Write your name here

Surname	Other names

Centre Number | Candidate Number

Edexcel GCE

Applied Information and Communication Technology

Unit 7: Using Database Software

COVER SHEET

6 – 24 May 2013

Paper Reference
6957/01

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Punch a hole in the top left corner of each printout.
- Ensure your printouts are in the correct order and attach them to page 2 of this cover sheet using a treasury tag.

Turn over ▶

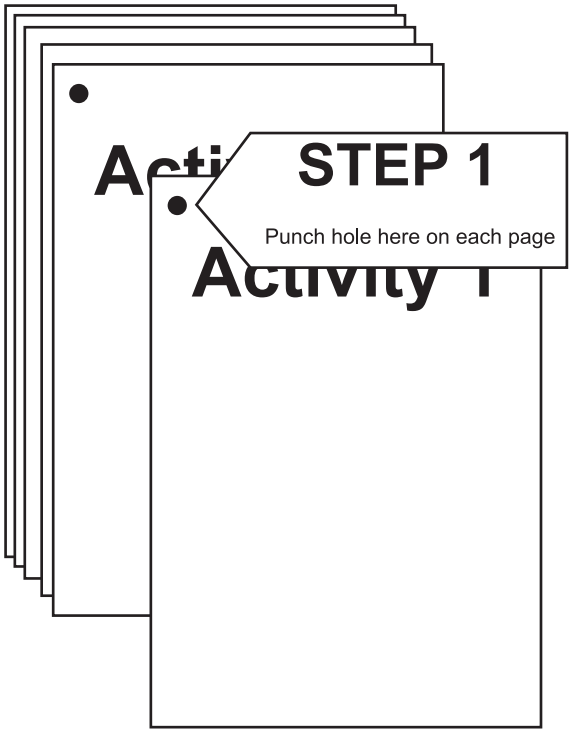
P41050A

1/1/1/1

P 4 1 0 5 0 A 0 1 0 4

PEARSON

Put 'treasury tag' through this hole



STEP 2 **Arrange your pages in this order, face up.**

Activity 1
Activity 2
Activity 3
Activity 4
Activity 5
Activity 6

STEP 3 Put a 'treasury tag' through all your pages

STEP 4 (last)

FOR EXAMINER'S USE ONLY

Activity 1			
(a)	1		
	2		
	3		
	4		
(b)	1		
	2		
	3		
Total			

Activity 2			
(a)	1		
	2		
	3		
	4		
	5		
	6		
	7		
(b)	1		
	2		
	3		
(c)(i)	1		
(c)(ii)	1		
(c)(iii)	1		
(c)(iv)	1		
(c)(v)	1		
(d)	1		
	2		
	3		
	4		
Total			

Activity 3			
(a)(i)	1		
(a)(ii)	1		
	2		
	3		
	4		
(a)(iii)	1		
	2		
(b)(i)	1		
	2		
	3		
	4		
(b)(ii)	1		
(c)(i)	1		
(c)(ii)	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
(d)(i)	1		
	2		
(d)(ii)	1		
	2		
	3		
Total			

Activity 4			
(a)(i)	1		
(a)(ii)	1		
	2		
(b)	1		
	2		
	3		
(c)	1		
	2		
	3		
(d)	1		
Total			

Activity 5			
(a)	1		
	2		
	3		
	4		
	5		
	6		
(b)(i)	1		
	2		
	3		
	4		
(b)(ii)	1		
	2		
(b)(iii)	1		
(b)(iv)	1		
(c)	1		
	2		
Total			

Activity 6		
MB1		
MB2		
MB3		
Total		

SWW		
1		
2		
Total		

A1		
A2		
A3		
A4		
A5		
A6		
SWW		
Total		

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Edexcel GCE

Applied Information and Communication Technology

Unit 7: Using Database Software

6 – 24 May 2013
Assessment Window: 3 weeks
Time: 10 hours

Paper Reference
6957/01

You must have:
Cover sheet, short treasury tag, Exercise_exam.txt

Instructions

- Complete your candidate details on the cover sheet provided.
- All printouts must contain your name, candidate number, centre number and activity number.
- At the end of the examination:
  – *all printouts should be placed in the correct order.*
  – *use a treasury tag to attach your printouts **(as shown)** to page 2 of the cover sheet.*

