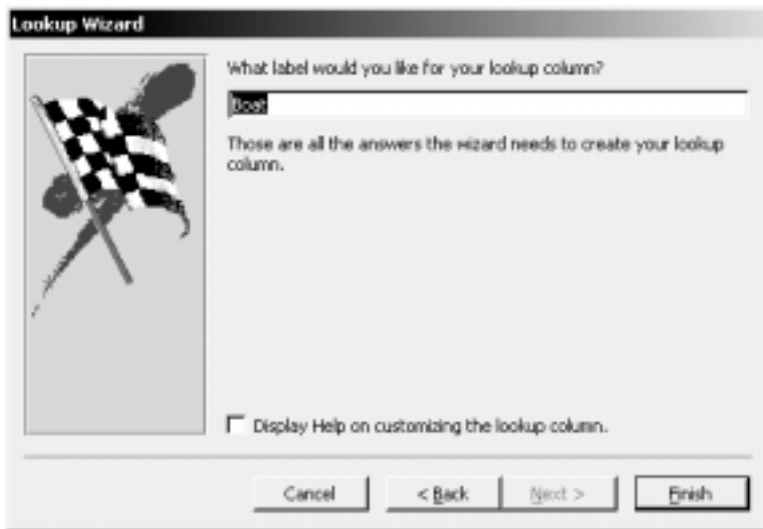
We want to see all of the fields when we pull down the list of boats.



We don't want to hide the key, as the key is the boat name.



We want to link Boat from the booking table to Boat from the boat table.

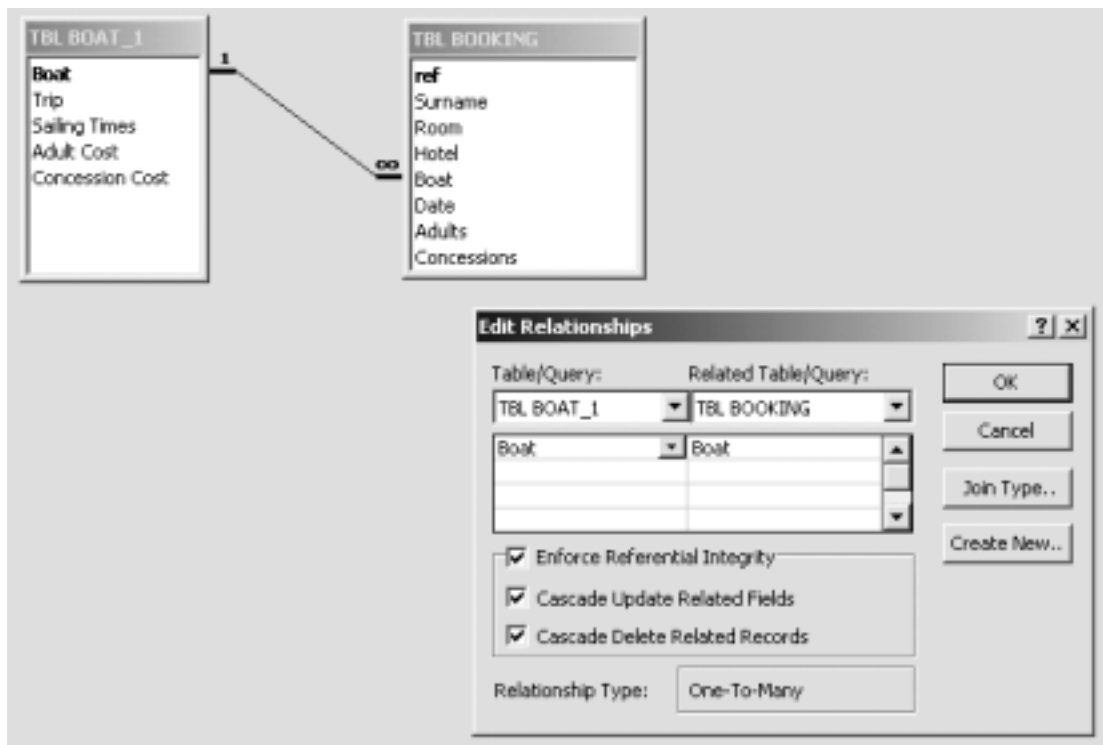


We have to give the link a name, call it Boat.

2.4 Relationships.

In your report, Put the heading Relationships. State that one boat can have many bookings.

Modify the relationships view to show this.



Copy a screen shot into your report. State that you created the relationship by using the lookup wizard.

3 Query Design.

Why do we use Queries? – There are four reasons why we use queries:

- In Tables, we split the data up. Sometimes you may want to **put the data back together again**. In this case, we need to create a ticket that has data from Booking and Boat.
- We may need to **sort the data**. For the passenger list, we need to sort the data into Surname ascending order.
- We may need to **search the data**. In the ticket, we only want a ticket for one booking, so we program the query to ask for the booking id. Only the ticket for the booking id will be shown.
- We may need to **carry out calculations**. The Total on the ticket is worked out using a formula Adults * Adult cost + Concessions * Concession Cost.

3.1 Query to create a Passenger List.

Construct the following Query, and save it as Passenger List.

Field:	Boat	Date	ref	Surname	Adults	Concessions
Table:	TBL BOOKING	TBL BOOKING	TBL BOOKING	TBL BOOKING	TBL BOOKING	TBL BOOKING
Sort:				Ascending		
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:	[Enter Name of Boat]	[Enter date of Sailing]				
or:						

In your report copy and paste a screen shot under the title ‘Passenger List Query’.

In your report note that:

- The operator enters the name of the boat, so only passengers for that boat are shown.
- The operator enters the date of the trip, so only passengers for that date are shown.
- The list is sorted into Surname ascending order, to make it easier to check passengers off on the boarding list.

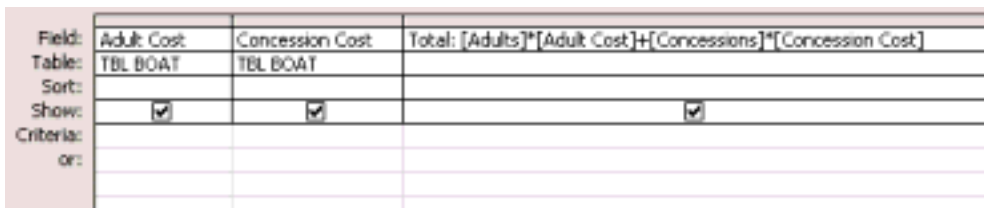
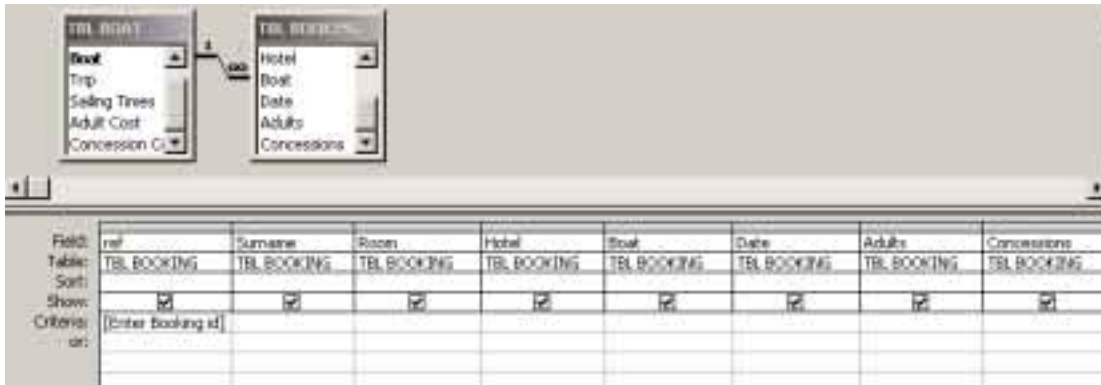
Test your Passenger List Query using the following data:

Name of boat **Valldemosa**
Date of Sailing **02/08/2004**

Print out the result of your test.

3.2 Query to create a Ticket.

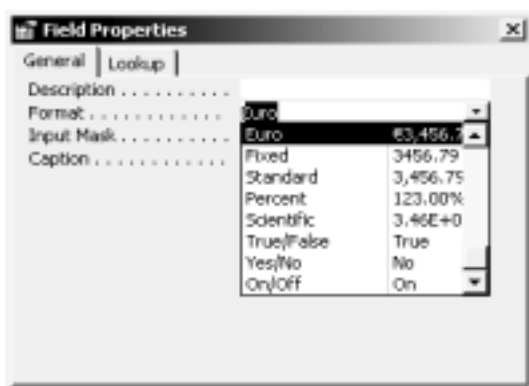
Construct the following Query, and save it as Ticket.



The total needs to be formatted to Euros



Right click on any of the lines underneath your formula, and pick properties.



From Format, pick Euros.

In your report copy and paste this query under the title 'Ticket Query'. Note that you will have to take two screen shots like above.

Note in your report that:

The operator enters the booking ID to call up the query.

The Total owed is worked out using the formula

$\text{Adults} * \text{Adult cost} + \text{Concessions} * \text{Concession Cost}$

Test your Ticket Query using the following data:

Booking ID **14** (Surname Rudd in Room 220)

Print out the result of your test.

4 Form Design.

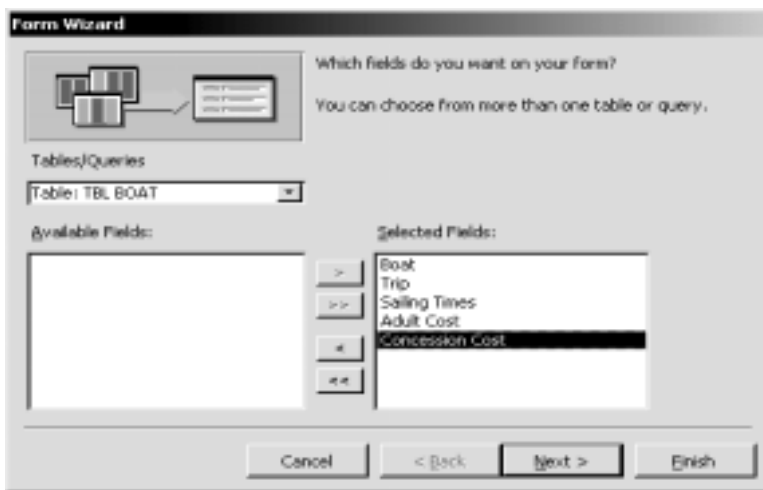
There are two ways of entering data into a table. In Datasheet view – which looks a bit like a spreadsheet, or using a form.

Forms are used to enter data into a table, such as a booking. They are used to present the table in an attractive way.

Two forms are needed for entering data:

- 4.1 to enter boat details into the boat table;
- 4.2 to enter booking details into the booking table.

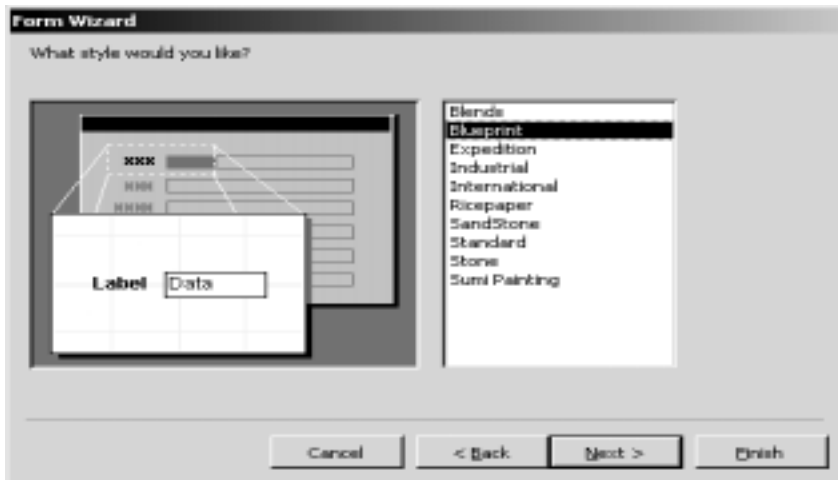
4.1 Boat Details. In the form section, use the ‘Create form using a wizard’ option to create a form for entering boat details.



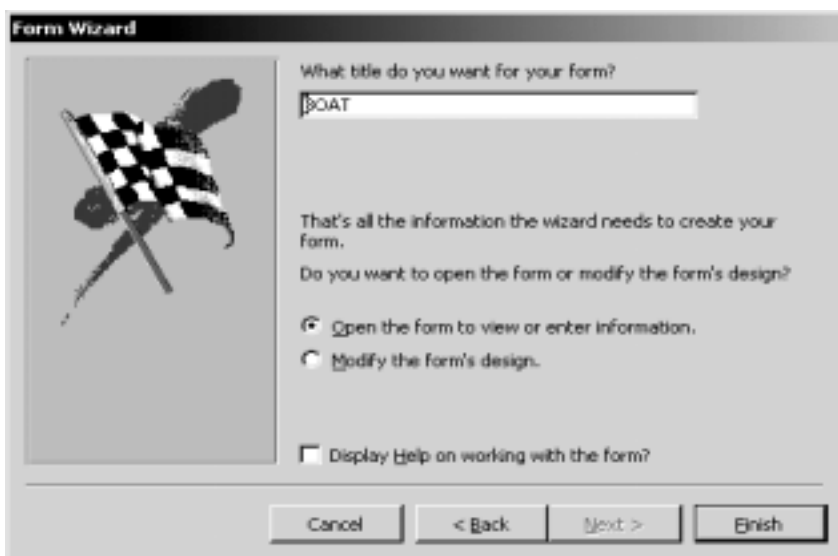
Select all of the fields from the TBL BOAT table.



Choose a layout.



Pick a style.



Call the form BOAT.

Boat	Mazara de Vallo
Trip	Glass bottomed boat trip around Alcudia bay, viewing the marine life through the unique glass viewing gallery.
Sailing Times	12am to 4pm
Adult Cost	€10.00
Concession Cost	€5.00

4.2 Booking Details. In the form section, use the 'Create form using a wizard' option to create a form for entering booking details.

Go through the same steps as above. This time pick:

- Table TBL BOOKING for the fields you require in the booking form;
- Justified Layout;
- BOOKING as the name of the form.

ref	Surname	Room	Hotel
	Garner	205	Delfin Park
Boat	Date	Adults	Concessions
Mazara de Vallo	01/08/2004	2	0
Trip			
Glass bottomed boat trip around Alcudia bay, viewing the marine life through the unique glass viewing gallery.			
Sailing Times	Adult Cost	Concession Cost	
12am to 4pm	€10.00	€5.00	

4.3 Under the title 'Creation of Forms', copy and paste both the booking form and the boat form into your report, stating that you used the Form wizard to create them. Write down any options you chose each time, so that someone else reading your work would know which options to choose to recreate your forms exactly.

5 Report design.

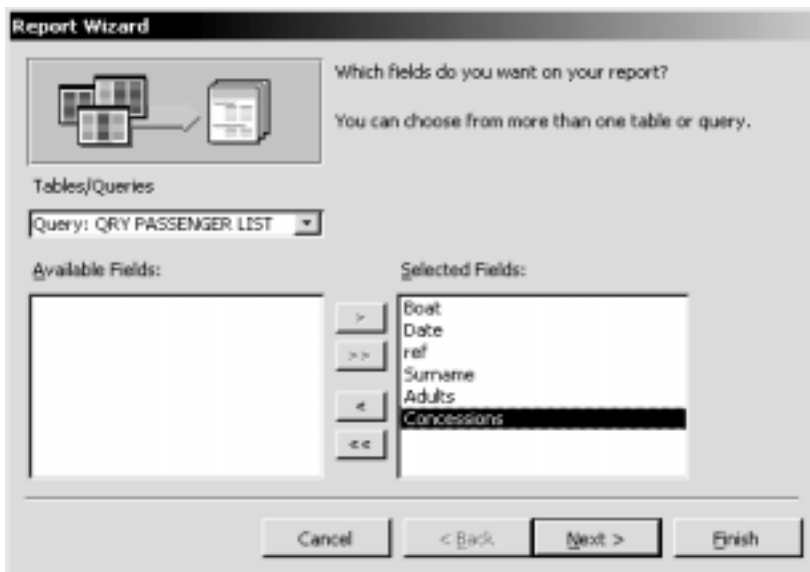
Reports are used to present data ready for printing.

Two reports need to be created:

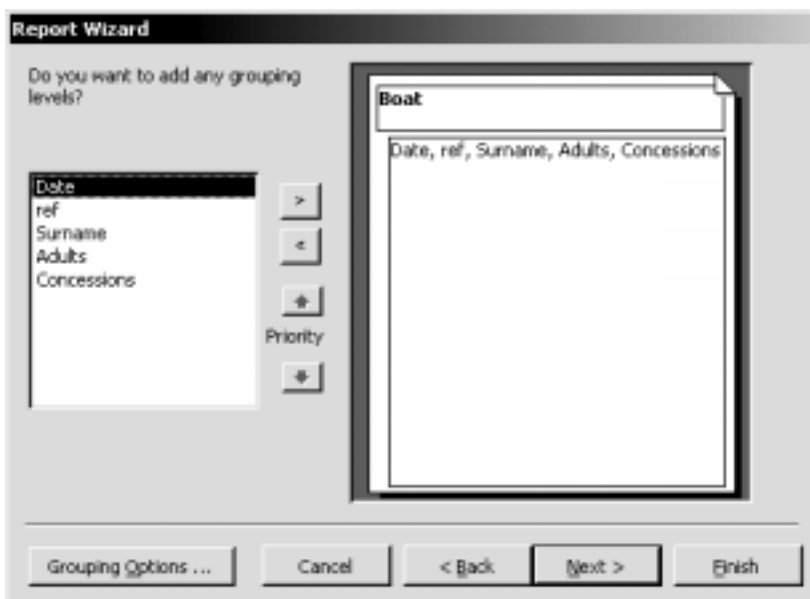
- 5.1 to show the results of the passenger list query;
- 5.2 to show the results of the ticket query.

5.1 Passenger List Report.

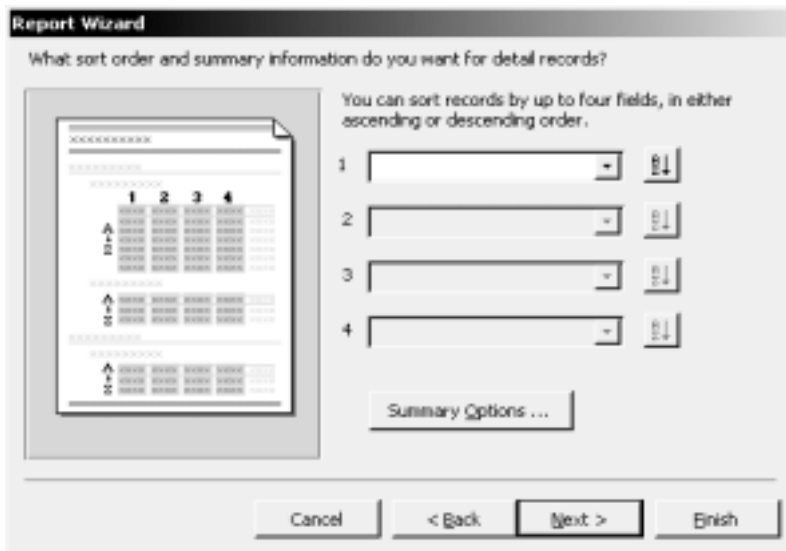
In the reports section, select 'Create report using a wizard' to create a passenger list.



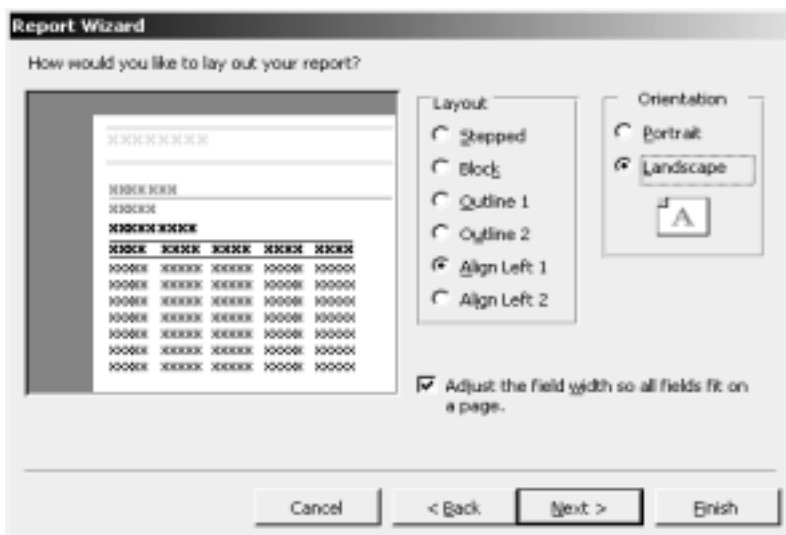
Pick the query Passenger list and select all of the fields.



