Examiner's Report

January 2010

GCE Applied ICT 6957 Paper 01

Using Database Software

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Overall Comments

Important information

This specification has been updated and ALL candidates will be assessed on the updated version from SUMMER 2010. This version which has a blue cover and has been sent out to centres, many centres have attended the free inset sessions.

Examined Units

It was clear from the candidates' answers that centres are using past papers to prepare candidates for the examination. This is good practice, however the candidates still need to look carefully at the question or task set, there are variations from one series to another, and candidates need to be prepared to carry out tasks from any area of the unit specification.

Unit 7: Using Database Software (6957)

General Comments

The evidence from this series seems to show that were better aware of what to expect. It was unusual for candidates not to complete/attempt all 5 questions.

The net result of the adjustments to the requirements and marking for each of the activities meant that far fewer candidates than in the past obtained very low marks, with weak candidates able to get 35-40 or so marks and clearly competent candidates gained 70-80+. Many candidates obtained around 45 marks for the paper – in past series a mark in the mid 30s or below was more common.

Candidates do, however, lose a large number of marks by not providing the correct evidence.

Despite instructions on the question paper, many candidates are still generating far too much paperwork for individual activities usually screenshots explaining how they had created forms and queries not explaining how they functioned, and also how they had created reports. A significant number of candidates included a lot of unnecessary pages that had not been asked for in the tasks, for example queries in Activity 2.

There were many explanations about setting up macros, often incorrect ones, but no evidence of the outcomes. Again, the report in Activity 5 asked for the SUMMARIES to be printed yet some candidates still produced all the contracts that had been taken out and failed to gain certain marks allocated for summaries. Similarly, a step-by-step guide on how to create the customer form was not required and gained no marks per se.

The vast majority of candidates did show their report in DESIGN view which was part of the rubric to ensure correct software was used for the report itself. Sadly, some candidate produced 3 reports, not asked for, and so gave away marks. Despite advice given in the previous Principal's Report there was still evidence that candidates failed to put their name, centre number and candidate number on reports meaning they were unable to score any marks.

There is still a lot of evidence of candidates either cropping screenshots too much – missing off names of tables, buttons they have added on forms, numbers of records on datasheets, etc, and of printing them out too small or with poor print quality (possibly photocopied) making the evidence illegible.

Solution themes were apparent in the different centres and it appeared that some classes had had a significant amount of advice between sessions.

There is still evidence that candidates are being entered for this examination who have not been prepared sufficiently with database skills or for whom the specification is inappropriate.

Centres should note that there is no need to use SQL as this is a unit designed for DBMS.

It is probably worthwhile here reiterating what is allowed as regards help and assistance during the exam period. The scenario is released prior to the examination

and teachers are allowed to discuss with their students possible answers to the questions. The teacher does not know the final construction of the dataset so that any datasets they give to their students can only really be guesswork.

Comments on Individual Questions

The scenario seemed accessible to candidates and most had a good 'feel' for what was required.

Despite advice given in previous reports some candidates produced tables nominated 'customer_exam' and 'phone_exam'. These elicited no marks.

Activity 5 saw candidates following the basic rubric this time of providing a screenshot in design view to show they were using the correct software for the report, a good and pleasing improvement over previous series'.

Activity 1

Overall, it would appear that candidates are gaining marks more easily and effectively using a table than with a written description of the inputs, processes and outputs. The greater clarity in the rubric clearly helped candidates present their evidence.

One area not well addressed by most of the candidates highlighted the need for candidates to understand what the database does, not what they want the end-user to be doing. There was very clear guidance on the scenario about the processes but many candidates did not take advantage of this. Too many candidates gained marks for the processes but failed to think through then describe what inputs and outputs would follow. A particular example was a process of "check contracts one month from expiry" and there would only be an input of "phone type and duration" when the input should have been "CURRENT DATE, phone type and duration" as the list could only refer to a starting point of the current date. If candidates had actually regurgitated the scenario verbatim they could have gained the 4 process marks.

Too many addressed what the database would do in terms of how it operated for the phone buyer to add new contracts but failed to realise that an integral part of the system was to input ALL the details needed i.e. ContractID, CustomerID, Phone Type, Package Type and date.

Some candidates did not produce a table and so gained no marks. An especial note on this is that without the table it was not possible to see where inputs, outputs and processes interacted.

The majority of candidates gained around half the available 12 marks, with a substantial minority gaining 8 and above.