Information

- The total mark for this paper is **90**. There are **six** activities in this examination totalling 88 marks. 2 further marks are allocated to Standard Ways of Working.
- The marks for **each** question, within an activity, are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Use relational database software to carry out the database activities in this examination.
- Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed
  – *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*

Advice

- Read through the Scenario carefully.
- Work through the activities in order.
- Attempt **ALL** activities.
- Label your printouts clearly as instructed.
- Printing must be undertaken within the examination time.

Turn over ▶

P41050A

1/1/1/1

P 4 1 0 5 0 A

PEARSON

Scenario

Wallsherpool Sixth Form College – Boot Camp

Wallsherpool Sixth Form College is located in the North East of England and offers students a range of A Level courses.

Enrichment activities take place on a Wednesday afternoon. One of these is a boot camp, where students undertake fitness training. Mr McGarry, a PE teacher, runs the boot camp.

Fitness testing takes place once a month. Students complete the same exercises each month. Some exercises test the number of repetitions a student can manage in 60 seconds, whilst others test the number of seconds for which a position can be maintained.

Mr McGarry currently maintains paper-based records of testing, so that students can see how their fitness levels are progressing. He knows you are studying ICT and thinks you could develop a more efficient IT-based solution to record and analyse the fitness records. In the first instance it has been agreed that you will design and build a ***prototype*** relational database system that will focus on four tasks. The final system will be based on your evaluation of the prototype and your recommendations for further functionality.

These are the tasks.

1 **Adding New Students**, which involves:

- ensuring their name and date of birth are present
- the generation of a unique StudentID: a mixture of letters from their name and ending with a sequential four digit number
- storing the student details if all requirements are met
- providing a suitable message for Mr McGarry, so that he knows what is happening.

2 **Adding a Monthly Fitness Test**, which involves the generation of:

- a unique identification key
- the month of the test
- a new record for each exercise, for each student, in readiness for their fitness test results.

3 **Recording Fitness Test Results**, which involves:

- adding a student's fitness test results for each exercise.

4 **Printing Records for Identified Students** – Mr McGarry needs to be able to select students and print records showing their best and worst result for each exercise.

The printout will need to be clear and easy to read.

Instructions to Candidates

All word processed documents **MUST** have a header and a footer. The header must contain the activity number. The footer must contain your name, candidate number and centre number.

Minimum font size of 10 should be used throughout.

Screen prints should be large enough to be easily read.

All database reports must have the activity number, your name, candidate number and centre number in the page header.

Activity 1 – Understanding the situation (suggested time 30 minutes)

(a) Use word processing software to answer this question.

The functional specification is an important document when designing a prototype system. Identify and explain **two** reasons why it is important.

(4)

(b) Use word processing software to create a copy of the following table, which lists actions in the tasks identified in the scenario.

Actions	Input	Generated	Output
Add name and date of birth			
Add enrolment number			
Store new student details			
Add the month of the test			
Print student records			
Message to say new student details saved			

For each action, identify whether it is an input to the system, something that is automatically generated or an output from the system.

(3)

Evidence to be submitted for Activity 1

On **one** side of A4:

- ❑ Your answer for part (a).
- ❑ Your answer for part (b).

(Total for Activity 1 = 7 marks)

Activity 2 – Structure (suggested time 2 hours)

You will need to use the data file **Exercise_exam.txt**

This is provided in your examination area.

Study the data file.

(a) Create an efficient database structure that minimises data duplication.

Screenprint the relationships in your database.

(7)

(b) Use the correct data types and key fields.

Produce screen prints in **DESIGN** view of each of your tables showing **only** the field names, data types and primary keys.

(3)

(c) An efficient database must include suitable validation.

Note: you can use the same field more than once if appropriate. In (i)–(v) you **MUST** name the type of validation used.