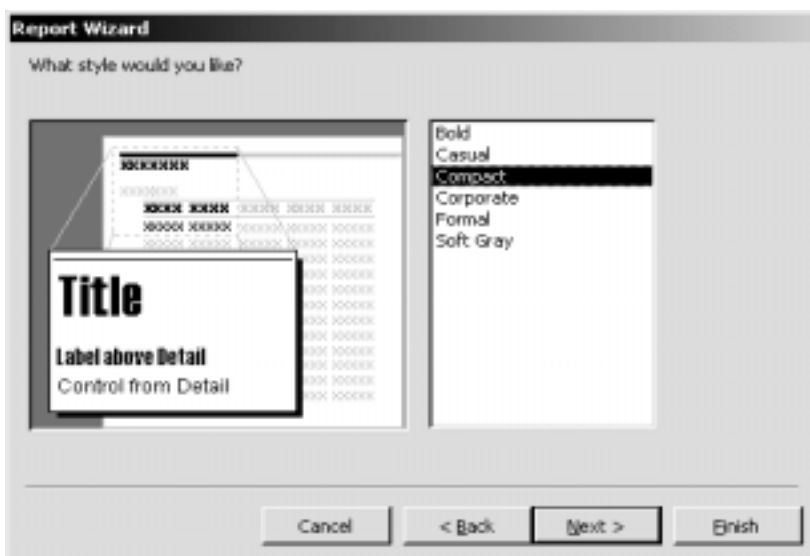
We do not require any further groupings, so just click next.



Our passenger list is already sorted by Surname in the query, so we don't need any further sorting.



Pick Align Left 1 and Landscape. This will space the list out in the best possible way.



Pick Compact to make the text all fit onto one page.

Report Wizard



What title do you want for your report?

That's all the information the wizard needs to create your report.

Do you want to preview the report or modify the report's design?

Preview the report.
 Modify the report's design.

Display Help on working with the report?

Cancel < Back Next > Finish

Call it Passenger List.

Test it by typing in 'Valldemosa' in the Name of Boat box, and 1/8/04 in the Date box. Print out a copy of the final passenger list.

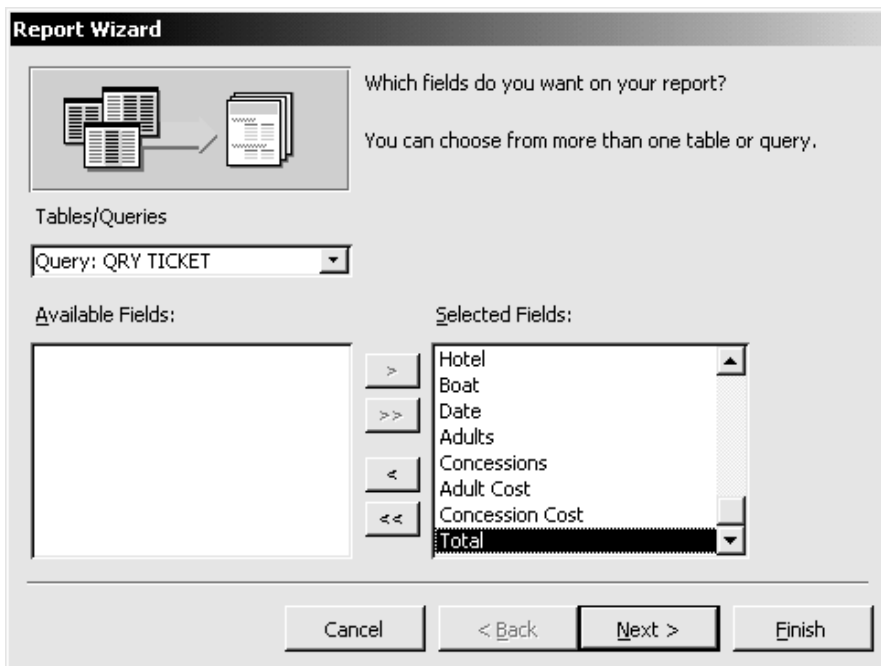
PASSENGER LIST

Boat	Valldemosa			
	Date	ref Surname	Adults	Concessions
	01/08/2004	6 Watt	2	1
	01/08/2004	5 Bradley	5	7

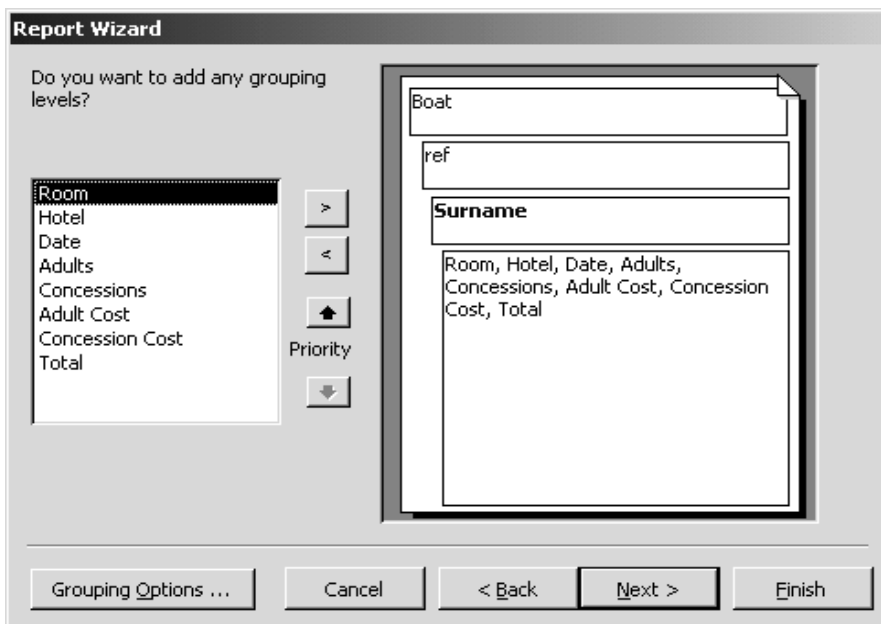
In your writeup, state that you used the report wizard to create the passenger list. Make sure that you give all the options you chose, including that you used compact text to make the form as small as possible.

6 The Ticket.

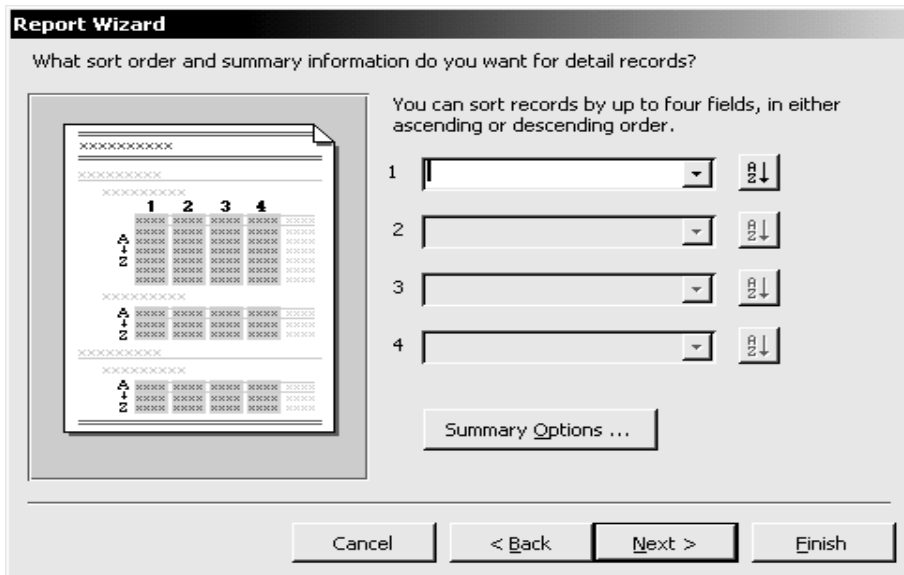
Use a report wizard to create a ticket.



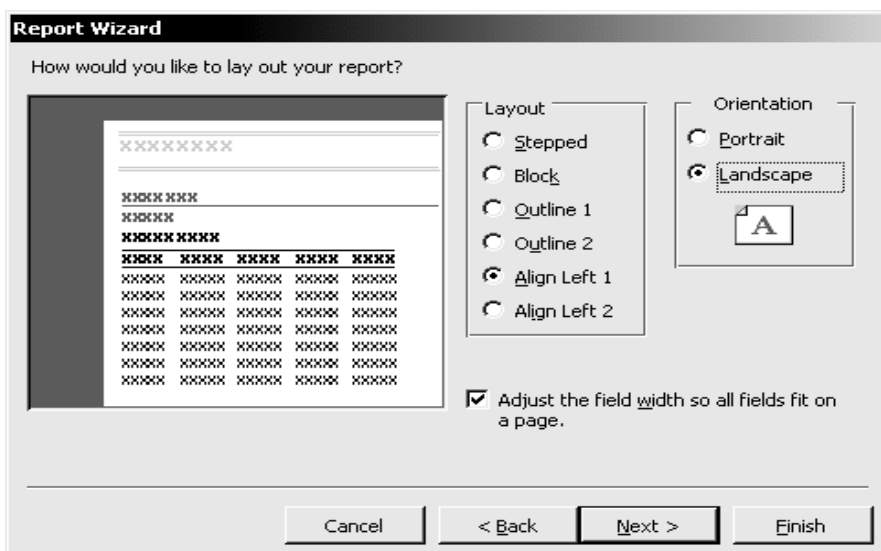
Pick the Query Ticket.



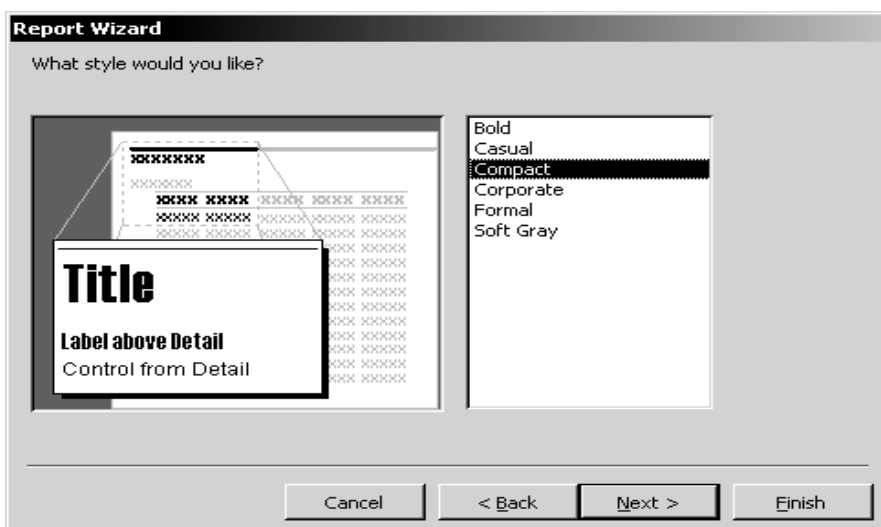
Add groupings for ref and Surname. It makes the surname stand out in Bold, which will be helpful when checking the ticket against the passenger list.



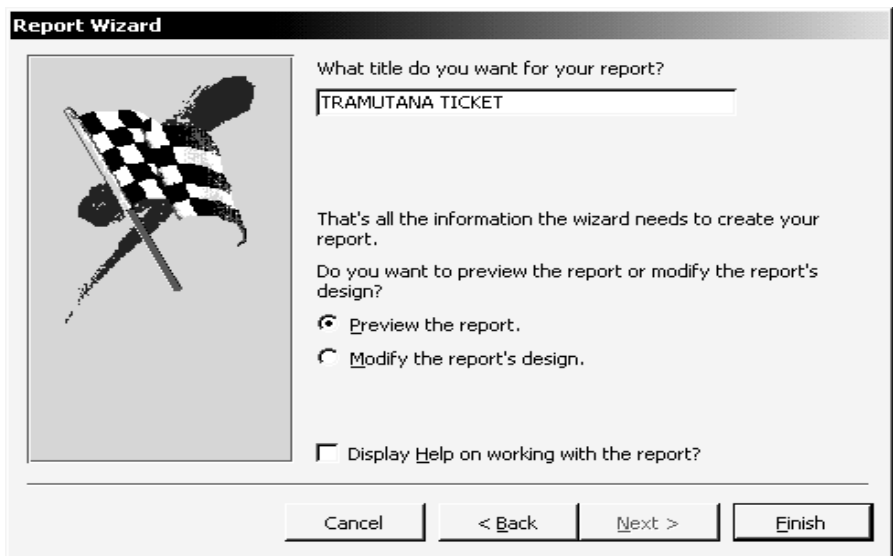
No sorting needed.



Align left 1 and Landscape to give maximum space.



Compact writing for maximum space.



Call the report Tramutana Ticket.

To preview the report, enter booking id 1.
Print out a copy of this ticket.

TRAMUTANA TICKET							
Boat Mazar'a de Vallo							
ref		1					
Surname	Garner						
Room	Hotel	Date	Adults	Concessions	Adult Cost	Concession Cost	Total
205	Delin Park	01/08/2004	2	0	€1000	€500	€2000

In your writeup, state that you used the report wizard to create the ticket. Make sure that you give all the options you chose, including the fact that it is based on the ticket query and that you used compact text to make the form as small as possible.

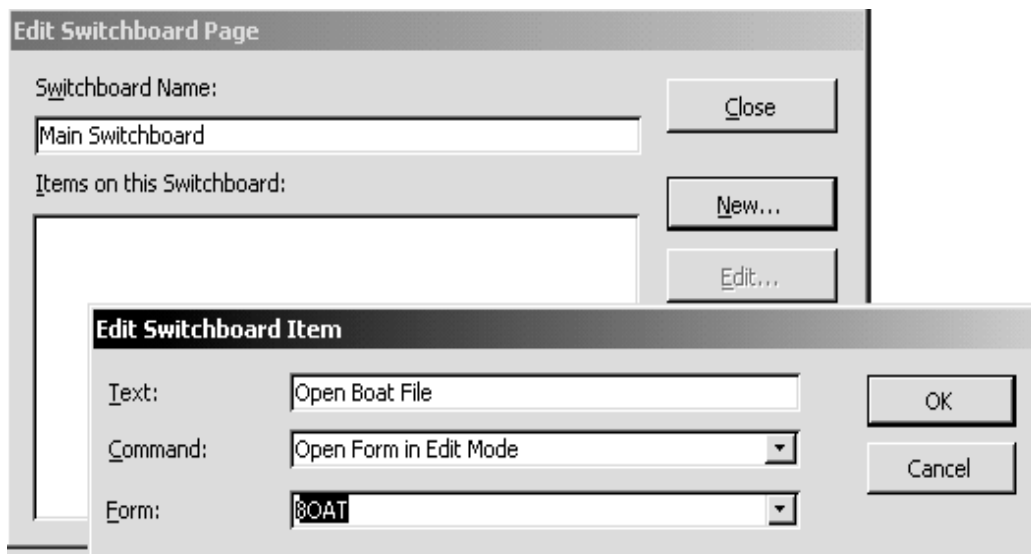
7 The Switchboard.

The switchboard is the front menu that will have buttons linking the Boat and Booking forms, and the Passenger List and Ticket reports. This is the Graphical User Interface and makes the database much easier to use.

Pick Tools - Database Utilities – Switchboard, then create a switchboard.



Select Edit to edit the switchboard.

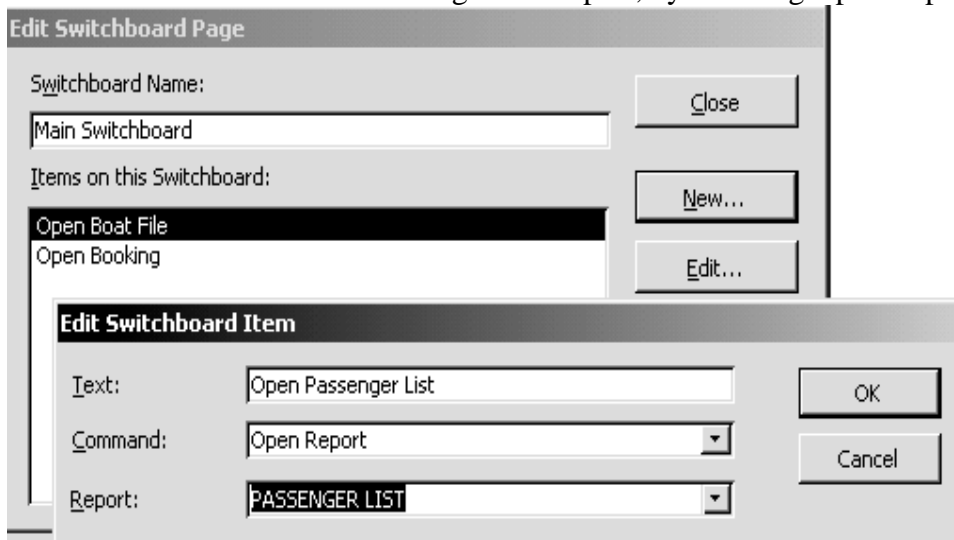


Select New to create a new button.

- The Text for the first button should be **Open Boat File**.
- The Command is what the button should do. Select **Open Form in Edit Mode** to open the form.
- Select **BOAT** to select the boat form.

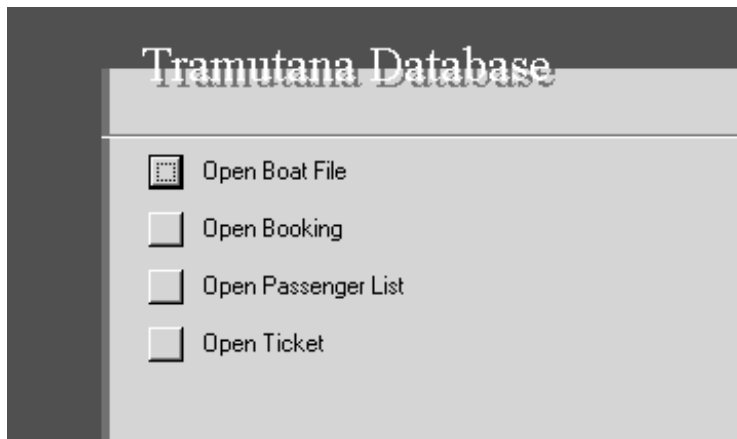
Create a New button in exactly the same way for the Booking Table.

Create a new button for the Passenger List report, by selecting Open Report in Edit Mode.



7.2 Create a new button in exactly the same way for the for the Ticket report

7.3 Close the switchboard editor, and test it by opening it from the Forms tab.



In your report, under the heading 'Switchboard', state that you have created the switchboard to open the forms and reports you have created. Copy and paste a screen shot of the switchboard into your work.

8 Testing

Now that we have created the database, we need to test it.

There are three types of test we need to carry out.

Normal – Test the database using normal every day data.

Extreme – Test the database using extreme data – Data at the maximum and minimum ends of what is acceptable. I.e. the minimum number of adults plus the Minimum number of concessions should be 1., To test this, we would book one person onto a trip.

Erroneous - Data that is wrong. For example entering 'one' instead of '1' in the number of adults on the booking form.

Under title 'Testing' copy and complete each of the tests below, filling in the expected output. Carry out the test and copy and paste a screenshot of the result into the bottom row for each test.

NORMAL TESTING TEST 1.

Description of the Test	Input Data	Expected Output
Test all of the buttons on the Switchboard	Click each button in turn.	
Screenshot:		

EXTREME TESTING TEST 2.

Description of the Test	Input Data	Expected Output
Enter a booking in the booking form. The minimum number of adults and concessions entered.	Surname: Garner, Hotel: Delfin Park, Room Number: 334, Boat: Mazara de Vallo, Date: 2/8/04, Adults 1, Concessions 0,	
Screenshot:		

NORMAL TESTING TEST 3.

Description of the Test	Input Data	Expected Output
Print out a ticket for test 2.		
Screenshot:		

NORMAL TESTING TEST 4.

Description of the Test	Input Data	Expected Output
Enter a new boat trip on the boat form.		
Screenshot:		

NORMAL TESTING TEST 5.

Description of the Test	Input Data	Expected Output
Print out a Passenger List		
Screenshot:		

ERRONIOUS TESTING TEST 5.