Activity 2

There was a variety of solutions from different centres. Often candidates from the same centre created databases with very similar structures, as might be expected. However, where there were errors the same errors tended to be repeated throughout a centre.

It was good to note that candidates this time did not waste a lot of time showing normalisation and data dictionaries for the database. If the tables, fields, primary keys and relationships are correct it is implicit that normalisation has been completed prior to developing the database structure. Most candidates identified 4 appropriate tables with most relationships. A large proportion of candidates managed to identify correctly the tables required this time.

There was some evidence of using wizards to check structures; this resulted in incorrect tables being introduced.

Setting up data types as well addressed with most candidates getting at least 3 of the 5 marks available, particularly the 'number' field for stock_level, reorder_level and reorder_quantity, the 'text' field for sort code and the date' time field for ContractDate

Fewer candidates than in the past had many pages showing very similar input masks for validation – postcode was less popular this time, though still probably the most frequently seen type of validation. Postcode validation/masking was done well, as was account number. Many candidates recognised and used drop down boxes to display the choices of phone or package, but did not seem to appreciate the need for 'limit to list' for combo boxes, or other validation for list boxes. More candidates than in the past (but still a minority) picked up the need for some presence checks, as clearly signalled in the scenario, but often failed to show clearly that these had been applied to the specific fields. The best candidates created a range check for the stock level.

Too many still gave an input mask and presence checks for customer ID which was inappropriate when the field had to be generated. Similarly, presence checks on primary keys are not valid evidence to gain a mark.

Overall, many candidates managed to gain 3 or 4 of the extra validation marks available, with a reasonable number managing all the 5 available marks.

There were fewer poor quality printouts than previously, but some candidates managed to achieve high marks for this activity whilst printing a small number of relevant pages, whilst others are still providing a large number of disorganised pages showing little of value, with a minority still producing pages of printouts showing 'how I imported the data'. There are no marks for explaining how to import records. It is enough simply to show clearly how many records have been imported.

Most candidates this time showed clearly how many records are in the various tables. When importing data into tables, too many candidates are still losing marks through not showing the actual number of records in a table at the bottom of the window. Because of poor structure candidates often ended up with too many records in their tables e.g. 253 customers.

Overall, a large proportion of candidates obtained 13 - 16 marks for the activity, with a few managing 20.

Activity 3

This activity was well answered. Most candidates obtained marks for this activity even when relationships and tables were not correct in the previous activity.

Candidates produced forms in design and form view and, in general, produced suitable documents.

Nearly all candidates successfully created the initial form and gained the vast majority of marks. Most candidates were able to collect up to 10 marks for their Customer form, and most did include the logo, company name and the purpose of the screen – evidence of learning from previous series'. Almost all included a drop down choice for phone type and package type.

However, too many candidates missed marks by not adapting the labels e.g. 'Address1' should simply have been 'Address'. Similarly the text boxes for holding the information needed to be adapted for size to make for a professional look to the forms, and often marks were missed there.

Candidates are asked to explain how the form and its commands worked. Many did this well with good screenshots and explanations. Macros and queries used were better evidenced than in previous series. This series candidates gained marks by explaining what the form would do from a technical angle rather than how the HCI worked.

The contract form was well produced, logical and usually allowed sensible choices to be made. Most forms had Confirm and Cancel buttons.

The marks for queries and macros were harder to obtain, though the 'generate customer ID' was better evidenced than previously usually showing 1 more that the maximum. There were good explanations of what the macros did and candidates who did this scored well.

A substantial minority managed to show to create a stock warning message and used their own data to get a result from their database, whereby showing the database had been correctly constructed.

Candidates were able to gain 10/15+ marks for this activity even when there was no evidence of a working system.

Overall, the marks awarded averaged 14 – 18.

Activity 4

This activity was better answered than in the past generally though not as well as in the summer 2009 series.

Nearly all candidates attempted this activity and showed all 5 sets of test data. Most candidates obtained at least 4 marks as there was usually sufficient evidence to show test 1 effected correctly, the table updated and an explanation. Most went on to attempt test 2, again with varying degrees of success.

Many were able to get around 7 marks for this activity and a significant number of candidates gained full marks. However, some missed out on one or two marks because they failed to carry out the correct test e.g. some used invalid **package** data when what was needed was invalid **customer** data.

In some cases the surname and first name were transposed at input leading to incorrect customer references.