(i) Screenprint in **DESIGN** view **ONE** example of a **Format Check** on an appropriate field. Ensure you can clearly see the field it is applied to and the format.

(1)

(ii) Screenprint in **DESIGN** view **ONE** example of a **Range Check** on an appropriate field. Ensure you can clearly see the field it is applied to and the range specified.

(1)

(iii) Screenprint in **DESIGN** view **ONE** example of a **Presence Check** on an appropriate field. Ensure you can clearly see the field it is applied to.

(1)

(iv) Screenprint in **DESIGN** view **ONE** example of a **List Check** or **Table Lookup** on an appropriate field. Ensure you can clearly see the field it is applied to and the list items or row source.

(1)

(v) Screenprint in **DESIGN** view **ONE** example of an appropriate **Field Size**. Ensure you can clearly see the field it is applied to and the field size.

(1)

(d) Import the data from the text file provided into your database.

Screenprint each table showing at **least five records**, or all records if there are fewer than five, and the **full record count**. (If the fields are too wide to fit on one page, truncated data is allowed.)

(4)

You must assemble your screen prints in the order you were asked to complete them.

(Total for Activity 2 = 19 marks)

Activity 3 – Adding new students, adding a monthly fitness test and recording fitness test results (suggested time 4 hours)

(a) A form is required that will allow Mr McGarry to add the details of a new student.

(i) Create a data entry form for Mr McGarry to use.

For each student the form should collect the student's:

- name
- address
- date of birth
- year of study

(1)

(ii) Generate the StudentID and display it on the form. A StudentID consists of the first letter of the student's surname, the first letter of their forename and a four digit number one higher than the highest existing number used.

Screenprint the form in **DESIGN** view.

Ensure you show how the StudentID has been generated.

It does not need any annotations.

(4)

(iii) Customise the form to make it easier to use.

Screenprint the form in **FORM** view.

It does not need any annotations.

(2)

(b) An automated method of saving a new student record is required.

Create an automated method of saving a student's details.

(i) The automated method of saving should:

- ensure the student's name is present
- ensure their date of birth is present
- include a message to indicate that the record has been saved
- clear the form, ready for another new student's details.

Screenprint in **DESIGN** view any macros, code and/or queries you have used.

Ensure that the detail can be seen in full.

(4)

(ii) The process must start by clicking a save button.

Screenprint the form showing the save button.

Screenprint the **OnClick** event properties, or equivalent, of the save button.

(1)

(c) A menu is needed so that Mr McGarry can click a button to automatically add a new monthly fitness test.

(i) Create a menu for Mr McGarry to use.

The menu should include a button that clearly indicates that clicking it will create a new monthly fitness test. The button should not have any actions attached to it yet.

Screenprint the form in **FORM** view.

It does not need any annotations.

(1)

(ii) An automated method is required that will:

- add the details of a new monthly fitness test
- add new records ready for the results of each exercise, for each student.

Create the automated method which will:

- generate a new TestID, which is made up of the current year, a dash and the number of the current month. For example, 2012–3 would be the TestID for March 2012
- generate the name of the month
- automatically store the TestID and month
- automatically add new records to the relevant table so that there is a new record for each exercise for each student.

The process should start by clicking the button created in (i).

Screenprint in **DESIGN** view any macros, code and/or queries you have used.

Ensure that the detail can be seen in full.

(9)

(d) A form is required that will allow Mr McGarry to record the results of the exercises for a monthly fitness test for one student.

(i) Create a query that will allow Mr McGarry to find a student and a monthly fitness test.

Screenprint the query in **DESIGN** view.

Ensure that the detail can be seen in full.

It does not need any annotations.

(2)

(ii) Create a form for Mr McGarry to use that is based on the query created in part (i).

It should allow him to enter, and save, the results of the exercises for the monthly fitness test for the student.

Screenprint the form in **FORM** view.

It does not need any annotations.

(3)

(Total for Activity 3 = 27 marks)

Activity 4 – Testing (suggested time 1 hour)

(a) Testing the creation of a new monthly fitness test.

(i) Produce:

- a screen print of the relevant table, showing the number of students currently in the system
- a screen print of the relevant table, showing the number of fitness test results currently in the system.