Description of the Test	Input Data	Expected Output
Enter invalid data 1000000 into number of adults		
Screenshot:		

9 Modifications.

Validation rules forces the user to enter data that is correct. For example, if you wanted to add a validation rule that forced the user to enter a date for the trip greater than or equal to today's date, you would do the following:

1. Open the Booking table in design View.
2. Pick the date field.
3. In the Validation rule, type in the validation you require. For a date that is \geq today's date, the rule would be \geq date()

Date() is code for today's date.

TBL BOOKING : Table			
	Field Name	Data Type	
	ref	AutoNumber	Key, Auto Number 1,2,3,...,n
	Surname	Text	Length 20
	Room	Number	Room number at hotel
	Hotel	Text	Length 50, Hotel Name
	Boat	Text	Lookup wizard to Boat.TBL BOAT
	Date	Date/Time	Date of Trip
	Adults	Number	No of adult tickets
	Concessions	Number	No of concessions tickets

Field Properties	
General Lookup	
Format	
Input Mask	
Caption	
Default Value	
Validation Rule	\geq Date() ...
Validation Text	
Required	No
Indexed	No

Test 5 produced a result that was erroneous because the boat would sink if 1,000,000 people tried to climb aboard.

We need to modify the database so that it only allows group bookings up to 60 people.

We need to add a validation rule that only allows up to 60 Adults and/or 60 Concessions on a booking.

The validation can be carried out in the same manner as the date example. The code for greater than or equal to is \geq

IN your report, put the title 'Modifications'. State that you found a problem with test number 5. Explain the problem.

Alter the validation for both the Adults and Concessions fields.

Take a screen shot of the alterations and add it to your report.

10 Evaluation

Evaluation should be done against the design Specification – The list of requirements for the project.

Under The title Evaluation, explain that you are going to evaluate against the original design specification. Copy and complete the following form below, filling in the gaps.

Evaluation

1. Input and store Boat information to include Name of boat, sailing times, description of trip, cost per adult, cost per concession.

Achieved?	Where?

2. Have a form for entering Boat information

Achieved?	Where?

3. Input and store Booking information to include Surname, name of boat, date of trip, number of adults, number of concessions.

Achieved?	Where?

4. Have a form for entering the booking information.

Achieved?	Where?

5. Create a ticket that includes all information about the boat and trip and the booking details, and also the total cost to pay.

Achieved?	Where?

6. Create a passenger list for each sailing that is in surname alphabetical order.

Achieved?	Where?

7. Have a main menu switchboard that provides links to the Boat form, Booking form, Ticket report and Passenger List report.

Achieved?	Where?

11 User Manual

You are required to create a user manual for the Tramutana Database you have created.

Use the following headings for your document. For each heading, write a section in a how to... style, include screen shots as necessary.

You should find you don't need to write too much, if you make good use of screenshots, with arrows etc showing clearly what needs to be done.

How to open the software and load the Tramutana Database

The Main Menu

How to add a boat trip

How to book customers onto a trip

How to create a passenger list

How to create a ticket

How to print

How to save and exit from the Tramutana Database

RESOURCES FOR TEACHING MODULE C

8.2.4 Legislation

The main areas of the law

You need to know about:

- Data Protection Act;
- Computer Misuse Act;
- Copyright, Designs and Patents Act;
- Health and Safety at Work Act;
- Health and Safety Regulations;
- Regulation of Investigatory Powers Act.

As the use of ICT becomes more and more widespread, not only the use of computing at home and at work but also the amount of information that is kept about individuals and groups on ICT systems.

What are some of the drawbacks that have arisen through the growth of ICT:

-
-
-

RESOURCES USED IN PREPARATION FOR ASSESSMENT UNIT 1 ICT KNOWLEDGE AND UNDERSTANDING (WRITTEN PAPER)

Additional materials, such as past question papers, are available through OCR publications, telephone 0870 770 6622 or email publications@ocr.org.uk

Some general revision:

- Complete the following table with one answer in each box:

Department	What does the department do?	Type of application software used	How it might be used	Documents that the department would prepare using ICT	One benefit through the use of ICT
Sales					
Purchasing					
Finance					
Operations					

- An estate agent keeps a list of all their clients manually at present and has recently bought the Access database program so they can computerise their use of client data.

i) Describe TWO benefits to the estate agent through the use of database software.

ii) Identify two pieces of legislation that will they have to comply with through using ICT to handle client details.

iii) List 5 separate field headings that might be used in setting up the database structure.

- A manufacturing business has introduced the use of robotics and CAD/CAM into their business in the hope that it will make the design, testing and manufacture of their products more efficient and accurate.

i) What is CAD/CAM an abbreviation of?

ii) EXPLAIN one reason why robotics will make production more efficient.

iii) What is meant by the term automation?

iv) What might some of the implications for employees be through the introduction of the new ICT facilities? Describe TWO.

- ICT is increasingly being used as a control device eg, controlling temperatures or controlling timings.

Identify TWO pieces of equipment that could be used to control temperatures/timings.

Temperature _____.

Timings _____.

- List the 4 main types of backing storage that a manufacturing company could use. State the main use of each:

i) Type of backing store: _____

Main use: _____

ii) Type of backing store: _____

Main use: _____

iii) Type of backing store: _____

Main use: _____

iv) Type of backing store: _____

Main use: _____

• What does the abbreviation CPU stand for? _____.

• IDENTIFY one way that the following equipment might be used:

i) Scanner _____

ii) Zip Disk _____

iii) Magnetic tape _____

iv) Hard drive _____

• EXPLAIN two risks to businesses that hold information on ICT facilities.

Risk 1 _____

Risk 2 _____

MATERIALS USED BY CENTRES TO SUPPORT PORTFOLIO WORK

Note to teachers

The following portfolio cover sheet and feedback form can be used with either portfolio, or for a single task. Positive and constructive feedback is an example of good practice which helps candidates achieve their potential as well as indicating to the moderator the amount of help, if any, the candidate has received.

These are an excellent aid allowing teachers to give formative feedback to students preparing portfolios for submission and will also indicate to the moderator the amount of help, if any, given to the candidate.

APPLIED GCSE ICT PORTFOLIO COVER SHEET

Candidate Name	
-----------------------	--

Portfolio Title	
------------------------	--

Portfolio Number		Date Issued	
-------------------------	--	--------------------	--

Assessor(s)		Date Due	
--------------------	--	-----------------	--

Assessment Decisions:	Evidence satisfies the basic requirements of the assignment?	Yes	No
------------------------------	---	------------	-----------

Points Awarded		Assignment Moderated?	Yes/No
Has interim feedback sheet been completed?	Yes/No	Have witness statements and evidence of planning been included?	Yes/No

Assessor's Feedback (two comments written if two teacher assessors)
<u>Assessor 1:</u>
<u>Assessor 2:</u>

Assessor 1 Signature		Date	
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Assessor 2 Signature		Date	
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INTERIM FEEDBACK SHEET –

TO BE COMPLETED DURING COMPLETION OF ASSIGNMENT IN LINE WITH OUR QUALITY INDICATORS

<p>FEEDBACK SESSION ONE:</p> <p>DATE _____</p> <p>What evidence has been produced thus far?</p> <ul style="list-style-type: none">•••••	<p>Interim assessment evidence – How is student progressing? What is the quality of the work like?</p> <hr/> <p>Students is presently working at Grade _____</p> <p>Targets for improvement:</p> <p>1)</p> <p>2)</p>
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<p>FEEDBACK SESSION TWO:</p> <p>DATE _____</p> <p>What evidence has been produced thus far?</p> <ul style="list-style-type: none">•••••	<p>Interim assessment evidence – How is student progressing? What is the quality of the work like?</p> <hr/> <p>Students is presently working at Grade _____</p> <p>Targets for improvement:</p> <p>1)</p> <p>2)</p>
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RESOURCES USED WITH ASSESSMENT UNIT 2 BUSINESS SYSTEMS PORTFOLIO

The material in these sections has been supplied by centres who have found it useful. In including it in this pack, OCR is not endorsing any specific worksheets/instructions as enabling access to the complete mark range. The responsibility for ensuring work meets the specification criteria remains with the centre.

It is important that assignments are not too prescriptive. Portfolios that are submitted for assessment must be the candidate's own work.

The first centre has given guidance based on specific grades and the second centre has given guidance based on different levels. This is each centre's own interpretation of the Assessment Evidence grid.

YEAR 10 APPLIED GCSE ICT

Unit 2 – Portfolio – Your first assignment!

You will find below your very first assignment for the course. As you complete the assignment, you will be building up what we call a “portfolio”. Your teachers will then mark the contents of your portfolio.

You will also find attached a copy of the assessment grid. This is the grid that is used to mark your work. When you look at the grid, you will see 3 columns. Each column has a set of allocated marks. The middle and right hand columns are where the higher marks are to be found.

Each column describes what you are expected to do in order to gain the marks within that column. Therefore, we have to check your work meets what the exam board states you must do in order to get the marks that are available.

We will talk more about this later ... Let's get to the assignment.

Tasks

A You will have to find 2 different businesses that use ICT so you can investigate, describe and explain how and why they use ICT.

Your businesses need to be completely different from each other. This means one large business that uses a lot of ICT and a smaller business that only makes a small use of ICT.

The questions you need to find answers to are:

- discovering a minimum of 3 ways that both businesses use ICT, what information they need in order to use it, along with what hardware and software they use.

Example: the business may use ICT to develop a web site. What information is needed for the web site? What hardware and what software?

- why the businesses use ICT to help them run more efficiently and how the use of ICT helps improve communication.

Once you have gathered all the evidence you need, word process a small report on each business that meets the requirements of the bullet points above.

Your deadline for this task to be written up is _____

B Collect a range of documents that are used by each of the business. Examples are shown below:

business letters, memos, reports, flyers, newsletters, presentations etc

If you are aiming for higher grades, collect documents from a variety of organisations!

Word process another section of your report that:

- describes the content and layout of at least 2 of the documents collected from each of your 2 main organisations;
- identifies the purpose and audience for the documents you have described;
- comments on the standard of the documents:

What do they tell you about the business?

Is there a clear, well-designed house style?

Why is this style used?

What have you learnt from the documents that will help you to layout your own documents later in the assignment?

Your deadline for this task to be written up is _____

You are now going to develop your own system using ICT to solve a problem.

As you know, Mr Evans is the Work-Experience Co-ordinator within the school. He regularly writes to parents, students and local businesses. He wants you to develop an ICT system that will help him maintain employer records, provide mail merge facilities and the ability to produce reports. At the moment his system is out-of-date, he is unsure of how to improve it and will need a user manual to help him use any new system effectively.

C Find out what information Mr Evans needs in order to arrange work experience for students and how the information flows between himself and the people that he works with.

- Draft, spellcheck/proofread and then finalise at least 3 documents that Mr Evans could use. You must use Word Processing, DTP and presentation software. These could be a letter, an information leaflet for students, a powerpoint presentation for parents at Yr 10 evening etc. One document must use mail-merge and you should show a consistent house style across each document.

Remember to use the documents collected in task B to help you do this.

Your deadline for this task to be written up is _____

- D Prepare either a simple data flow or a more complex data flow diagram for your system. Analyse the information flows.

Your deadline for this task to be written up is _____

- E Design a specification for the new system that you are going to create for Mr Evans. It should cover:

- a description of the user requirements;
- indication of where the information will be obtained;
- describe in detail the inputs, process and outputs;
- identify the type of application software that will be used;
- describe how the system will be tested.

Your deadline for this task to be written up is _____

- F You will now be expected to design the system for Mr Evans. At all stages of the process you must take screen shots and describe how you developed the system. It is important that for higher grades, you go through this step by step.

The basic golden rule is that if someone followed all your evidence, they would be able to make an exact copy of your system!

Your deadline for this task to be written up is _____

- G You will be expected to prepare a testing schedule that will include normal, abnormal and extreme inputs. Print out evidence of your testing and also the evidence of any changes to your system.

Explain why testing is important and then comment in detail on your system. Does it do what the specification from task E above states?

Your deadline for this task to be written up is _____

H This is a very detailed part of the assignment. You have to produce a user guide that Mr Evans will be able to follow in order to use your system effectively. The user guide should cover detailed instructions of how to:

- open the software;
- input data;
- obtain outputs;
- print the output;
- save and exit.

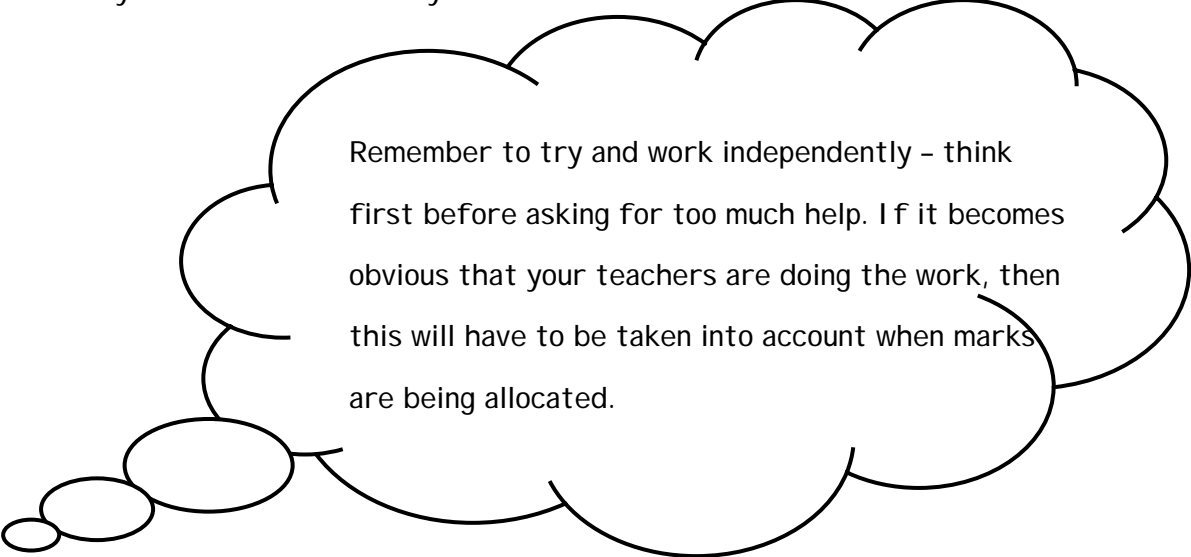
For higher grade marks, use screen shots that are included in your guide so that Mr Evans can see within the guide what the screen should look like. Use non-technical language.

Try to get a user guide eg, on how load Software, a printer etc to give an idea of presentation, style, layout etc

Your deadline for this task to be written up is _____

Try to look at the assessment grid as you go along. This will show you the level that your work must reach. We will be monitoring your work closely during the next few months.

You must stick to your deadlines so that you do not fall behind!



Remember to try and work independently - think first before asking for too much help. If it becomes obvious that your teachers are doing the work, then this will have to be taken into account when marks are being allocated.

Finally: *GOOD LUCK.*

YEAR 10 APPLIED ICT

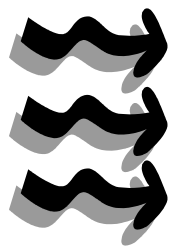
PORTFOLIO 1 – PORTFOLIO DIARY

The diary that appears below is a breakdown of all the ICT lessons that you will have in order to complete the first piece of portfolio work. This portfolio diary should be followed very carefully.

The aim of the coursework diary is to help you:

- Organise your time and task management. Following the diary should help you remain up-to-date and not miss deadlines;
- Come up with ideas and suggestions on what to include in your portfolio;
- To work independently – the diary gives you a complete structure on what to do;
- Organise homework as this will also be included in the diary.

DEADLINES are extremely important on an Applied GCSE – the portfolio is worth 33% of your overall grade and it is vital that you pay real attention to the content within the coursework diary. Meeting deadlines will allow your teachers to assess your work, give feedback and target you towards a specific grade.



The assignment grid is also included. Remember, it is a breakdown of the work that is required for all the different grades. Use it to target yourself towards CC/BB/AA/** level work. The work needed for each grade is also included in the coursework diary, so if you follow the diary carefully you should cover the higher grades anyway.

<i>Date and Time of Lesson</i>	<i>Details of the work to be completed (to be read along side the assignment and the assignment grid)!</i>
This corresponds to TASK A of the assignment.	<ul style="list-style-type: none">▪ You will be looking at two different organisations and how they use ICT. The organisations need to be different, eg, one large and one small or one that uses a lot of ICT and another business that does not.▪ To make life simple we will be looking at Royal & Sun Alliance and our own School – specifically how Mr Evans uses ICT to organise work experience.▪ You <i>first task is to prepare an interview sheet</i> for both R&SA and Mr Evans. You will have a guest speaker from R&SA coming in to school and talking to you about how they use ICT. The information that you

<p>Homework:</p> <p>Finish typing up your interview sheet!</p>	<p>need to find out for both systems include:</p> <ul style="list-style-type: none"> ✓ At least three different ways (eg, e-mail, a website, insurance quotations), that the organisations use ICT; ✓ What information they need to put on to the ICT system; ✓ What hardware they use and why they use it; ✓ What software they use and why they use it; ✓ For higher grades, you also have to find out how ICT helps meet the organisations needs eg, speed, accuracy, presentation.
	<ul style="list-style-type: none"> ▪ Carrying out the interviews and taking notes from each guest speaker.
	<ul style="list-style-type: none"> ▪ Carrying out the interviews and taking notes from each guest speaker.
<p>Homework:</p> <p>Ensure this section is word processed and completed for marking</p>	<ul style="list-style-type: none"> ▪ Now you have to type up a report (using report format): <p style="text-align: center;">REPORT</p> <p>To: From: Date: Subject: ICT Portfolio 1.</p> <p>Section 1 Introduction (make sure that you use bold!!)</p> <ul style="list-style-type: none"> ▪ Introduce, using two paragraphs what this portfolio is about: <ul style="list-style-type: none"> ✓ In paragraph one – mention you are researching how organisations use ICT, state what the two organisations are, mention you have prepared an interview sheets, introduce the two people making the presentations. ✓ In paragraph two, explain that you will have to devise a new system for Mr Evans. Explain what your system must do and how you will design, implement and test a new system to ensure that it meets the needs of Mr Evans.
<p>Keep these documents safe and ensure you do not lose them or forget to bring them to the lesson.</p> <p>Homework:</p> <p>Ensure all 6 documents are finished.</p>	<ul style="list-style-type: none"> ▪ You now have to collect a variety of business documents. <ul style="list-style-type: none"> ✓ Two of these must come from R& SA; ✓ Two must come from the school; ✓ At least another 3 from different organisations. ▪ You will have to “stick” these documents on separate sheets of A3 paper and annotate them. This means draw attention to the features and formatting of the documents eg: <ul style="list-style-type: none"> - font sizes and font colours; - other use of colour (backgrounds etc); - use of images; - layout (columns, tables etc); - the key features (address, organisation name, salutation and so on)

<p>This is TASK B of the portfolio.</p>	<ul style="list-style-type: none"> ▪ Now go back into the report that you word processed earlier. ▪ Add another Section called Section 2 Business Documents ▪ Now you will have to go through each of the documents from the previous task. Each document should be in a separate section, for example: <p>Section 2.1 Newsletter from R & SA Section 2.2 Flyer from Tesco</p> <p>Under each heading describe each of the documents – refer to the annotations that you made on the A3 sheets. Make sure that you cover the features and the formatting used.</p> <p>For dd/cc/bb grades you will have to cover the following points within each of the sections:</p> <ul style="list-style-type: none"> ✓ I identify the target audience for each document (ie, who it is aimed at); ✓ I identify the purpose of each document; ✓ Comment using explanations on how well the documents meet the needs of the target audience, eg, <p>“This document is fit for the purpose because it uses images such as pets that relate to the target audience, ie, pet owners. The green and black colours used are the corporate colours of R&SA and this part of their house style. This is effective because”</p>
<p><i>This will be a catch up period for all students who are not attempting these grades.</i></p>	<p>For bb/aa/** grades you have to have a separate section called conclusions, eg, Section 2.8 Conclusions. In your conclusion you have to cover the following questions:</p> <ul style="list-style-type: none"> ✓ What have you learned about the layout of business documents? ✓ Why is a house style important? ✓ How will you use what you have learned to develop your own documents?