Many candidates then went on to attempt to type the records into the table (shown by the 'pencil' in the table) and it was clear where this was so. This was not what the

test was about. It was intended to prove that the functionality of the database was correct and records were stored in tables automatically. An example was where one candidate typed in the answer "as none of the test data was in the system, I had to enter it into the customer table . . ." Where there was evidence that candidates attempted to type the results into the table marks were not given. This was usually the case when the initial attempt to test was not good and the candidate had attempted to 'force' the record into a table, for example creating a contract for the test involving Blackberry phone that did not exist therefore the contract could not be created at all.

Better candidates did carry out good testing and were able to demonstrate where data could not be stored with well constructed error messages and good explanations. The incorrect package types in particular were well evidenced.

Some candidates lost marks because there was no evidence of the data being rejected or not stored when a further screenshot would have shown this as the data they had created were clearly invalid. The idea of the student's own testing is to demonstrate the robustness of the database construction.

Worthily, where candidates had achieved a working database with appropriate validation, they went on to score highly on this activity. It was pleasing to note that a good number of candidates got full marks.

Overall, the marks awarded averaged 5 -8.

Activity 5

Most candidates who had managed their time well got onto this activity and it was well answered. They had followed the rubric stated and, generally, there were fewer pages to deal with than on some previous occasions.

Happily, there was very little evidence presented by candidates of what they had done to generate the report, information that would have gained no marks.

It was very pleasing to see most candidates presented a design view of the report to show they had used database software to generate it. However, some candidates lost marks by producing 3 reports, 1 for each duration type. Centres should note that no design view meant no marks awarded for the report. There was little evidence that students had used word processing or desktop publishing software to create the report. This, too, would have yielded no marks.

Where this task was attempted most candidates obtained at least 7 marks, with 12+ not uncommon. Most had the logo and company name as required. Sadly, a lot missed an 'easy' mark by not having these repeated on each page.

Most candidates managed to produce data for 2009 only, though some did include data from 2008 and lost a mark for that. Only a small minority managed to follow all the instructions relating to **summary** data which was what was asked for. Too many produced a list of **all** the transactions

Many 'missed' marks for layout e.g. customising the labels and aligning data with labels. The report is intended to look like a professional document showing Elisha the data she needs and many candidates simply produced a technically correct but uninformative document. There was insufficient sense of audience and purpose.

It is important candidates follow the rubrics given not what they think they are or what they might consider to be a suitable alternative. Where they did, candidates scored well.

Overall, the marks awarded averaged 7 – 10.

Administration

Responses were not always supplied in the way required. Centres should be aware that examination documents are considered to be the e-portfolio described in the Standard Ways of Working section of the specification (practical restrictions mean it is not possible at present to accept the examination work in an e-portfolio). Not having output correctly labelled or in the wrong order is considered to be not "creating an appropriate structure". Marks are awarded for Standard Ways of Working and students may lose these if their materials are not labelled or badly ordered.

All printouts should be attached to the cover sheet via a **single** treasury tag to the hole available in the top left corner of the inside of the cover sheet as shown in the instructions. There should be no need to punch extra holes in the cover sheet and the treasury tag should be passed through the cover sheet and the printouts only **once**. The instructions are clear and the examiners would be grateful if centres could remind candidates to do this. Candidates should not include rejected work.

Candidates are still not assembling the folders correctly and the more paper that is generated the more difficult it is for candidates to hole punch and keep in order the hardcopy evidence. Too many candidates lost both the SWW marks because their script was incorrectly compiled. Many failed to complete the script correctly or added unnecessary (and sometimes blank) sheets also depriving them of SWW marks.

Double sided printing, whilst environmentally laudable, makes marking very difficult.

Candidates are still attempting to enter the header/footer containing the candidates details by hand. This is not acceptable. It should be noted that in future series candidates work submitted without correct headers/footers will not be given the marks for that sheet as it is proof of authentication. Where headers/footers are missed it is generally on Activity 5.

There were a few cases of candidates printouts being on paper that had been put through the printer again and therefore had other things printed on it. This practice should not occur as it could deprive candidates of SWW marks.

A number of centres were late in posting off students' work. Centres need to ensure that work is sent off immediately the exam has concluded.

Grade Boundary January 2010

6957	Total	A	B	C	D	E
Raw Mark	90	67	58	49	41	33
UMS	100	80	70	60	50	40