(1)

(ii) Using the menu you created in Activity 3, click the button to add a new monthly fitness test.

Produce:

- a screen print of the relevant table, showing the new monthly fitness test details
- a screen print of the relevant table, showing the full record count after the new records for each exercise, for each student, have been added.

(2)

(b) You now need to enter results for the monthly fitness test you created in (a).

Enter the results for StudentID JA1126.

ExerciseID	RepsOrTime
BD0005	47
CL0006	40
CR0011	75
LP0014	26
LS0008	69
PJ0002	39
PK0004	64
RS0007	64
SC0003	33
SJ0009	17
SK0001	75
SP0012	84
WP0010	29
WS0013	64

Produce:

- a screen print of the completed form in **FORM** view
- a screen print of the relevant table showing the results for each exercise for this student.

(3)

(c) Enter the details of this new student on the relevant form.

Surname: Teneur
Forename: Colin
Date of Birth: 25/05/1997
Year: 12
Address: 15 The Grove
Postcode: BB1 1BB

Produce:

- a screen print of the completed form in **FORM** view
- a screen print of the message that appears when the student details have been saved
- a screen print of the relevant table showing the new student details.

(3)

(d) Enter the details of this new student on the relevant form.

Forename:	Tina
Date of Birth:	31/01/1997
Year:	12
Address:	113 Park Lane
Postcode:	HR1 1CB

Produce a screen print of any message that appears.

(1)

(Total for Activity 4 = 10 marks)

Activity 5 – Selecting particular students and printing records (suggested time 1 hour and 30 minutes)

Note: this activity requires you to produce a database report. The activity number, your name, candidate number and centre number should be in the page header for the report. (You need to modify your report in DESIGN view to do this.)

Mr McGarry needs to be able to print records for particular students showing their best and worst result for each exercise. The report must be printed in portrait orientation, on A4 paper. Each student record must start on a new page.

(a) Create a query that will find results for StudentID AA1111 and StudentID DS1119.

For each student, the query should:

- find the best and worst RepsOrTime for each exercise
- display the StudentID, StudentSurname, StudentForename, ExerciseID, Description, best RepsOrTime and worst RepsOrTime.

Name the best result as 'Best'.

Name the worst result as 'Worst'.

Screenprint the query in **DESIGN** view. Ensure that the criteria can be seen in full.

(6)

(b) Create a database report based on the query.

(i) Group the report appropriately and add a suitable title that will appear on every page.

(4)

(ii) Ensure that the group header shows:

These fields:

- StudentID
- StudentSurname
- StudentForename

These labels:

- ExerciseID
- Description
- Best
- Worst

(2)

(iii) Ensure the detail section shows these fields:

- ExerciseID
- Description
- Best
- Worst

(1)

(iv) Ensure the results for each student appear on a different page.

(1)

(c) Format the report.

(2)

Screenprint the report in **DESIGN** view.

Print the database report.

Evidence to be submitted for Activity 5

- ❑ A screen print of the query in **DESIGN** view.
- ❑ A screen print of the database report in **DESIGN** view.
- ❑ The printed database report.

(Total for Activity 5 = 16 marks)

***Activity 6 – Evaluation (suggested time 1 hour)**

You need to evaluate the prototype you have produced.

In a word processed report:

- evaluate your prototype. This must be an evaluation of how well it carries out the tasks rather than a commentary of what you have done or your own performance in doing it.
- discuss your recommendations for further functionality. In the scenario you were told that your system was to be the first prototype and that it would only carry out certain tasks. In this section of the evaluation describe what else you think the fully functioning version should do.

The Quality of your Written Communication (QWC) will be assessed in this question.

(Total for Activity 6 = 9 marks)

Standard Ways of Working.

All printouts must contain the activity number, your name, candidate number and centre number.

Pages must be securely fastened to the cover sheet and in the correct order.

A minimum font size of 10 should be used for all word processed documents.

(Standard Ways of Working = 2 marks)

TOTAL FOR PAPER = 90 MARKS