<p>This is TASK C of the portfolio.</p>	<ul style="list-style-type: none"> ▪ You now have to use everything you have learned about the formatting and features of business documents. <p>You will have to prepare 3 documents as follows:</p> <ul style="list-style-type: none"> ✓ A powerpoint presentation that Mr Evans could use at Year 9 options evening – presentation software; ✓ A flyer/leaflet that could be given to Year 10 students publicising the benefits of work experience – DTP software; ✓ A standard letter that could be used in a mail merge to write to employers about work experience – word processing software. <p>▪ Find out what a house style is. Think of how you can apply a house style to all of the 3 documents that you will produce.</p> <p>The first document to work on is the Powerpoint presentation:</p> <p>Use the following:</p> <ul style="list-style-type: none"> ✓ A minimum of 3 pages (more for higher marks); ✓ Graphics; ✓ Numbers; ✓ Wrapping features; ✓ Different formatting features; ✓ Animation effects eg, text, sound and so on. ✓ Interactivity – menus and action buttons (for higher marks)
	<ul style="list-style-type: none"> ▪ Continuing with the powerpoint presentation. Ensure that you proof read your work. <p>Include an original and improved/corrected version in your folder</p>
	<ul style="list-style-type: none"> ▪ Working on the information leaflet for Year 10 students: <p>Again think of the following:</p> <ul style="list-style-type: none"> ✓ A multi-page leaflet with headers and footers is needed for higher marks ✓ Bullet points, ✓ Images and wrapping; ✓ Tables; ✓ Any other features. <p>Proof read and check your work.</p> <p>Include an original and improved/corrected version in your folder</p>

	<ul style="list-style-type: none"> ▪ Working on a standard letter. <p>Find out how to layout a formal business letter. Use the school letterhead as a basis of the letter – Can you scan in the letterhead?</p> <p>Now design a standard letter for Mr Evans to write to employers asking them if they are willing to offer a placement to students this year.</p> <p>For higher marks this should be an extensive letter showing a range of software skills. You might produce a multi-page letter including plenty of details and a reply slip</p> <p>Use formal language, remember the target audience, proper salutations, closures and so on. Proof read your work. Include an original and improved/corrected version in your folder</p>
<p>This is TASK D of The portfolio</p>	<p>Working on Task D – the data flow diagram.</p> <ul style="list-style-type: none"> ▪ Take out your interview notes from when you interviewed Mr Evans. ▪ I identify all the information that Mr Evans needs in order to arrange work experience. Key in another Section heading called Section 3 Dataflow diagram. Under this heading describe the information flows that Mr Evans uses. Refer to your interview notes. ▪ Find out the correct symbols that should be used in the construction of a dataflow diagram. ▪ Use the information that you have gathered and prepare a data flow diagram. To do this think carefully of: <ul style="list-style-type: none"> ✓ What information Mr Evans needs to arrange a work experience placement; ✓ Where the data is stored; ✓ How the data is processed; ✓ What the outputs are. <p>For higher marks you should add a written analysis of the problem.</p>
<p>This is moving on to Task E of the Portfolio.</p>	<ul style="list-style-type: none"> ▪ You now have to prepare a specification for the new system that you will design for Mr Evans. <p>Key in a new Section called Section 4.0 Specification</p> <p>Use the following headings to ensure you cover the correct criteria:</p>

	<p>Section 4.1 User Requirements</p> <p>Here explain what Mr Evans wants the new system to do. Refer back to the interview that you carried out with him. Cover the need for mail merge and database.</p> <p>Section 4.2 Sources of information</p> <p>Explain where the data to be entered into the system comes from. It may be useful to refer back to your dataflow diagram.</p> <p>Section 4.3 Inputs, Process and Output</p> <p>Explain what inputs will be used, how they will be processed and what the outputs might be. For example, inputting employer details and then performing queries or preparing reports. Outputs might be formatted database reports or query results.</p> <p>Section 4.4 Types of application software used.</p> <p>List the software that will be used to run your system and explain why you are using them.</p> <p>Section 4.5 Testing</p> <p>Here you will explain why the system needs to be tested and the benefits that testing will bring. Explain you will include a more detailed testing section later in the portfolio.</p> <p>For dd/cc/bb grades you need to ensure that you describe and explain under the headings above. You must also be using more than one piece of software.</p>
	<ul style="list-style-type: none"> ▪ Finishing TASK E.
<p>Moving on – it is now TASK F.</p>	<ul style="list-style-type: none"> ▪ Now you will actually have to design your system. This is where you will have to think carefully of what you want to do: <ul style="list-style-type: none"> ✓ Enter Access and design the database structure. Think carefully of the fields that you will use eg: Title, Initial, First name, Surname, Employer name and so on. ✓ IT IS VERY IMPORTANT that you check that your fields can be used in the standard letter that you prepared in Task C. This is because you will use the mail merge function to prepare final letters to employers. ✓ When entering each field make sure that you format the field correctly eg, length of characters, validation rules, look up tables.

	<ul style="list-style-type: none"> ✓ Think of ways that you can reduce the risk of input errors – using lookup features. <p>Your teacher will talk through with you what validation, look ups and so on mean and how do them using Access.</p> <ul style="list-style-type: none"> ▪ You must take a screen dump of the design of your database structure.
	<ul style="list-style-type: none"> ▪ Now create another Section 5 Implementation <p>Under this section explain what you are going to do, ie, “design the system for Mr Evans. This section will show on a step-by-basis how I actually designed and implemented the system” and so on. Take a print screen of your database structure.</p> <ul style="list-style-type: none"> ✓ Describe why you have decided on the formats used. Go through each field eg: <p>Initial - This will be text and 2 characters. Date - This will be data and</p> <p>Nature of employment - This will be text – using a look up table. This will be used because ...</p> <p>Go through each field include screen dumps of eg, your look up details.</p>
	<ul style="list-style-type: none"> ▪ Now prepare at least 3 queries, some complex and some simple. Think of the design of each query. Take screen dumps of the design view of each query and then the data sheet view. <p>Go back into Section 5 of your word-processed report and then put a heading Queries.</p> <ul style="list-style-type: none"> ▪ Explain what a query is and why they are used. What is the benefit of performing queries? ▪ Explain each of the queries that you have carried out and describe the difference between a simple query and a complex query. ▪ Make sure that you show clear steps on how to perform a query and then show the print screens from earlier.
	<p>Finish and ensure that queries section is completed.</p>
	<ul style="list-style-type: none"> ▪ Now you have to prepare a report using the system that you have designed. <ul style="list-style-type: none"> ✓ You can use the wizard for this but take print screens from each stage of the completion of the report. ✓ Go into the design view and audit the report eg,

	<p>ensuring that the title fits, the fields are shown fully;</p> <ul style="list-style-type: none"> ✓ Take screen prints of the design view and a print out of the actual report itself. ✓ Include another heading in your report called Reports and explain what a report is and why you have prepared one. Include screen dumps of how you prepared the report and make sure that you include the screen dumps showing how you customised the report for higher grades – making the title and report headings fit on to the page.
<p>Homework</p> <p>Ensure that this section is completed and that all work is up-to-date.</p>	<ul style="list-style-type: none"> ▪ Finish your implementation section. <ul style="list-style-type: none"> ▪ For dd/cc/bb grades you have to describe what you have done so read your section on implementation and check that you have described what you have done to prepare the system. ▪ For bb/aa/** you have to give a clear step-by-step approach to the design of your system. The key to gaining this grade is the fact that if I followed your system then I should be able to design the system for myself. Check that you have done this by following your own screen dumps and explanations: <ul style="list-style-type: none"> ✓ Have you covered how to use queries? ✓ And reports? ✓ And entering data? ▪ The last task that you have to do here is to implement the mail merge. This means that you actually have to run the mail merge: <ul style="list-style-type: none"> ✓ Take screen dumps of how to do the mail merge step-by-step; ✓ Show the standard letter from Task C before, during and after the mail merge. ✓ Print off one copy of the mail merge.
<p>Now you are nearly there - you are now on Task G.</p>	<p>This is all about testing that your database actually works!</p> <ul style="list-style-type: none"> ▪ Look at the example of testing documentation that your teacher will talk you through. ▪ I identify at least 4 ways that you can test your system. You must cover the following areas in your testing: <ul style="list-style-type: none"> ✓ Abnormal output; ✓ Normal output; ✓ Extreme output; ✓ Another test of your choice.

	<ul style="list-style-type: none"> ▪ The first thing that I would advise you to do is to include any problems here that you experienced when you designed the system eg, you used a validation rule but it did not work. List this as a problem using the test grid from above. Then complete the rest of the grid – ie, what you had to do to fix the problem. ▪ Carry out your first test and complete the grid. Make sure that you take a print screen of the test and then a print screen of the result.
	<ul style="list-style-type: none"> ▪ Now complete the rest of your tests remembering to take the screen dumps and so on. ▪ Complete the grid for all the tests and make sure that you have extreme, abnormal and normal tests.
	<ul style="list-style-type: none"> ▪ Now go back into your report and key in another section: <p>Section 6 Testing</p> <ul style="list-style-type: none"> ✓ Explain what testing is and why it is important; ✓ Define what is meant by the terms “abnormal”; “normal” and “extreme” tests; ✓ Introduce your testing grid; ✓ Below each test refer to the screen dumps for each one.
	<ul style="list-style-type: none"> ▪ Finish the testing section.
The last task - Task H	<ul style="list-style-type: none"> ▪ This is when you prepare a user guide for Mr Evans to use. ▪ By using your user guide then he should be able to follow your instructions and use the system that you have designed effectively. Just to obtain the basic grades of gg/ff/ee then your instructions need to look at the following: <ul style="list-style-type: none"> ✓ How to open the database; ✓ How to input data; ✓ How to obtain output eg, reports and queries; ✓ How to print the output; ✓ How to save and exit. <p>Use the above as headings and include clear instructions, use screen dumps so that Mr Evans will be able to see on paper what the screen will look like. This will make sure that you obtain dd/cc/bb grades.</p>
	<ul style="list-style-type: none"> ▪ Continuing with dd/cc/bb work on the user guide.
	<ul style="list-style-type: none"> ▪ Continuing with dd/cc/bb work on the user guide.

	<ul style="list-style-type: none"> ▪ Continuing with dd/cc/bb work on the user guide.
	<ul style="list-style-type: none"> ▪ For bb/aa/** grade on the user guide then you will have to make sure that you use a range of techniques to help Mr Evans in the user guide. This means: <ul style="list-style-type: none"> ✓ A wide range of annotated screen dumps; ✓ Detailed instructions; ✓ Using non-technical language that Mr Evans will be able to understand easily and follow without difficulty.
	<ul style="list-style-type: none"> ▪ Prepare a final bibliography for all sources used to prepare your portfolio. Use headings such as: <p>Bibliography (for books) List the Title of the book, the year it was published and the author.</p> <p>Webography (list all the URL's visited and used)</p> <p>Other (videos. Magazines etc).</p>
	<ul style="list-style-type: none"> ○ CatchUp/Completion if needed
	<ul style="list-style-type: none"> ○ CatchUp/Completion if needed
	<ul style="list-style-type: none"> ○ CatchUp/Completion if needed
	<ul style="list-style-type: none"> ○ CatchUp/Completion if needed

- a) **How and why the organisations (H&A) use ICT, the hardware and applications software used and how these meet the organisations needs.**

WHAT YOU MUST DO:

- Describe (for each – H&A) how the organisation uses ICT
- The information requirements of most major systems
- And the hardware and software used
- **Level 3** - Try to explain how the systems meet the organisation's needs and helps them communicate and function effectively. (What are each organisation's needs, why do they use ICT systems to meet those needs.)

ADVICE ON HOW TO DO IT:

So for **A** write about each department in the school. Discuss how each uses IT in differing ways, discuss what the **input and outputs** are. Discuss the **Hardware and Software** used by each department (Resources/ Library/ the main office/ reception/ finance/ registers/ restaurant). **If you want to achieve Level 3** you need to stress how the ICT systems have helped the departments to run efficiently and the school to run efficiently. What does the departments/school need to achieve – how does using ICT help to meet these needs.

For **H**, you need to stress that they have only just acquired a computer system. You need to then discuss how they are currently using the system – what have they produced? (hint – very basic letters). You could mention the **inputs and outputs** for the current use (it is very basic, but worth mentioning) - and the **Hardware and Software**. I think you should take the opportunity to stress all the **ways in which Hearsay is under-utilising** the ICT system. What could they be doing on the system (hint – Standard letters/memos etc using templates, database of all customers/suppliers/phones etc, mail-merge to customers, spreadsheets of accounts, creating of invoices). **If you want to achieve Level 3** you need to stress how the ICT systems will help the departments to run efficiently and the company to run efficiently. What does the departments/company need to achieve – how does using ICT help to meet these needs.

b) The documents used by the organisations to communicate internally between individuals and departments and externally with customers and suppliers.

WHAT YOU MUST DO:

- Analyse the documents (for both H&A) – annotate notes on each
- Describe (for both H&A) documents the purpose and target audience for each
- Describe (for both H&A) documents how the writing styles meet, or do not meet, these purposes.
- **Level 3** - (Try to Draw some general conclusions about the standards expected in business documents)

ADVICE ON HOW TO DO IT:

So for **H & A** documents write (annotate) on each document each part of the document, so for documents mentioned below, label each part

Letters – Reference, Date, Recipients Address, Senders Address, Greeting, Opening paragraph, detail paragraph, closing paragraph, salutation.

Memo – Title, who it is to, who it is from, date, subject, detail, initials to signify end.

Agenda – Title, date + time of meeting, venue of meeting, list of people to attend, List of items to be discussed.

Business Card – Logo, Company Name, Company address, telephone/fax/e-mail details, Name of person, Job title of person.

Write on the document whether the document has all the expected elements (detailed above) are there any items missing that you would expect to find on that type of document. Make general comments about whether it looks professional etc., could it be improved in any way?

Write a summary at the end of the **H** documents. List each of the documents looked at (ie/ letter, memo, agenda) and for each write about the purpose of the documents and the target audience in each case. Does the documents writing style meet, or not meet, the purpose of the document? (Hint – if it has all expected elements and it looks professional it should meet the purpose)

Write a summary at the end of the **A** documents. List each of the documents looked at (ie/ letter, memo, agenda, business card, presentation) and for each write about the purpose of the documents and the target audience in each case. Does the documents writing style meet, or not meet, the purpose of the document? (Hint – if it has all expected elements and it looks professional it should meet the purpose)

This table would help you do this task:

Document	Purpose (what it is used for)	Target Audience (who will use it)	Needs of Audience (what needs to be included)
Business Letter	Formal communication between organisations/ individuals	Recipient	Letter head, address, telephone, fax nos.

For Level 3 – Draw some general conclusions about the general standards expected on business documents (use a text book to help you here – or handout provided).

c) Use software to produce original documents for different business documents

WHAT YOU MUST DO:

- Produce a Logo for H
- Produce a Letter for H. This might be an extensive letter to a prospective employee, including information about a particular job.
- Produce an Advertising Flyer or Leaflet for H
- Produce a Presentation or Web Page for H Products

ADVICE ON HOW TO DO IT:

Produce a Logo (explain how it developed - ANNOTATED ROUGH DRAFTS with details of what needs changing for the next/final version)

Produce a Letter (explain how it developed - ANNOTATED ROUGH DRAFTS with details of what needs changing for the next/final version) Write on details on how you save a basic blank letter as a template and how the detail has been set up using a HEADER – explain why – how is this method of templates and headers advantageous to the user.

Produce an advertising flyer/leaflet (explain how it developed - ANNOTATED ROUGH DRAFTS with details of what needs changing for the next/final version). Try to include a table of information on it (perhaps opening times of the shop or prices of the products).

Produce a Presentation use PowerPoint or Publisher and use Hyperlinks to navigate through the presentation.

Level 3 – *There should be consistency between documents (an 'in-house style')*

Level 3 - *Summary for each of the documents produced, write a summary explaining:*

- How the style of document has been influenced by the research you have done*
- Explain how the documents meet their intended purpose*

Also for Level 3 - you will need to do the mail merge in the latter sections

d) the use of a dataflow diagram to represent the flow of information in a given system

WHAT YOU MUST DO:

- List the dataflows in a simple system
- Produce a dataflow diagram for a simple system
- **Level 3** – additional written analysis of ALL the information flows in the system.

ADVICE ON HOW TO DO IT:

*List the data flow of a customer coming into the shop and requesting information about a particular type of phone (**the old system pre-database**)*

*Draw a dataflow diagram to represent the flow of information for the above (**the old system pre-database**)*

The dataflow diagram should show clearly labelled

- **External people/organisations** who are the **sources/destinations** for the data,
- **processes**,
- **data stores** and the
- **flow of data** between them.

*List the data flow of a customer coming into the shop and requesting information about a particular type of phone (**the new system with the database**)*

*Draw a dataflow diagram to represent the flow of information for the above (**the new system with the database**)*

e) the design of the ICT system

WHAT YOU MUST DO:

- List and describe the user requirements
- Give details of sources of information
- Describe the inputs, processes and outputs required
- Identify the type(s) of application software to be used (only 1 - level 1)
- **Level 3** – Describe how the system will be tested. Incorporate Mail merge to the above.

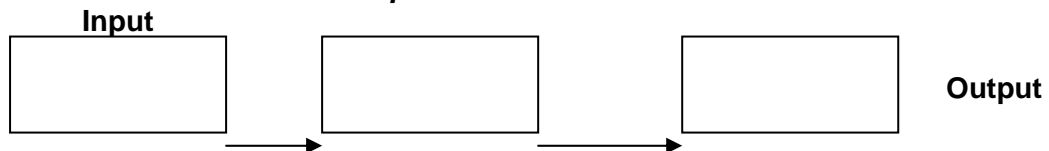
ADVICE ON HOW TO DO IT:

Make a **list** of the things the user will expect the system to be able to do (Think about phones/customers/suppliers). Think about the different uses of the ICT system and the different types of departments that will be using the system (management, sales assistants and secretaries). These are your user requirements. (If doing **level 3**, do not forget to mention mail merge).

Sources of information are Index cards, product lists, mail shots, questionnaires/data capture forms, supplier documents. Explain which sources of information Hearsay are likely to be using for this system, and what sorts of information they will gather from these sources.

Describe in detail the **input**, **processes** and **outputs** required by the system. (In most cases it is easier if you think of the outputs first, these usually determine the inputs). Think about some of the different things that you will expect to get out of the system the use boxes and enter in the relevant details for that particular situation.

You should have at least 3 examples of the below



The type of **application software** needed first you will need **windows** and explain that you have decided to use **Access** (– you may use this opportunity to explain why you came to that decision – hint relational database, front-ended with forms). If you are going for **Level 3** you will have to explain that you will also have to have **Word** to be able to do your mail merge.

At this stage you should also give some idea of how you intend testing the system. **Level 3** this should be a detailed specification for testing the system. (Copy your test plan).

f) the implementation of the ICT system

WHAT YOU MUST DO:

- Describe how you have implemented the system (a step-by-step diary). Include screen shots as evidence of having completed the work
- Provide examples of Inputs and Outputs. This means that you should show clearly your system actually working to produce what you want it for.
- **Level 3** – The above must be completed to a standard that somebody else could read your step-by-step diary, and be able to recreate the ICT system.

ADVICE ON HOW TO DO IT:

At Each stage of this document use SCREEN SHOTS as evidence, how you did it

Design your 'phone table' and input some phones (20-30 phones)

Design your 'welcome' form

Design your 'phone search' form

Automate (macro) movement from the 'welcome' form to 'phone search' form

Use 'filter by form' to search for a phone and save results as a query

Design a Report based on the previous query, to display the results

Automate (macro) the process of 'saving results as a query and viewing report'

Automate (macro) the process of getting back (possibly back to 'welcome' form)

Create a toolbar that incorporates the 'filter by form' and your new macro

Import the customer table

Add your details to the customer table

Design a 'customer search' form

Automate (macro) the movement from the 'welcome' form to the 'customer search' form

Automate the process of 'Edit, find' to bring up the find screen where the staff can enter the details that they wish to find.

Automate (macro) the process of getting back (possibly to the 'welcome' form)

For Supplier it should be the same process as for customer

Level 3 – *At this level screen shots should be annotated (so use arrows to label things, for example if you suggest that they click on save – arrow and label the save icon). Also, you must test things as you go along, so document that you test your macros as you create them, document that you test any validation rules as you do them (again use screen shots to prove/illustrate).*



g) Testing and Evaluation of the ICT system

WHAT YOU MUST DO:

- Do some simple tests to test 'normal', 'abnormal' and 'extreme' inputs. Produce screen shots or printouts as evidence that your system produces the required outputs.
- Do some complex customer queries and print the results (using AND, OR, NOT)
- **Level 3** – Fully test the system (both during and after implementation). Keep a record of any modifications or improvements made as a result of testing. Add a written evaluation considering how well you have met the requirements of the design specification.

ADVICE ON HOW TO DO IT:

Write-up a test plan. In this you give details of how you will test the database

* You will do some **Verification** – Proof reading the data in the tables, printout Phone/Customer/Supplier check visually for mistakes (highlight mistakes + label), correct any errors found, printout to prove (label printout)

* You will do some **Validation** – Test validation rules, screen shots to prove (you may have already done this in previous section – if so do not repeat)

* Then you will do some actual tests, printing the results produced. Write up the test that you intend doing: eg.

1. Customer 1 wants a Nokia phone that has WAP facilities
2. Customer 2 wants any type of phone, except Sony, it needs to cost less than £100.
3. *(Write up at least 5 customer searches – use **AND, OR, NOT**)*
4. *remember you must also test **Normal, Abnormal, Extreme** inputs (so on something like price you might have a validation rule that accepts items from £1 to £500, Normal would be within that range, abnormal would be outside of that range - £550, Extreme would be £1 or £500.*

You will also have to test the CUSTOMER and SUPPLIER search facilities. As above write-up searches you intend doing to test the database works correctly. Screen shot how you searched for the customer, with the 'found' customer details behind.

The Above tests will then need to be input into a test plan table:

What the test data is	Expected Results	Actual Results	Difference (Explained)	Purpose of test

Summary:

- 1) Test you can search for customer queries (I want a Nokia & WAP) – do at least 5 – use **AND, OR** and **NOT**.
- 2) Test validation rules work correctly, test **Normal, Abnormal,** and **Extreme** data
- 3) Test you can find existing customers (at least 2)
- 4) Test you can find existing suppliers (at least 2)
- 5) Test macros/buttons – move around database correctly

h) User Documentation for the ICT system

WHAT YOU MUST DO:

- Produce a user guide with screenshots to illustrate the process of using the system in detail
- **Level 3** – As above, but must include annotated screen shots, and must enable a non IT user to follow system. Also try to explain a simple mail merge.

ADVICE ON HOW TO DO IT:

Firstly you must instruct the user on how to access the database (from the start button on the desktop)

Then you should show how the user can:

- *Add data to the tables*
- *Carry out queries to obtain output*
- *Print output*
- *Save and exit the system.*

Your system involves a number of tables and queries. It is not necessary to repeat instructions. You should be able to give a clear example of, for example, adding data to the phones table, then make it clear which other tables can be added to in the same way.

Have a look at a 'quick start' guide for a piece of software or audio/video equipment. That should give you a good idea of an appropriate layout and the right amount of detail needed.

Tick ✓	Description on Work	Level
E	<p>Design an ICT System</p> <ul style="list-style-type: none"> • List and describe the user requirements • Give details of sources of information • Describe inputs, process and output required • Identify the type(s) of application software to be used (only 1 – level 1) • Describe how the system will be tested. <p>Level 3 will be a comprehensive design specification, including details of ALL aspects of a complex system, with a detailed specification for testing the system.</p>	<p>1</p> <p>2</p> <p>3</p>
F	<p>Implementation of the ICT System</p> <ul style="list-style-type: none"> • Describe how you have implemented the system (a step-by-step diary) • Include screen shots as evidence of having completed the work • Provide examples of inputs and outputs <p>Level 3 – the above will be completed to a standard that somebody else could read your step-by-step diary, and be able to recreate your ICT system</p>	<p>1/2</p> <p>3</p>
G	<p>Testing and Evaluating the ICT System</p> <ul style="list-style-type: none"> • Do some simple tests, provide screen shots or printouts as evidence that your system produces the required output for some inputs • Do some tests that test the system for ‘normal’, ‘abnormal’ and ‘extreme’ inputs. Produce screen shots or printouts as evidence that your system produces the required output from some inputs. • Fully test the system, both during implementation and after it is completed. • Keep a record of any modification or improvements they make as a result of testing • Evaluate your system against your design specification 	<p>1</p> <p>2</p> <p>3</p> <p>3</p> <p>3</p>
H	<p>User Documentation for the ICT System</p> <ul style="list-style-type: none"> • Produce a user guide including how to load the software and system, how to enter data, how to obtain output, how to print output and how to save and exit • Enhance the user guide with screenshots to illustrate the processes of using the system in detail • The user guide will have to be detailed, with annotated screen shots, that a non-IT user could follow 	<p>1</p> <p>2</p> <p>3</p>

Note to Teachers:

On the following pages are 'Section Dividers' provided by one centre. These are printed onto colour card and given to each student. These have helped to clarify the marks allocated for each task.

The centre has contextualised the requirements for sections e and f for the creation of a database system to suit the Centre assignment.

Centres are reminded that whilst it can be helpful to try to interpret the requirements of the assessment evidence grid for students to understand more easily, teacher assessment must be carried out with reference to the OCR specification – the assessment evidence grid and exemplification. Further guidance for assessment can be found in the Frequently Asked Questions and Additional Guidance for Portfolios sections of this document.

GCSE Applied ICT

Name: _____

Section A

Organisational Use of ICT

Organisation 1: _____

Organisation 2: _____

A typical candidate at grades GG, FF, EE will:	A typical candidate at grades DD, CC, BB will:	A typical candidate at grades BB, AA, A*A* will:
A 1 Identify how the organisations use ICT, the information requirements of some systems and the hardware and application software used.	A2 Describe how the organisations use ICT, the information requirements of most major systems and the hardware and application software used.	A3 Explain why the organisations use ICT and how the hardware and application software used meet the organisations' needs and help them to communicate and function effectively.
Lists/brief comments about the use of ICT in two organisations. Lists/brief descriptions of the hardware, software and information used.	Several sentences describing each of the organisations' uses of ICT and hardware and software used.	Detailed and well structured explanation of why the organisations use ICT and the ICT systems used.

GCSE Applied ICT

Name: _____

Section B

Describing Documents

Organisation	Documents studied	Documents in folder?

A typical candidate at grades GG, FF, EE will:	A typical candidate at grades DD, CC, BB will:	A typical candidate at grades BB, AA, A*A* will:
B1 Describe the content and layout of documents used by the organisations.	B2 Make informed suggestions about the writing and presentation styles used by the organisations in their documents.	B3 Draw logical conclusions about the standards for business documents and use these when producing your own documents.
Annotate documents to show significant items of: Content; Layout and format; Writing style.	Identify the purpose and target audience for each document. Suggest how the writing and presentation styles meet these purposes.	Summarise the standards you have found for each type of document you have studied. Summarise what you have found for documents from the same organisation. Apply these standards to your own production of documents in Section C.

Requirements are for student guidance only.

Teacher assessment must use the Assessment Evidence Grid and exemplification from the specification.

GCSE Applied ICT

Name: _____

Section C Creating Documents

Type of software	Documents created
Word Processing	
Desktop Publishing	
Presentation	

A typical candidate at grades GG, FF, EE will:	A typical candidate at grades DD, CC, BB will:	A typical candidate at grades BB, AA, A*A* will:
C1 Produce straightforward business documents that match their purpose and the target audience by making basic use of word processing, publication and presentation software.	C2 Produce more complex business documents that use appropriate writing, presentation and layout styles by making use of more features of word processing, publication and presentation software.	C3 Use what you have learned from studying organisations' documents, and the full range of software facilities to produce business documents that meet their intended purpose, are appropriate for the target audience and that are accurate, clear and consistent.
Create at least 1 document with each type of software. Have a clear purpose for each, aimed at target audience. Enter and format text and use clipart and other images. Provide evidence of checking for errors.	Produce more complex documents eg business reports (wp), newsletters (dtp), extensive presentations of 5 or more slides (pp). Use a wide range of software features such as headers and footers, bullets, cut and paste, tables, wrapping text around images. Provide evidence of checking and correcting errors.	Produce complex documents of professional standard showing a house style. They should meet the intended purpose and be appropriate for the target audience. Use a range of facilities including mailmerge. Work should be error free.

Requirements are for student guidance only.

Teacher assessment must use the Assessment Evidence Grid and exemplification from the specification.

GCSE Applied ICT

Name: _____

Section D Dataflow Diagrams

A typical candidate at grades GG, FF, EE will:	A typical candidate at grades DD, CC, BB will:	A typical candidate at grades BB, AA, A*A* will:
D1 With help, identify the information flows in a simple system and produce a dataflow diagram.	D2 Investigate the information flows in a system and produce a dataflow diagram.	D3 Analyse the information flows in a system and produce a comprehensive dataflow diagram.
Produce a simple dataflow diagram with help.	Produce a simple and accurate dataflow diagram without help.	Produce a more complex dataflow diagram showing more than one process. Produce a written analysis of the system identifying the flow of data and processes carried out.

Requirements are for student guidance only.

Teacher assessment must use the Assessment Evidence Grid and exemplification from the specification.

GCSE Applied ICT

Name: _____

Section E

Design Specification

A typical candidate at grades GG, FF, EE will:	A typical candidate at grades DD, CC, BB will:	A typical candidate at grades BB, AA, A*A* will:
E1 Produce a basic design specification for a system.	E2 Produce a detailed design specification for a system.	E3 Produce a comprehensive design specification for a system.
<p>State the problem to be solved.</p> <p>Identify the user requirements - typical queries needed.</p> <p>Identify where the source data is to come from.</p> <p>Identify the inputs, processing and outputs required.</p> <p>State the type of software needed.</p> <p>Include details of database structure eg field names and datatypes.</p>	<p>Clearly state the problem to be solved and the user requirements - a complex problem with typical queries needed and documents required.</p> <p>Clearly specify where the source data is to come from.</p> <p>Draw a data entry form and explain reasons for its use.</p> <p>Describe in detail the inputs, processing and outputs required.</p> <p>State 2 types of software packages that could be used.</p> <p>Describe validation tests that will be used.</p> <p>Outline how you propose to test your system.</p>	<p>Clearly state the problem to be solved and the user requirements - a complex problem with typical queries needed and documents required.</p> <p>Clearly specify where the source data is to come from. .</p> <p>Clearly specify why a data entry form is to be used.</p> <p>Describe in detail the inputs, processing and outputs required giving reasons.</p> <p>State 2 types of software packages that could be used and justify choice.</p> <p>Plan out a test strategy for both aspects including validation tests.</p>

Requirements are for student guidance only.

Teacher assessment must use the Assessment Evidence Grid and exemplification from the specification.

GCSE Applied ICT

Name: _____

Section F Implementation

A typical candidate at grades GG, FF, EE will:	A typical candidate at grades DD, CC, BB will:	A typical candidate at grades BB, AA, A*A* will:
F1 Produce brief records of the implementation of the system.	F2 Produce clear records of the implementation of the system.	F3 Produce comprehensive records of the implementation of the system.
Show evidence of database used including file structure and typical values. Include at least 2 queries stating: Question to be answered; Criteria used; Print out of answers.	Write about how database file structure was set up and data entered using a data entry form. Include screen shots to show evidence. Use screen shots to show how you created at least 2 queries stating: Question to be answered; Criteria used; Print out of answers; Show evidence that you have solved all the problems identified in the design specification.	Include sufficient detail in your work so that someone else could recreate the database and perform the interrogation to produce similar results.

Requirements are for student guidance only.

Teacher assessment must use the Assessment Evidence Grid and exemplification from the specification.

GCSE Applied ICT

Name: _____

Section G

Testing and Evaluation

A typical candidate at grades GG, FF, EE will:	A typical candidate at grades DD, CC, BB will:	A typical candidate at grades BB, AA, A*A* will:
G1 Carry out simple tests to check that the system meets the design specification.	G2 Test the system under a range of conditions to ensure that user requirements are met.	G3 Carry out a detailed evaluation of the system, which checks the outcomes against user requirements, and produce records of any modifications and improvements made.
Provide printouts to show the system produces the required output for some simple searches.	Show testing of the system using normal, abnormal and extreme inputs.	Demonstrate full testing of the system as indicated in the test specification both during implementation and after it is completed. Include a record of all modifications or improvements made as a result of testing. Add a written evaluation which looks at the design specification and assesses how well you have achieved your original aims.

Requirements are for student guidance only.

Teacher assessment must use the Assessment Evidence Grid and exemplification from the specification.

GCSE Applied ICT

Name: _____

Section H

User Documentation

A typical candidate at grades GG, FF, EE will:	A typical candidate at grades DD, CC, BB will:	A typical candidate at grades BB, AA, A*A* will:
H1 Produce a basic user guide to the system.	H2 Produce a detailed user guide to the system.	H3 Produce a comprehensive user guide to the system that would allow a novice user to use the system efficiently.
Produce a simple list of instructions that tell a user how to: Open the database; Input data; Perform queries; Print results; Save and exit.	Produce a detailed user guide with screen shots for each instruction.	Produce a comprehensive user guide with extensive use of annotated screen shots for each instruction. Instructions are detailed and non-technical.

Requirements are for student guidance only.

Teacher assessment must use the Assessment Evidence Grid and exemplification from the specification.

RESOURCES USED WITH ASSESSMENT UNIT 3 ICT SURVEY PORTFOLIO

The material in these sections has been supplied by centres who have found it useful. In including it in this pack, OCR is not endorsing any specific worksheets/instructions as enabling access to the complete mark range. The responsibility for ensuring work meets the specification criteria remains with the centre.

It is important that assignments are not too prescriptive. Portfolios that are submitted for assessment must be the candidate's own work.

The first centre has given guidance based on different levels and the second centre has given guidance based on specific grades. This is each centre's own interpretation of the Assessment Evidence grid.

Tasks B & C

Scenario

ANC are a new company who plan to set up as an Internet Provider.

They want to find out what providers are available already, what services are already being offered and which are the most popular with users.

To achieve this, they want you to find out the answers to the following questions, and present your answers in the form of a report that will help them to decide what services to offer.

Questions 1

What do most people use the internet for?

How often do people use the internet?

Who is the most popular internet provider?

Where do people usually log on the internet?

What is the most popular search engine?

What would be the most popular use of e-mail?

Questions 2

Do males use the internet more than females?

Approximately how long do individuals spend online on named tasks- e.g. games, shopping music, research?

How much does each provider charge for different types of access?

How many people use the internet also use e-mail?

Do people in different age groups use the internet for different purposes?

Breakdown of Tasks

You will need to

1. Carry out a survey
2. Enter results into a database
3. Produce reports combining data from more than one table and illustrate graphically using the results of your searches.
4. Search database and analyse results using a spreadsheet.

Remember, keep records and screen shots of all stages in the development of your project. You will need to annotate these printouts to show how you arrived at your final solution.

Tasks

1. Carry out a survey

Create a data capture form using an appropriate package. Your questions must be worded in such a way to enable you to answer the questions that ANC have asked.

You will need to collect a MINIMUM of 20 records.

2. Enter results into a database

Using Access, create a suitable data structure, and enter the results that you have collected. To obtain **level 2** you will need to create a “relational database”, consisting of 2 or more tables. You must use data validation for different types of data. To obtain **level 3** you will need to create a form to input data.

3. Produce reports combining data from two tables

Create reports in Access using the first set of questions. ANC have asked to see the results in graphical form, therefore you need to create Access charts.

To obtain **level 2** you must produce reports using data from two tables. To obtain **level 3** you must produce a customised report to meet user needs.

4. Analyse the results using a spreadsheet

Import the results of queries based on the 2nd set of questions. Use formula to calculate totals and display the results as graphs.

To obtain **level 2** you must be able to format cells and titles, use simple formula. To obtain **level 3** you must use absolute cell reference and select specific print areas.

5. Combine your results to produce a report to the directors

Combine your graphs and tables. Describe what each chart or table shows and how it may help the directors of ANC to reach decisions.

To obtain **level 2** you must produce different types of charts and graphs suitably labelled. To obtain **level 3** you must combine sections of your spreadsheet and charts or graphs to produce a coherent report.

Unit 3 - Section B&C

Clarification of Requirements

These sections are particularly difficult, in respect to the things you have to prove that you have done. Try to manipulate the work in such a way that you can tick off all the requirements of the marking scheme.

As such I will try to detail what you must have, below:

You will need 2 reports (or 2 sections)

Report 1 – Evidence of how you did it

Outline the scenario – What have you been asked to do

Questionnaire – Discuss how you set it up, the things you had to consider, the accuracy of your results, the group you surveyed

Setting up the Database –

- You will need to explain how you set up the main table. Evidence of types of fields used, validation rules, related tables (use a combo), relational tables (supplier codes & prices);
- You will also need evidence of creating a form for inputting data – use a wizard to create it;
- Evidence of setting up a complex query (linking the main table to the relational table, pulling all the data together);
- Evidence of designing a report (use the wizard & base it on the query you have just done). This needs to be customized for the target audience, so tailor it for ANC (the company you have been employed by). You might group certain ‘types’, such as ‘provider’ together, or sort it into a particular order etc.

Written explanation of ‘dropping’ (either you main table OR query) into excel

Using the Spreadsheet -

- Firstly evidence that you have added a heading (use a header/footer);
- I would add some simple calculations (such as =average, =max, =min);
- You will need evidence to show how you can create a simple pivot table;
- You will need evidence then of using your pivot table to create a graph (make sure it has suitable headings and labels);
- Evidence that you know how to set a print area, particularly useful if you have added graphs to the same sheet as your data.

Report 2 – Report of Findings to ANC

This is your **formal report to ANC** (and as such it should look professional – try using Headers and Footers with the date, your name, page numbering etc).

- Start by **recapping what you have done** (ie/ designed a questionnaire, tested it on a sample, input the results into an Access database, tested that the data could be manipulated for the results you required etc etc, then did it for real, who did you sample, how many etc etc.);
- Then Provide them with a **copy of your questionnaire**;
- Provide them with a **copy of the results** (in either the table format, or even better the nice report format that you evidence in the previous section);
- The start to **provide results for each of their questions**. Give them both **graphical analysis and written analysis** for each. (It is no use sticking a graph in the report and expecting them to interpret it);
- **TRY TO USE MORE THAN ONE TYPE OF GRAPH**. (Make sure they are labelled correctly). Think of the best ways to show each type of data. Maybe some is best shown on a grouped chart, for example.

	A	B	C	D	E	F	G	H	I	J
1	Gender	Age	Where Use	Main Use	How Often	Search Engine	Use of Email	IntProvider	Price	
2	M	<16	Home	E-mail	Daily	Yahoo	Social Letters	AOLBB1	£24.99	
3	M	16-22	Work	E-mail	2-3 days	Altavista	Business Letters	AOLBB2	£30.00	
4	F	<16	Library	Research	4-5 days	Yahoo	Social Letters	AOLFix	£14.99	
5	M	23-30	Internet Café	Shopping	weekly	Altavista	Social Letters	AOLFix	£14.99	
6	M	41-50	Work	E-mail	Daily	Google	Business Letters	AOLFix	£14.99	
7	M	<16	School	Research	4-5 days	Yahoo	Social Letters	AOLFix	£14.99	
8	M	16-22	School	Research	2-3 days	Yahoo	Social Letters	AOLBB2	£30.00	
9	M	<16	Home	E-mail	Daily	Yahoo	Social Letters	AOLBB1	£24.99	
10	M	16-22	Work	E-mail	2-3 days	Altavista	Business Letters	AOLBB2	£30.00	
11	F	<16	Library	Research	4-5 days	Yahoo	Social Letters	AOLFix	£14.99	
12	M	31-40	Library	Research	Daily	Yahoo	Attachments	AOLBB1	£24.99	
13	M	60+	Library	Research	Daily	Google	Ordering	AOLBB2	£30.00	
14	M	23-30	Internet Café	Shopping	weekly	Altavista	Social Letters	AOLFix	£14.99	
15	F	23-30	Work	E-mail	Daily	Ask Jeeves	Business Letters	AOLBB1	£24.99	
16	M	41-50	Work	E-mail	Daily	Google	Business Letters	AOLBB2	£30.00	
17	M	<16	School	Research	4-5 days	Yahoo	Social Letters	AOLBB2	£30.00	
18	M	16-22	School	Research	2-3 days	Yahoo	Social Letters	AOLFix	£14.99	
19	F	31-40	Home	E-mail	Daily	Google	Social Letters	AOLBB1	£24.99	
20	Tot. amnt pd Home		74.97	Tot. amnt pd BB2 fast connection				180	Formula 1	
21	No. using at Home		3	No. using BB2				6	Formula 2	
22	Ave. price at Home		24.99	Average price of BB2				30	Formula 3	

Formula 1 =SUMIF(H2:H19,H17,I2:I19)

Formula 2 =COUNTIF(H2:H19,H17)

Formula 3 =H20/H21

This is an alternative method of getting the data in a form that can easily be graphed. You might use Pivot Tables instead. The choice is yours.

The first formula is summing the values in the cells I2:I19, ONLY IF they cells in the range H2:H19 match the value (or what ever is in) H17. In other words, AOLBB2 is in H17, so wherever that appears in the 'H' column, the formula will add up the corresponding value from the 'I' column. (They add up to 180)

The second formula is Counting how many cells in the 'H' column, match the value (or what ever is in) H17 – in other words there are 6.

The third formula divides what is in H20 by what is in H21, in other words it finds the average cost of the BB2 connection.

Unit 3. ICT Survey – Online Purchasing

Introduction

In this project you will carry out research on how ICT is used in everyday life. You will analyse the data you collect using a spreadsheet and a database, and present the findings in a presentation.

The survey will be about Internet shopping.

Below is a series of hypotheses, that you will either prove or disprove in your analysis.

Hypotheses

Hypotheses you will analyse using a spreadsheet:

1. The average age of an online shopper is 25.
2. Males purchase more products online than females.
3. People shop online more in the evenings than during the day.

Hypotheses you will analyse using a database:

4. The most popular online shop is Tesco.net.
5. Online users purchase books from Amazon.com.
6. Tesco shoppers are more likely to be women.
7. Younger people buy the most music online.
8. Most ebay users are men below the age of 40.

Opinion Hypotheses to be written about in a presentation.

9. It is cheaper to purchase a product online than on the high street.
10. Online shopping will replace high street shopping in the next ten years.

Can you prove or disprove these hypotheses?

Task 1. Create a new report for this project in a word processor.

T1.1. In your report, write an introduction stating that you will use computer analysis methods to prove or disprove the hypotheses:

1. The average age of an online shopper is 25.
2. Males purchase more products online than females.
3. People shop online more in the evenings than during the day.

4. The most popular online shop is Tesco.net
5. Online users purchase books from Amazon.com.
6. Tesco shoppers are more likely to be women
7. Younger people buy the most music online.
8. Most ebay users are men below the age of 40

9. It is cheaper to purchase a product online than on the high street.
10. Online shopping will replace high street shopping in the next ten years.

T1.2. In groups, discuss what type of data you require for each of the hypothesis.

In your report, put the title 'Gathering Data'. Explain that you are working in a group to gather data to prove or disprove the hypotheses. As a group you have decided to collect the following data. Create your data collection table as below, and fill it in.

Online Purchasing				
Hypotheses	Data to Collect	Resource Type / Method of Collection and Where?	Reason for collection	Type of Analysis
<i>All</i>	<i>Name</i>	<i>Questionnaire Given to friends and family</i>	<i>To personalise the data collected</i>	<i>Will be used in the spreadsheet analysis and database analysis</i>
<i>1</i>	<i>Age</i>	<i>Questionnaire</i>	<i>To find the average age of an online shopper</i>	<i>Spreadsheet using the AVERAGE function</i>
				<i>Etc.</i>

The resources for your data could include:

- Questionnaire;
- Tally Chart;
- Book;
- Newspaper / Magazine;
- High street research;
- Internet Search.

You MUST use as many types of resource as you can when collecting your data.

T1.3. Construct and print any questionnaires, tally sheets, etc. you may use.

T1.4. Collect your data, then share it amongst your group.

T1.5. In your report summarise (say what you have collected – NOT what it all means) the data you have collected, and how you got it. You will need to cover:

T1.5.1 Questionnaire – Include a copy of your blank questionnaire and a few examples of completed questionnaires. In your explanation you should say how many questionnaires you had completed and what sort of people filled them in.

T1.5.2 Internet searches – Write about the Internet searches you carried out, including what you were looking for. Copy and paste screen shots of your search criteria. Remember you need complex search techniques to get full marks – these should show the use of a range of different features offered by the advanced search options of the search engine. Explain why you chose the words, phrases and options you did. Add statements on what you did to ensure information is not biased and is accurate. Show, with screen shots, how you have added important sources to your favourites folder.

T1.5.4 Newspaper and book research. – Explain what sort of information you found from newspapers and books, and make a list of books used and page numbers where useful information was found.

Task 2. Spreadsheet Analysis.

Working by yourself, create a spreadsheet to process the data for the first three hypotheses.

T2.1. In your report Put the title 'Spreadsheet Analysis'. State that you are going to create a spreadsheet to prove or disprove:

1. The average age of an online shopper is 25.
2. Males purchase more products online than females.
3. People shop online more in the evenings than during the day.

T2.2. Create your spreadsheet.

- Set up the spreadsheet
- Format the column headings and cells appropriately.
- Enter the data
- Format the data
- Create Formulae

In your report copy and paste the spreadsheet, making sure that the whole of the spreadsheet is displayed. Annotate any formatting used.

IN your report copy and paste the spreadsheet in Formula view (Tools – Options – Formula) and annotate the formulas.

T2.3. Charts.

Create appropriate charts in your spreadsheet. Make sure you include suitable titles and labels.

T2.4. The Summary Reports.

In your report Put the title 'Summary Report'.

For each of the three hypotheses:

AIM: State what you are trying to prove / disprove

METHOD: Data collected, and how you manipulated it.

FINDINGS: Screen shots of the relevant parts of your spreadsheet, and charts.

CONCLUSION: Have you proved or disproved the hypothesis?

Hypotheses to be analysed using a spreadsheet – Teachers’ notes

Some of the more obvious expected outcomes are listed below. Whilst it is expected that candidates will be supported and suggestions given, they must be given enough scope to demonstrate skills of their own. Teachers might consider going through similar types of question together, leaving students to come up with their own solutions to the main tasks.

1. The average age of an online shopper is 25.
List all online shoppers’ ages and use the AVERAGE function.
Plot the ages of online shoppers on a graph.
2. Males purchase more products online than females.
Use the COUNT IF function to count the number of males and the number of females. Use a graph to show results.
3. People shop online more in the evenings than during the day.
Use COUNT IF function to count the number of users between 7am – 10am, 10am – 1pm, etc, and create a graph.

Name	Age	Gender	Time of shopping
...
...
...
	AVERAGE	COUNT IF MALE	COUNT IF 7-10am
		COUNT IF FEMALE	COUNT IF 10-1pm
			COUNT IF 1-5pm
			Etc.

Graphs to represent the data: inc. Scatter graph for age, bar chart for Gender count, Smooth line for Time of Shopping count.

Task 3. Database Analysis.

Working by yourself, create a database to process the data for hypotheses 4-8.

T3.1. In your report, state that you are going to create a database to prove or disprove:

4. The most popular online shop is Tesco.net
5. Online users purchase books from Amazon.com.
6. Tesco shoppers are more likely to be women
7. Younger people buy the most music online.
8. Most ebay users are men below the age of 40

T3.2. Create a database to analyse the data you have collected. You will need to create a number of different tables. Think carefully about appropriate validation checks you can put into these tables to reduce the chance of error when entering data.

In your report put the title 'table design' and copy and paste each of your tables. Explain any validation checks you have used.

T3.2.2. Linking Tables:

You now need to link the tables together.

In your report put the title 'Relationships' and place a screen shot of the relationships.

T3.2.3. Create data entry forms.

In forms view, create data entry forms for each of the tables. Create a switchboard for your main menu.

In your report, under appropriate titles take screen shots of your data entry forms.

T3.2.4. Enter Data.

Enter the data you have collected. If you have created forms, use the forms to enter the data. If you have not, enter the data directly into the tables in datasheet view.

In your report, copy and paste the data from each table under an appropriate heading.

T3.2.5. Searching and sorting.

You should now be able to create queries to help you find evidence to support or disprove the hypotheses.

You need to create at least one simple search, one search and sort and two complex searches. You should use data from more than one table in at least some of your queries.

In your report, give a description of each of the queries then copy and paste screen shots of the queries.

T3.2.6. Report Creation

Create reports in Access for the queries created.

Run the reports, print the results and place them into your report. Annotate them to show what query they came from.

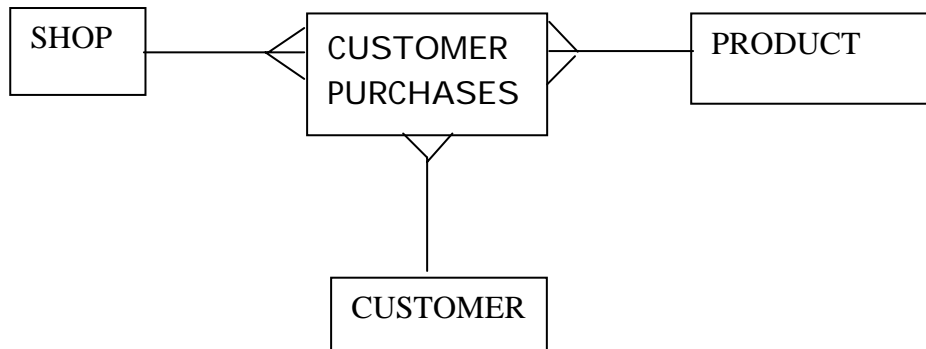
T3.2.7. In your report, explain the findings for each of the five hypotheses.

AIM: State what you are trying to prove / disprove
METHOD: Data collected, and how you manipulated it.
FINDINGS: Results from the queries / reports.
CONCLUSION: Have you proved or disproved the hypothesis?

Hypotheses you will analyse using a database – Teachers' notes

One possible solution is given below. Whilst it is expected that candidates will be supported and suggestions given, they must be given enough scope to demonstrate skills of their own. Teachers might consider going through similar types of question together, leaving students to come up with their own solutions to the main tasks.

Database Structure



TBL CUSTOMER PURCHASES (Customer Number, Shop name, Product Type)

TBL SHOP (Shop name, URL) The main purpose of this table is as a lookup for 'shop name' in CUSTOMER PURCHASES.

TBL PRODUCT (Product Type) The purpose of this table is as a lookup for 'product type' in CUSTOMER PURCHASES.

TBL CUSTOMER (Customer Number, Customer name, age, gender).

The tables CUSTOMER PURCHASES and CUSTOMER will need to be combined in queries that search and sort to produce lists that will provide evidence with which to evaluate the hypotheses.

Task 4. Presentation.

From your research you will have background information for hypotheses:

9. It is cheaper to purchase a product online than on the high street.
10. Online shopping will replace high street shopping in the next ten years.

You now need to present your findings in a PowerPoint presentation

T4.1. In your report, put the title 'Presentation of Findings', and state that you are going to produce a presentation to show the results of your research for hypotheses 9 and 10.

T4.2. Slide Content.

You will create a *non-linear* presentation to present the findings of your research. The presentation will have different paths for the hypotheses, and include different media, such as text, graphics (including charts), sound and animation. For the two hypotheses, you will create slides that show:

AIM: State what you are trying to prove / disprove.

METHOD: Data collected, and how you manipulated it.

FINDINGS: Screen shots of the relevant parts of your spreadsheet, and charts.

CONCLUSION: Have you proved or disproved the hypothesis?

Finally, There will be a slide that credits all of the resources that have been used. Note ALL of your resources, including:

- Questionnaire (Who you collected data from);
- Internet search (Make a note of how you used complex search criteria and how you looked for non biased and relevant information);
- Newspaper research (How you used the online database of newspaper articles);
- High street research (How you found a product and compared it to a product from the internet).

T4.3. Slide Navigation.

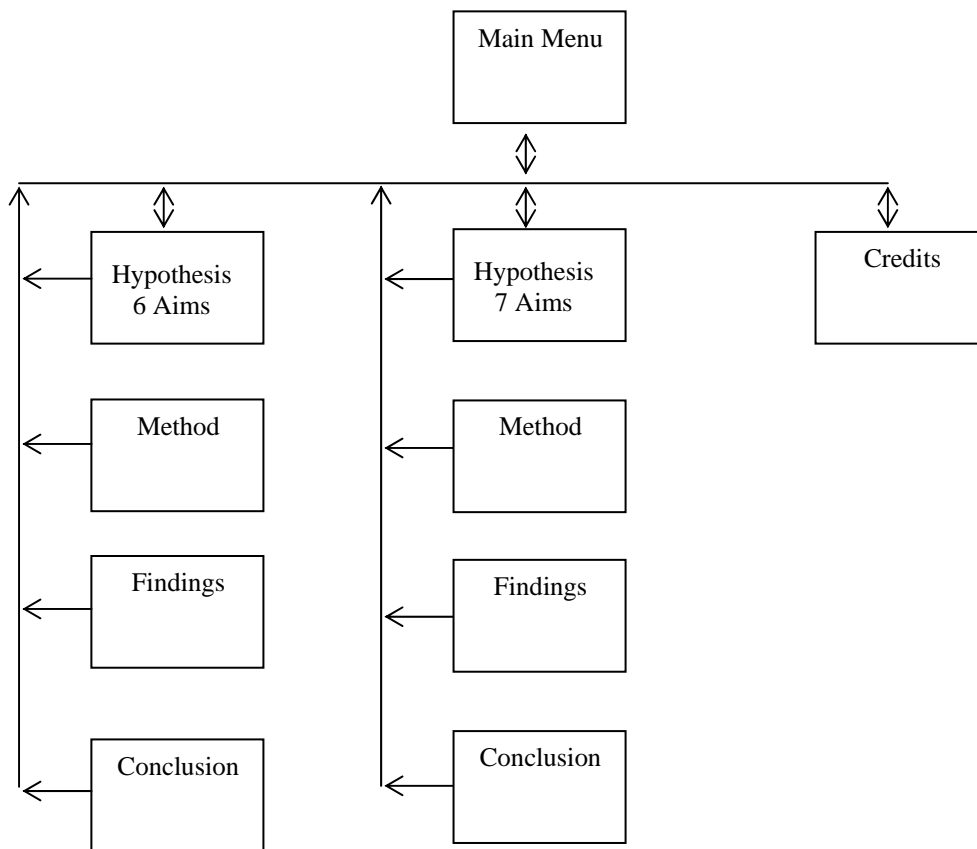
You need to consider how many slides you will be needing. Remember the best designs are quite compact and to the point. You will need to consider: Titles, Buttons, Notes attached, etc.

In your report, state that you are going to use a non linear presentation, stating that you will use buttons to link your reports for Hypothesis 9, Hypothesis 10 and Credits.

How many slides do you need? This is up to you. Think about what you need to include and how it will be best split up. Write down the slides you will need, for example:

Main Menu	x1
Hypothesis 9	1x Aim, 1x Method, 1x Findings, 1x Conclusion
Hypothesis 10	1x Aim, 1x Method, 1x Findings, 1x Conclusion
Credits	x1
Total	10.

You should now draw a structure diagram to show how these slides will link together. A possible diagram is shown below as an example, yours will not be exactly the same as this:



T4.4. Build It!

Build your presentation, linking slides with action buttons (you may want to consider building a master slide with all of the buttons you need on it first).

Try to make your presentation as attractive and original as possible. A top quality presentation will not rely solely on clip art and slide transitions for multimedia effects. Think of appropriate ways of including relevant and original sounds, images and video.

ASK YOUR TEACHER to print out your presentation in the most economical way possible. Add it to your report.

Unit 3 ICT Survey Project part 2 – Impact of ICT developments (20 Marks)

Overview

You are to research how ICT affects the five areas listed below, and write your findings in a report.

- Personal Communication
- Working Styles and Employment Opportunities
- People with Special / Particular Needs
- The Effect of ICT on Business
- Community Activities

For each area you should aim to write at least 1 1/2 pages.

For each area you need to carry out independent research, using books and the Internet. You must add a list of sources to the end of each report. Make sure you give details of specific web pages and specific pages from books that you use.

You need to be as specific as you can in your report, making sure you show that you have researched the topic.

Create a report. In the header, place the name of the report, 'Analysis of ICT Use – Applied ICT Project work', your name, your teacher's name, and your group.

In the footer, place the page number and the date.

Personal Communication.

In your report, use the following headings and write an essay on personal communication. Try to fill approximately 1 ½ pages.

Introduction

How is ICT used in personal communication? You might consider developments such as Video Conferencing, e-mail, mobile telephones and fax.

- a) The effects of ICT in personal communication on groups and individuals.
Consider particularly how advances in personal communications have affected:
 - teenagers
 - working people
 - retired people
 - people with disabilities.

- b) The needs that are met by the use of ICT in personal communications.
How does the use of ICT in personal communication help organisations and individuals? Give some specific examples of needs that are met. Consider the benefits of meeting these needs using ICT rather than other methods.
 - Does it increase speed? How?
 - Does it reduce the costs? How?
 - Does it improve the lifestyle of the user? How?
 - Does it give an advantage over competitors? How?
 - What hardware, software and training is needed?

- c) What is the consequence of not having access to ICT for personal communication? Give some specific examples.

Credits: List the article(s) you have used in this part of the report, clearly stating where they have come from, and why you believe they are non-biased and accurate.

Working Styles and Employment Opportunities.

In your report, use the following headings and write an essay on the effects of ICT on working styles and employment opportunities. You might consider advances such as teleworking, work monitoring and skills requirements. Try to fill approximately 1 ½ pages.

- a) The effects of developments in ICT on working styles and employment opportunities. Consider particularly how advances in ICT have affected the working styles and employment opportunities of:
 - teachers
 - people working in offices
 - people working in factories
 - people with disabilities.

- b) The needs that are met by the use of ICT in the developments you have considered. How do these uses of ICT help organisations and individuals? Give some specific examples of needs that are met. Consider the benefits of meeting these needs using ICT rather than other methods.
 - Does it increase speed? How?
 - Does it reduce the costs? How?
 - Does it improve the lifestyle of the user? How?
 - Does it give an advantage over competitors? How?
 - What hardware, software and training is needed?

- c) What is the consequence of not having access to the ICT developments you have considered? Give some specific examples.

Credits: List the article(s) you have used in this part of the report, clearly stating where they have come from, and why you believe they are non-biased and accurate.

The Effects of ICT on Business

In your report, use the following headings and write an essay on the effects of ICT on Business. You might consider advances such as home shopping, on-line banking and communications. Try to fill approximately 1 ½ pages.

- a) The effects of developments in ICT on business.
Consider particularly how advances in ICT have affected:
 - People running a small business
 - Small shopkeepers
 - Bank staff and customers
 - Supermarket managers

- b) The needs that are met by the use of ICT in business.
How do these uses of ICT help organisations and individuals? Give some specific examples of needs that are met. Consider the benefits of meeting these needs using ICT rather than other methods.
 - Does it increase speed? How?
 - Does it reduce the costs? How?
 - Does it improve the lifestyle of the user? How?
 - Does it give an advantage over competitors? How?
 - What hardware, software and training is needed?

- c) What is the consequence of not having access to the ICT developments you have considered? Give some specific examples.

Credits: List the article(s) you have used in this part of the report, clearly stating where they have come from, and why you believe they are non-biased and accurate.

Community Activities

In your report, put the title 'Community Activities.'

You will discuss how ICT has affected community activities. You might consider effects on clubs/groups, libraries, public transport and travel information, sporting activities...

- a) The effects of developments in ICT on community activities.
Consider particularly how advances in ICT have affected community activities of:
 - teenagers
 - working people
 - retired people
 - people with disabilities.

- b) The needs that are met by the use of ICT in the developments you have considered.
How do these uses of ICT help organisations and individuals? Give some specific examples of needs that are met. Consider the benefits of meeting these needs using ICT rather than other methods.
 - Does it increase participation? How?
 - Does it increase goodwill? How?
 - Does it improve the lifestyle of the user? How?
 - Does it give an advantage over competitors? How?
 - Does it affect the cost of the activity?

- c) What is the consequence to people and communities of not having access to the ICT developments you have considered? Give some specific examples.

Credits: List the article(s) you have used in this part of the report, clearly stating where they have come from, and why you believe they are non-biased and accurate.

People with Special / Particular Needs

In your report, put the title 'People with Special / Particular Needs.'

Introduction

What is meant by special and particular needs. Give a few examples of particular needs that a person might have.

- a) The effects of developments in ICT on people with special/particular needs. Choose four specific individuals or groups of people with special needs and consider particularly how advances in ICT have affected each.
- b) The needs that are met by the use of ICT in the developments you have considered. How do these uses of ICT help groups and individuals? Give some specific examples of technologies and the needs that are met. Consider the benefits of meeting these needs using ICT rather than other methods.
 - Does it improve quality of life?
 - Does it improve access to everyday services/activities?
 - Does it improve opportunities for working?
 - Does it reduce costs of doing things?
- c) What is the consequence to people with special/particular needs of not having access to the ICT developments you have considered? Give some specific examples.

Credits: List the article(s) you have used in this part of the report, clearly stating where they have come from, and why you believe they are non-biased and accurate.

YEAR 11 APPLIED GCSE ICT

Unit 3 – Portfolio – Your second assignment!

You will find below your second assignment for the course. As you complete the assignment, you will be building up another portfolio. You will also find attached a copy of the assessment grid.



Remember that this is the grid that is used to mark your work. When you look at the grid, you will see 3 columns. Each column has a set of allocated marks. The middle and right hand columns are where you should aim for your work to be.

Each column describes what you are expected to do in order to gain the marks within that column. Therefore, we will have to check your work meets what the exam board states you must do in order to get the marks that are available.

We will talk more about this later ... Let's get to the assignment.

Tasks

A You will have to carry out a survey into one specific area of ICT. This might be mobile phones, WAP phones, Internet providers, PC's on the market, business software, e-mail and so on.

You will have to use both spreadsheet and database software to enter, process, edit and display your results.

The aim of the survey is to investigate one area of ICT and analyse the impact that your choice has had on the target audience. You therefore have to design a draft data collection sheet that will allow you to gather all the information eg:

- the name of the shop or the ICT provider eg, Vodafone/Dixons;
- personal information;
- costs involved eg, buying the hardware/software;
- how the ICT is used by your audience;
- how often the equipment is used and so on.

As you have to use spreadsheet software you will have to collect data that is numeric and can be input and calculated through the spreadsheet.

Collect data from at least 25 people.

Your deadline for this task to be written up is _____

B You will now need to prepare a database to record all your data. Be sure to include a print out of your database structure showing:

- the fields used and their features;
- any validation rules that you have used.

Please note that for access to DD/CC/BB/AA grading you will also have to do the following:

- ensure that the database has two related tables;
- use forms to input data into the database.

Now you will have you prepare a document outlining:

- the searches that you will perform on your database eg, finding all the people over 20 who have a WAP phone, or finding everyone who spends longer than 30 minutes per evening surfing the web. (Use titles such as "Search 1" and so on). **Do 4.**
- the reports that can be produced using the database software, eg, using the wizard in Access you can prepare a report showing all the people who spend 30 minutes per evening on the web but who use BT as their ISP. (Use titles such as "Report 1" and so on). **Do 2. All searches/reports must use both tables in the database.**

Please note that for access to BB/AA grading you will also have to do the following:

- write a summary report giving your findings in a format to suit your target audience and explain this fully in the document you have prepared.

Your deadline for this task to be written up is _____

C You now have to use spreadsheet software in order to process the data that you have collected. Think carefully of what you might put into the spreadsheet.

You must think about the following:

- layout of the row and column headings;
- titles;
- the formulae that you will use;
- the relevant charts and graphs that can be produced from the data.

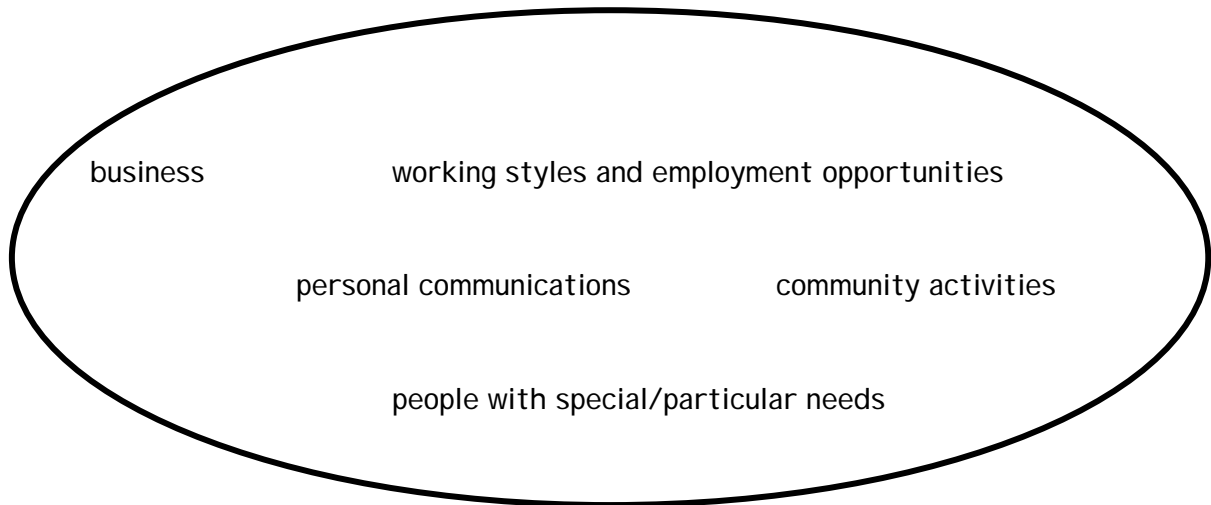
You must include a print out of the formulae from the spreadsheet.

For access to higher grades your spreadsheet MUST contain the following:

- more complex formulae such as SUM, AVERAGE and ABSOLUTE referencing;
- formatting of cells to match the data type eg, currency;
- layout and formatting of cells clearly and accurately for the target audience;
- preparation of a variety of charts/graphs with titles and legends.

Your deadline for this task to be written up is _____

D ICT has had a huge effect on our working and social lives. The exam board asks that you investigate how ICT has affected the following particular areas:



You must pick at least 3 or 4 of the above areas and then choose 3/4 groups from within each area that have been affected by ICT. **For access to AA/** you have to actually choose 4 groups from all 5 areas.**

You have to research using the Internet and other resources how **each of the groups** within the above areas have been affected by ICT -

- explain clearly the effects and benefits that ICT has had;
- give real life examples of how they have been affected and how ICT helps;
- assess the impact that the developments have had on their working/social lives.
- describe and then analyse in detail how ICT meets at least 2 of their needs;
- explain and assess the consequences of restricted ICT access on the groups that you have chosen.

BUT, task D and the next tasks must be presented using multimedia



- For GG/FF/EE - this will be 2 pages using text/images/backgrounds.
- For DD/CC /BB - users must be able to navigate their way through your presentation eg, choosing an option that takes them to a certain page rather than going through it page by page (using hotshots and control buttons). You must use sound/text/images. Minimum 5 pages.
- For AA/** - all of the above + you will use animation and or video. You will need to provide evidence that you have created and edited some original media components, eg sound/video. The emphasis is on quality.

Your deadline for this task to be written up is _____

- E Ensure that you keep a record of all sources used and prepare a bibliography (showing the title, author and page number of the source) and webography (showing full URL's) for the end of your portfolio.

VERY IMPORTANT NOTE:

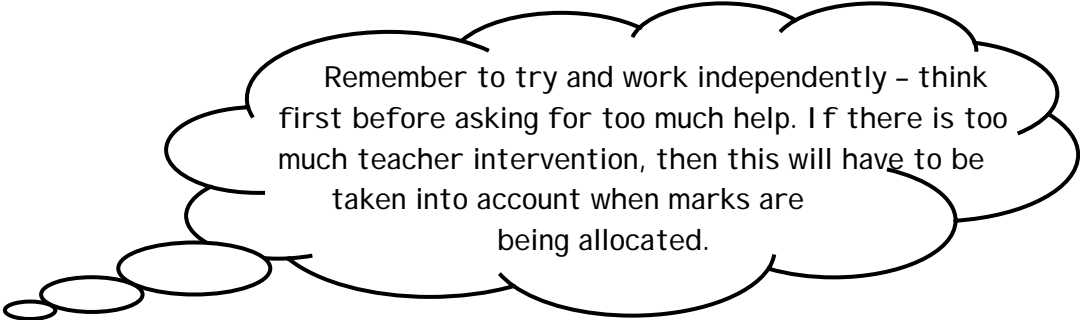
During the course of this assignment you will have had to use the Internet for research. You will have to show that you can use:

- advanced search facilities to narrow down the search and gain more meaningful results;
- use facilities such as bookmarks and favourites.

When you do this ask your teacher to witness it (ie, print off a copy of the search result, write on it the search criteria used and get the teacher to sign it and date it).

Your deadline for this task to be written up is _____

Try to look at the assessment grid as you go along. This will show you the level that your work must reach. We will be monitoring your work closely during the next few months. You must stick to your deadlines so that you do not fall behind!

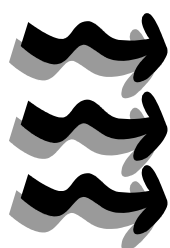


Remember to try and work independently - think first before asking for too much help. If there is too much teacher intervention, then this will have to be taken into account when marks are being allocated.

YEAR 11 APPLIED ICT

PORTFOLIO 2 – PORTFOLIO DIARY

The diary that appears below is a breakdown of the time that you have left to complete this piece of portfolio. You will see that all your lessons are indicated in the diary alongside the work that you will be expected to have completed by the end of those lessons. Homework will also be included in the diary.



It is your responsibility to meet the deadlines that are clearly stated. Use the diary as a checklist. It informs you of the type of work that you have to do and the date it needs to be completed by. This piece of portfolio represents 33.3% of your overall grade. The assignment grid is also included. Remember, it is a breakdown of the work that is required for all the different grades. Use it to target yourself towards CC/BB/AA/** level work.

<i>Date and Time of Lesson</i>	<i>Details of the work to be completed (to be read along side the assignment and the assignment grid)!</i>
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>This corresponds to TASK A of the assignment.</p> </div>	<ul style="list-style-type: none"> ○ You will be talked through the nature of the assignment and get started on your first task. ○ Decide on the area of ICT that you want to investigate. It is probably better to make it a survey of people in the school. ○ Design a draft data collection sheet – Mr Ashworth will talk you through the nature of the work and what you have to include. ○ A Draft Data Collection Sheet must be completed by the end of Period 5 today.
<p>KEEP copies of your print dumps and only print what you feel is relevant eg, prices of PC's, WAP phones etc.</p>	<ul style="list-style-type: none"> ○ Finish your draft collection sheet. <ul style="list-style-type: none"> ▪ You will have to use the use the internet to find sources of data for your portfolio. This must be related to the area of ICT that you are investigating. ○ You will have to use the advanced searches features on your search engine. Take at least 2 “print screens” and save them into word. Use a header/footer and then print them as evidence. Record the websites used here: ○ Make sure that you record any web sites in your favourite's page. ○ Get the teacher to witness your use of favourites and sign your print screen printout.

	<ul style="list-style-type: none"> ○ Your homework this week will be to try and find sources from magazines or books on your chosen topic. Take notes on the key information. Prepare draft bibliography. ○ ALSO - very important - Collect all the data using your data collection sheet - minimum 25 records.
	<ul style="list-style-type: none"> ○ You will have to prepare your database structure. Think carefully of how to do this. You will have to prepare two database tables - To make them relational each table must have a primary key field and share one common field, eg, form group might be a field heading that appears in both tables. <p>One - might include all the personal details of the people that the data was collected from; Two - might contain the financial information and provider information eg, phone dealer, time, costs and so on.</p> <ul style="list-style-type: none"> ▪ For higher grades you will have to use forms to input the data; ▪ You must use validation rules for data entry - your teacher will show you in groups how to do this. ▪ Try to use the look up function.
	<ul style="list-style-type: none"> ○ Working on the above for your database - check your design has the following: <ul style="list-style-type: none"> - has 2 separate tables; - each table has one common field eg, form; - you have set the data types and field lengths; - uses lookup; - has 2 validation checks; - has primary keys set in both tables;
	<ul style="list-style-type: none"> ○ Now you have to type up a report (using report format): To: From: Date: Subject: ICT Portfolio 2. <p>Key in a heading Section 1 and call it introduction:</p> <ul style="list-style-type: none"> ▪ Summarise what the assignment is about ie, researching into the impact of ICT and society. ▪ Explain what part of ICT that your are investigating; ▪ Explain that you will use both database and spreadsheet software and describe what you will use them for. <p>Key in a heading Section 2 - Database Design</p> <ul style="list-style-type: none"> ▪ Introduce the design of your 2 tables. Show a print screen of the design ie, all the fields. <p>Explain and use print screens to show how you have used validation and lookups.</p>

	<p>Now start the next task. You have to prepare 4 searches using your database – see the assignment for examples.</p> <ul style="list-style-type: none"> ○ Create the relationship between your two tables. P88 – 90 of your book shows you how to do this. Take a print screen and print with name in header/footer of the relationship. ○ Make sure that you use both tables in the search – you will see that when you add both tables to the query design that the relationship is shown between both tables. ○ Take print screens of all 4 designs and all 4 outcomes of the search. Paste into word and using header/footer, then print.
Homework – everything must be up-to-date.	<ul style="list-style-type: none"> ○ Continuing with searches. Homework for Friday is to ensure that all 4 searches are completed and printed.
	<ul style="list-style-type: none"> ○ Go back to your report from earlier. Create a Section 3 – Searches. ○ Under this heading explain what a relational database is and how your database is related ie, using the field _____. ○ Talk through each of your searches and show the design and the result for each search below your description.
	<ul style="list-style-type: none"> ○ Prepare one report using the wizard. Again it must use both tables. ○ Customise your report to add your own individual touch and then print it with an appropriate title. ○ Create a section 4 called “Report”. Talk through the purpose of your database and what you have found out from it. Include specific references to queries/reports and include copies/screenshots where appropriate.
	<ul style="list-style-type: none"> ○ HALF TERM – your homework over half term is to: Ensure that all work so far is finished, proof read and up-to-date.
	<ul style="list-style-type: none"> ○ Using Excel, set up a spreadsheet so that you can analyse your data from the data collection sheet. This is where you will work with the number element of the portfolio, think of: <ul style="list-style-type: none"> ▪ Layout of row and column headings; ▪ currency ▪ Titles; ▪ How you can use formulae; ▪ Design the spreadsheet appropriately.

	<p>Enter data into your spreadsheet and print off the task, Ensure your name is inserted as a footer/header.</p> <ul style="list-style-type: none"> ▪ Start to use the formula such as SUM, AVERAGE, ABSOLUTE referencing, IF statements. ○ Create a Section 5 called Spreadsheet. Introduce the purpose of your spreadsheet and what made you choose your final design. List the features that you have used. Include a print dump of the spreadsheet below your description.
	<ul style="list-style-type: none"> ○ Finish working with formula to process your spreadsheet. <ul style="list-style-type: none"> ▪ Print off a copy of the spreadsheet showing the formula (tools, options, view, formulae, then make sure the formula is clearly showing and choose landscape)
	<ul style="list-style-type: none"> ○ Prepare 3 different graphs (line, bar etc) for 3 different purposes. Ensure all titles, axis labels and so on are clear. ○ Print. ○ Organise your folder – check all work is completed and in order – clearly referenced. ○ Create a Section 6 called Report. Outline the purpose of the spreadsheet and the things you have found out from it. Copy and paste extracts of your sheet and graphs from Excel to illustrate your report.
	<ul style="list-style-type: none"> ○ You will have to use multimedia in order to develop a comprehensive presentation that uses text, images, backgrounds. ○ You also need to be able to use hotshots/control button so that users can select specific pages rather than view the work in the order that you have prepared it. ○ Practice the use of hot shots and control buttons. ○ Think about the design of your presentation.
	<ul style="list-style-type: none"> ○ Look at part D of your assignment. Pick at least 3 or 4 of the 5 stated areas and then identify 3 or 4 different groups of people from within each heading. ○ Carry out advanced searches on the internet (as before), print screen a couple of examples.
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>Think of layout, backgrounds, images, sound, text effects.</p> </div>	<ul style="list-style-type: none"> ○ Group 1 – identify the group clearly: <ul style="list-style-type: none"> - explain the effects and benefits that ICT has had; - give real examples of how ICT has helped them; - describe and analyse in detail how ICT meets 2 of their needs; - assess the impact that developments have had on their working or social lives. - explain and assess the consequences of restricted access to ICT on the group being discussed.

	<ul style="list-style-type: none"> ○ Finish group 1 – check that you have: <ul style="list-style-type: none"> - explained in sentences; - analysed where required; - come to an overall decision ie where you have to assess.
	<ul style="list-style-type: none"> ○ Group 2 – identify the group clearly: <ul style="list-style-type: none"> - explain the effects and benefits that ICT has had; - give real examples of how ICT has helped them; - describe and analyse in detail how ICT meets 2 of their needs; - assess the impact that developments have had on their working or social lives. ○ - explain and assess the consequences of restricted access to ICT on the group being discussed.
	<ul style="list-style-type: none"> ○ Finish group 2 – check that you have: <ul style="list-style-type: none"> - explained in sentences; - analysed where required; ○ - come to an overall decision ie where you have to assess.
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>Think of layout, backgrounds, images, sound, text effects.</p> </div>	<ul style="list-style-type: none"> ○ Group 3 – identify the group clearly: <ul style="list-style-type: none"> - explain the effects and benefits that ICT has had; - give real examples of how ICT has helped them; - describe and analyse in detail how ICT meets 2 of their needs; - assess the impact that developments have had on their working or social lives. ○ - explain and assess the consequences of restricted access to ICT on the group being discussed.
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>Think of layout, backgrounds, images, sound, text effects.</p> </div>	<ul style="list-style-type: none"> ○ Group 4 – identify the group clearly: <ul style="list-style-type: none"> - explain the effects and benefits that ICT has had; - give real examples of how ICT has helped them; - describe and analyse in detail how ICT meets 2 of their needs; - assess the impact that developments have had on their working or social lives. - explain and assess the consequences of restricted access to ICT on the group being discussed.
	<ul style="list-style-type: none"> ○ Finish group 4 – check that you have: <ul style="list-style-type: none"> - explained in sentences; - analysed where required; - come to an overall decision ie where you have to assess.
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>For an AA/** grade then 5 groups are needed.</p> </div>	<ul style="list-style-type: none"> ○ Group 5 – identify the group clearly: <ul style="list-style-type: none"> - explain the effects and benefits that ICT has had; - give real examples of how ICT has helped them; - describe and analyse in detail how ICT meets 2 of their needs; - assess the impact that developments have had on their working or social lives. ○ - explain and assess the consequences of restricted access to ICT on the group being discussed.

	<ul style="list-style-type: none"> o Finish group 4 – check that you have: <ul style="list-style-type: none"> - explained in sentences; - analysed where required; - come to an overall decision ie where you have to assess.
	<ul style="list-style-type: none"> o Prepare a final bibliography for all sources used to prepare your portfolio. Use headings such as: Bibliography (for books) List the Title of the book, the year it was published and the author. Webography (list all the URL's visited and used) Other (videos. Magazines etc).
	<ul style="list-style-type: none"> o Making sure that your presentation is finalised and uses the expected features. o Proofread all your work clearly.
	o CatchUp/Completion if needed
	o CatchUp/Completion if needed
	o CatchUp/Completion if needed
	o CatchUp/Completion if needed

Portfolio work D-Day is This gives your teachers 2 weeks to do all the marking and paperwork associated with your portfolio.

<p>WITNESS STATEMENT EVIDENCE TOWARDS ACHIEVEMENT</p>
--

Candidate Name:	
Candidate Number:	
Assessor:	
Portfolio Number:	4874
Portfolio Title:	ICT Systems Portfolio

I hereby acknowledge that the work submitted within the multimedia presentation is that of the above named student. I have witnessed the presentation itself and can confirm that it contains the following formatting features:

-
-
-
-
-
-
-
-

This allows me to place the work of the student into the following column _____ and award _____ marks.

Assessor Signature	
Centre Number	

ICT.... what does it stand for

Information and

Communication

Technology



An Introduction to Unit 3

ICT and Society

Who does it affect ?

Most people

- ✓ Youngsters
- ✓ Teenagers
- ✓ Adults

Personal life

Social life

Working life

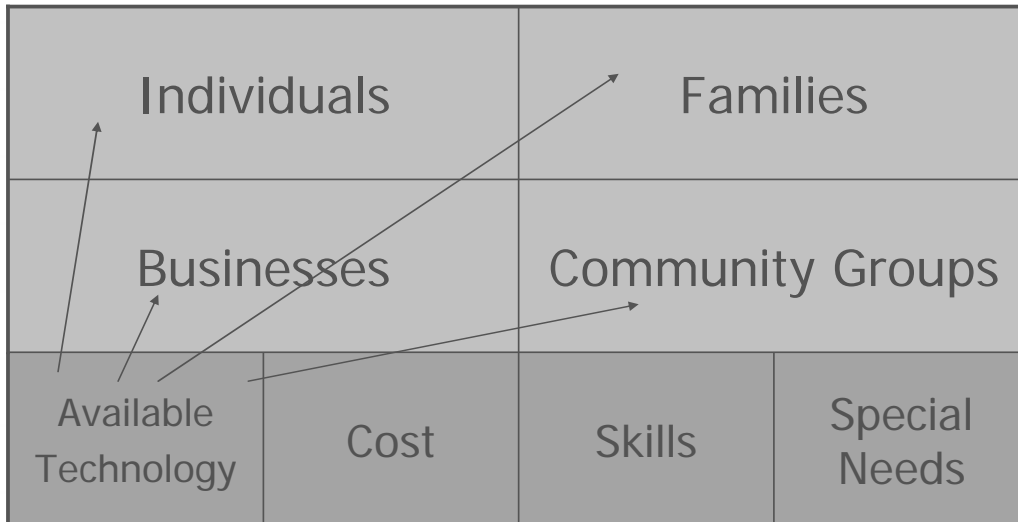


Consider these 4 groups

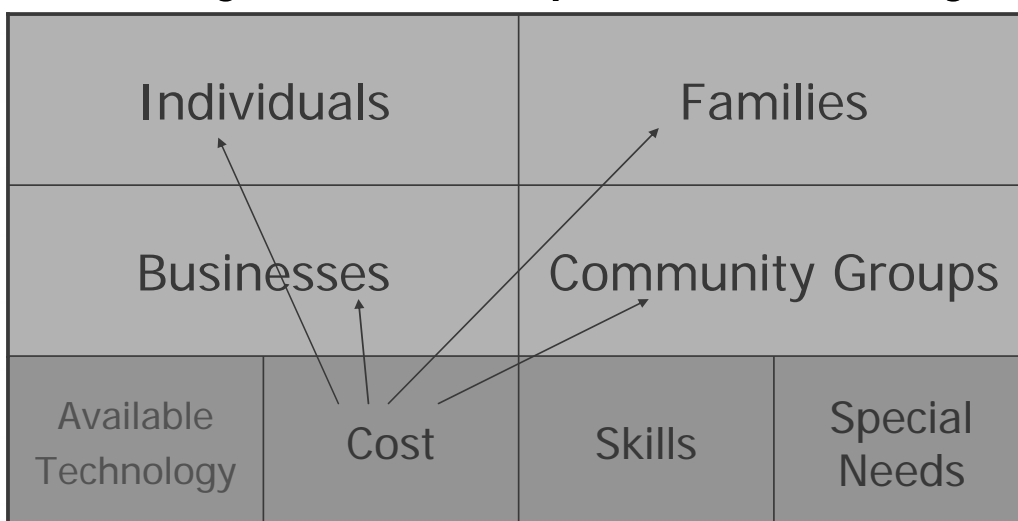
○		○	
○		○	



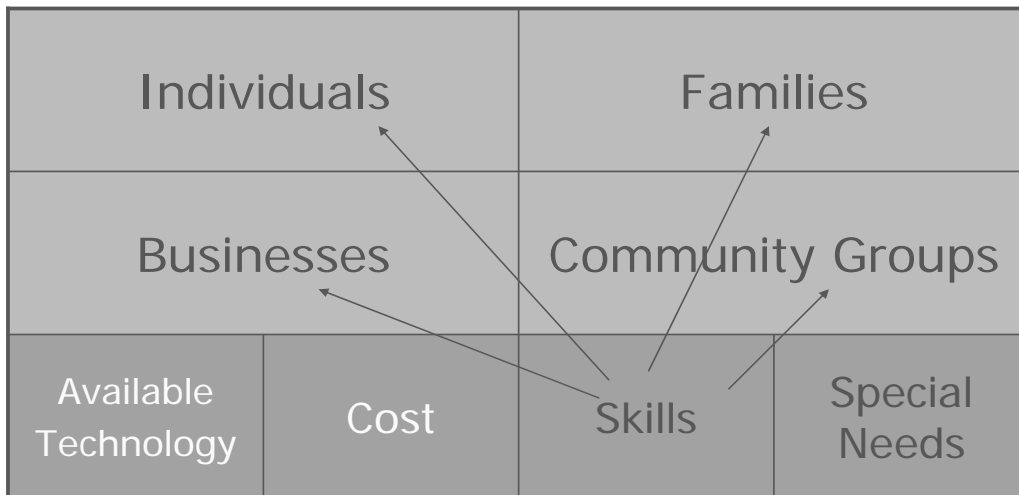
Each Group is affected by a number of FACTORS



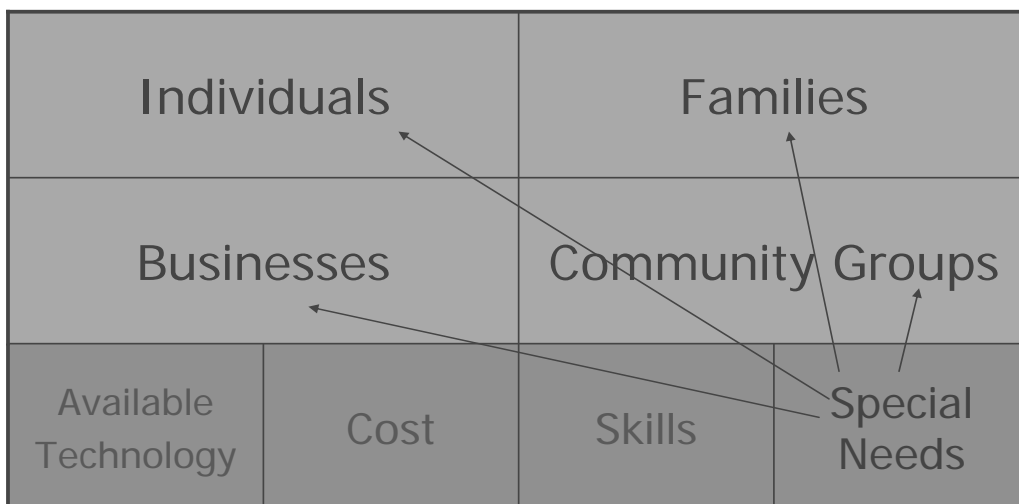
It may be too expensive to buy



People may not have the skills needed



The people may have special needs





People's
needs must
be considered

Ava
Technology

OS
al
needs



+ + + + + + + +
There will be
**POSITIVE
EFFECTS**
+ + + + + + + +



**There may be
NEGATIVE
EFFECTS**



ICT systems are used

- ✓ Hardware
- ✓ Software
- ✓ People to control the system



Changes

Changes in technology happen quickly

- ☞ New products
- ☞ New uses for computers/micro technology

.....future developments.....

.....**predict** what might happen



You will be taught about 7 areas

- ☞ Available Technologies (224-244)
- ☞ ICT uses in Business (links with unit 2) (247-256)
- ☞ Work Styles (260-266)
- ☞ Legislation (268-278)
- ☞ Personal Communication (279-288)
- ☞ Community uses (293-300)
- ☞ Special Needs (301-306)



You MUST also find out things for yourself

- ✓ A detailed survey
- ✓ Articles from newspapers
- ✓ Business leaflets
- ✓ Community leaflets
- ✓ Notes from TV programmes
- ✓ Notes from Interviews/talks
- ✓ Internet research (annotated)

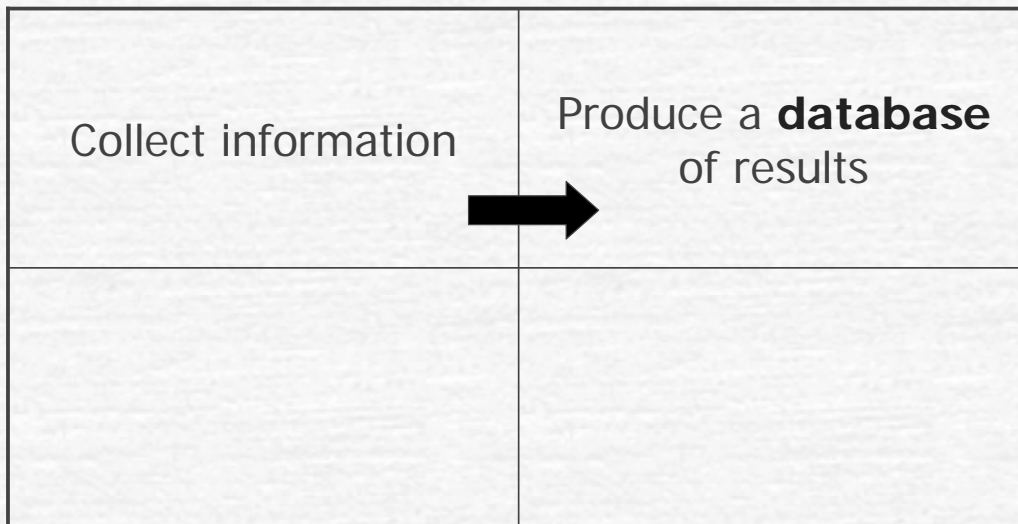


Your report

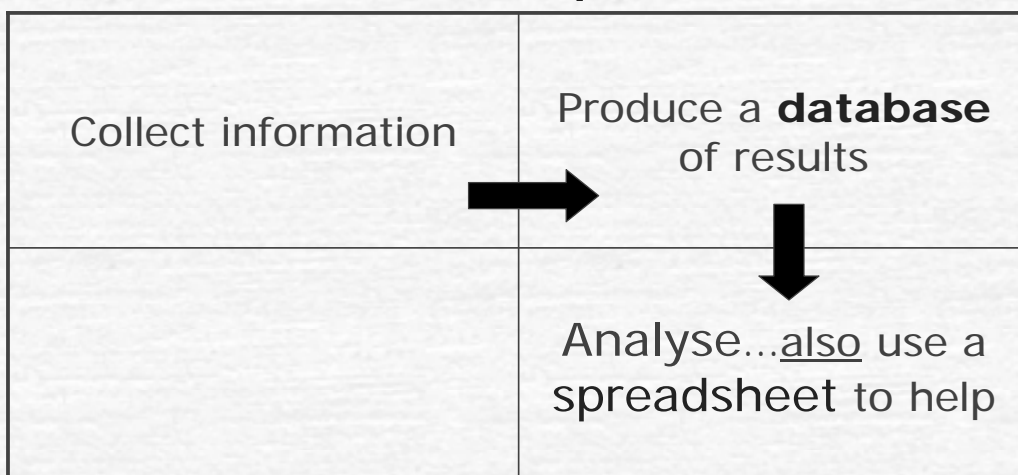
Collect information	



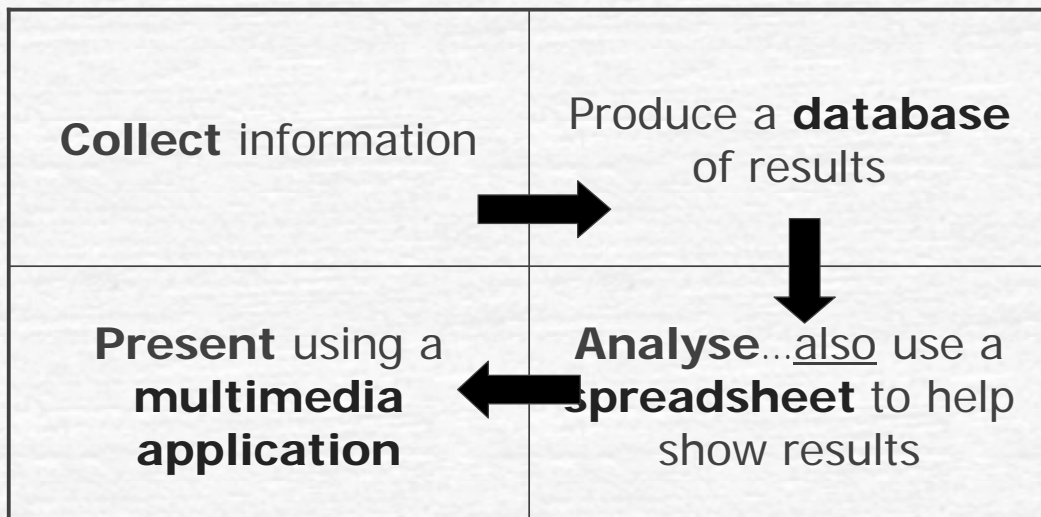
Your report



Your report



Your report



To access top grades

- ☞ What are the objectives of your survey
- ☞ Consider accuracy of data
- ☞ Use validation on your database
- ☞ Analyse specific groups (e.g. partially sighted)
- ☞ Produce a story board/design plan for your multimedia presentation
- ☞ Number pages/use contents page
- ☞ Make your work PROFESSIONAL



You are now ready to answer 3 questions....take your time please

 [Click here](#)



3 ways to do the assignment

1. Think of your **own** ideas and work through these at your own speed.
(ideal for independent learners)
2. Use an assignment guide designed by the exam board (OCR)
3. Use a detailed assignment worked out by another school
(ideal for structured learners)



Planning your ideas

You can help get organised in 2 ways

1. Use mind manager to plan out your ideas and thoughts
2. Make some notes on a sheet to give to the teacher. [Click](#)



Year 10: Month 6-Feb

- ☛ By now you should have
 1. Completed some research (section A)
 2. Planned a database on paper (sec. B) [click](#)
 3. Started setting up the database using MS Access (section B)
- ☛ You may have also
 1. Linked 2 tables using Access
 2. Copied and pasted some of your database work into WORD (to explain it)



Read this to find out more about section B

b1 (0-3)	Students will set up a single table database, enter and edit data, sort data and carry out simple searches. They will be able to display the results as tables and using default report formats.
b2 (4,5)	Students will set up a database with at least two related tables, enter and edit data, sort data and carry out both simple and complex searches. They will be able to produce database reports using data from more than one table.
b3 (6,7) mark	When setting up their relational database and entering data, students will create forms for data input. They will apply validation rules for different types of data, e.g. text, currency, date. Students will be able to customise the report format, so that database reports produced meet their intended purpose and are appropriate to the target audience.

Your teacher will now help you to develop your database to make it

- ☞ easier to use
- ☞ look more professional

You will need to **explain** all the changes you have made. Why not use 'screen prints' from your Database to Microsoft Word)

Don't forget to use 'headers and footers'

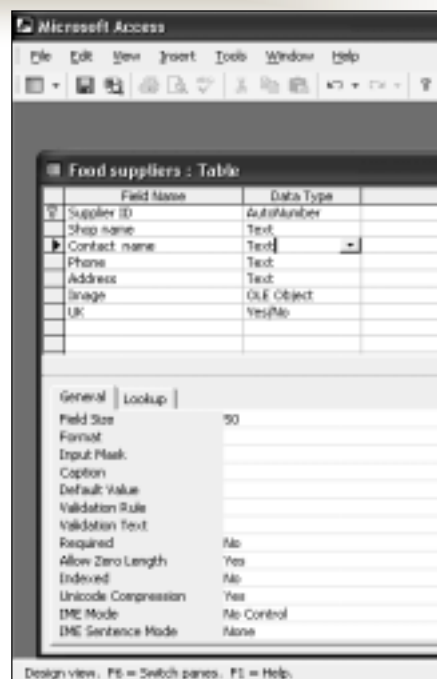


Planning a database

As with all subjects planning what you are **going to do** is important

Using Microsoft Access can be **difficult**

therefore you need to think carefully about what you want the database to contain and how it will be set out



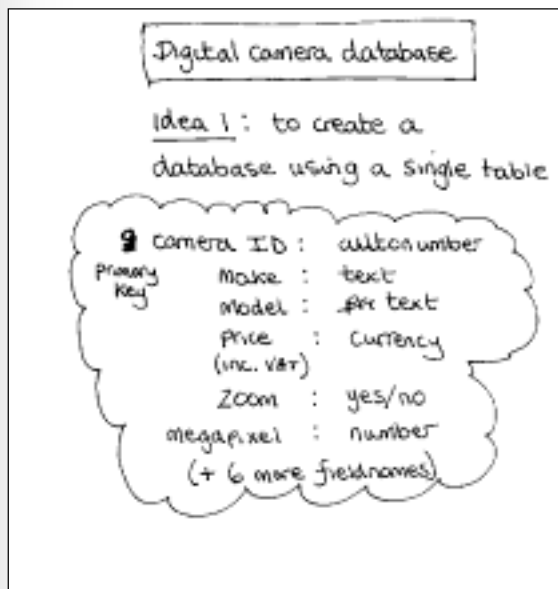
Imagine you are doing a database about **digital cameras**

It will need to contain information such as

- Make of camera (e.g. Canon)
- Model of camera (e.g. DC5)
- Price

But **most importantly** you will need to give each camera a **UNIQUE code (called the primary key)**

It is best to plan your database on paper

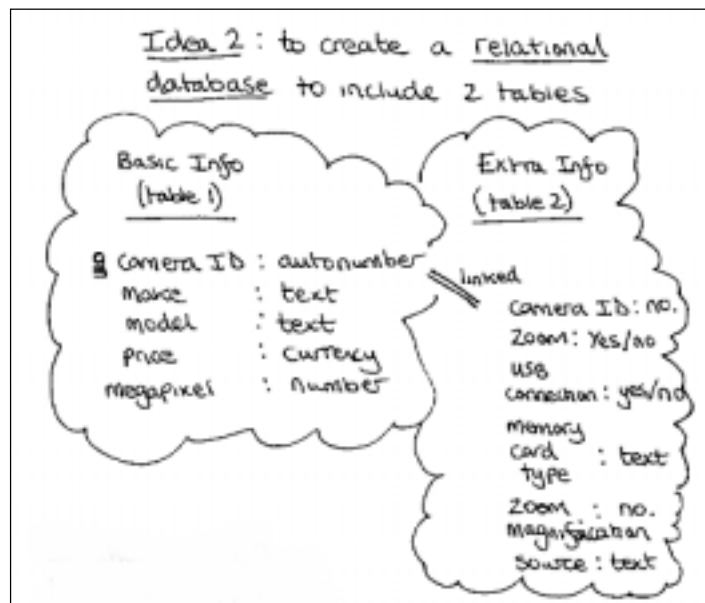


Here is the **first idea** for the database

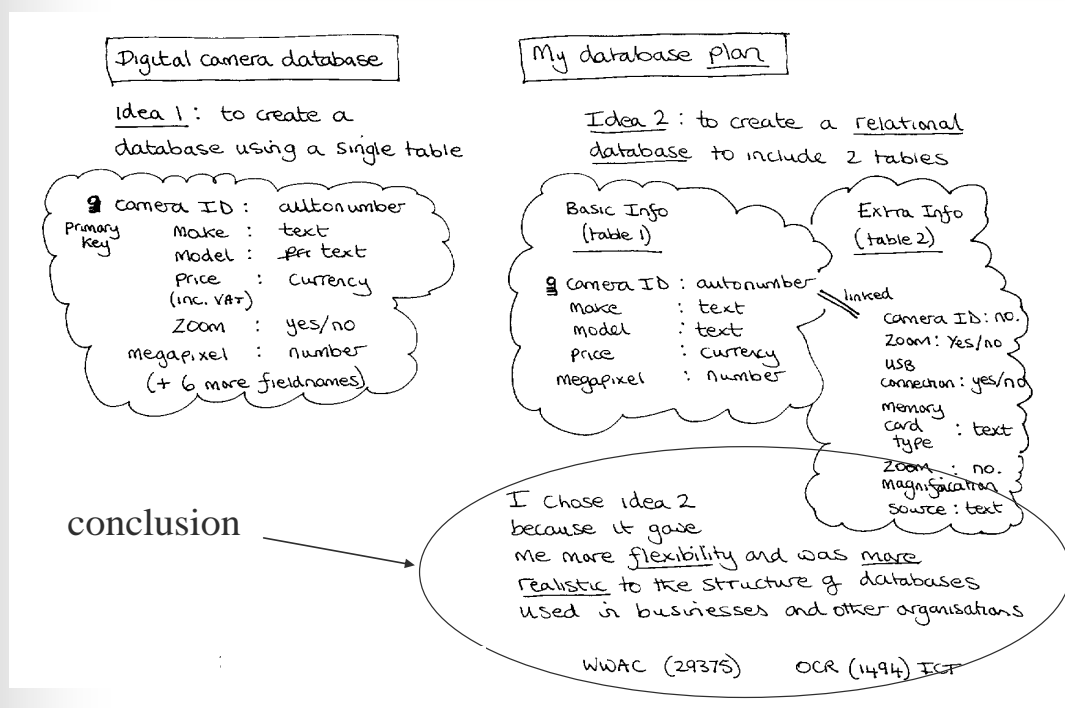
What do **YOU** think of it ?

Here is the **second idea** for the database

What do **YOU** think of this one?



Here are the two ideas together plus a conclusion



So.....what can YOU do

- Design your database on paper
- Think of more than one idea
- Write a conclusion describing **your** thoughts
- Show your teacher your plan, then put it in your file....good luck