Edexcel GCE

Applied Information and Communication Technology

Unit 7: Using Database Software

10–28 January 2011
Assessment Window: 3 weeks
Time: 10 hours

Paper Reference
6957/01

You must have:
Short treasury tag, Customers.txt, Cover sheet

Instructions

- Complete your candidate details on the cover sheet provided.
- All tasks 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 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 ▶

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Scenario

Raptshia

Roderic Maine saw himself as the 'main' man when it came to setting scoring records using any type of games console.

After a few weeks of sixth form study, Roderic realised that he had a problem. He was spending more time playing games than before. This meant that he needed more money to buy enough games to keep him happy.

Roderic decided to set up his own business selling games and consoles. He called his business Raptshia. The business started slowly with sales mainly to his friends at school. He then set up a website to advertise his goods. Gradually, Roderic got more orders from further afield and the business started to grow. Currently orders come in over the phone, by post or as email enquiries.

Roderic soon lost track of what he was selling and who he was selling it to. His friend, Antonia, told him he needed a database management system and this is where you come in. You are going to build a ***prototype*** of a database system that will show Roderic some of the good things a database can do. It may be expanded later to a fully functional system. This system would be based on your evaluation of the prototype and your recommendations for further functionality.

Antonia has managed to get the following list of tasks that the database prototype has to perform, from Roderic.

1. **Adding New Orders**, which involves:

   - selecting a customer and product
   - entering the quantity of the product required
   - automatically assigning the order date
   - determining the total cost of the order
   - the generation of a new sequential order number, which always begins ORD
   - storing the order details somewhere suitable
   - reducing stock levels
   - providing a message to the user so they know what is happening.

2. **Adding New Customers**, which involves:

   - adding the customer details ensuring the postcode is present
   - the generation of a new sequential CustomerID
   - storing the customer details somewhere suitable
   - providing a message to the user so they know what is happening.

3. **Produce Stock Checks** – A printout of the products Roderic needs to order including the supplier details, how many of each product and costs.

   The printout will need to look professional and be easy to read.

   Roderic always sets a reorder number for his products so that he knows how many of each to order when stocks are running low. Currently this is between 3 and 20.

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 mins)

(a) Use word processing software to create a copy of this table.

Process	Input	Output
	Quantity of product Cost of product	Total cost
	Highest existing order number	"ORD"& highest existing order number +1
	Highest existing CustomerID	Highest existing CustomerID +1
	Current stock level Quantity of product ordered	New stock level

Complete the table by adding the four missing processes.

(4)

Evidence to be submitted for (a).

❑ On one side of A4, a printout of the completed table.

(b) A good database will minimise data entry wherever possible.

Some of the steps for adding orders are given in this table. The steps are not in the correct order.

Use word processing software to create a copy of this table.

Step	Input	Generated	Output
Select customer	×		
Add order date			
Display message			
Add total cost of order			
Select product			
Add order number			
Add quantity of product			

For each step in the process, identify whether it is an input to the system, something that is automatically generated or an output from the system by adding a cross in the appropriate cell. The first one has been done for you.

(6)

Evidence to be submitted for (b).

❑ On one side of A4, a printout of the completed table.

(Total for Activity 1 = 10 marks)

Activity 2 – Structure (suggested time 2 hours)

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

This is provided in your examination area.

Study the data file.

When creating your tables and relationships, take into account that the system that you are creating is a prototype. At this time, an order can only be for any quantity of a single product.

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

Screenprint your relationship diagram.

(7)

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

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

(2)

(c) An efficient database must include suitable validation.

Note: you can use the same field more than once if appropriate.

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

(1)

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

(1)

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

(1)

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

(1)

(d) The data from the text file should now be in the tables you have created.

Screenprint each table showing **ONLY** the first five records and the record count. (If the number of fields is too big to fit on the width of the page, all the fields do not have to be displayed.)

(4)

Please assemble your screenprints in the order you were asked to complete them.

(Total for Activity 2 = 17 marks)

Activity 3 – Dealing with customer orders (suggested time 4 hours)

(a) An order form is needed so that existing customers can order any quantity of one product.

(i) Create an Order form for Roderic to use. He must be able to select the CustomerID and ProductID and enter the Number Ordered.

(3)

(ii) The Order Date should be automatically set to the current date.

(1)

(iii) Calculate the total cost of the order and display this on the form.

(1)

(iv) Generate the new sequential Order Number which consists of "ORD" and a sequential number one higher than the last Order Number.

Screenprint the form in **DESIGN** view

It does not need any annotations.

(3)

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

Screenprint the form in **FORM** view.

It does not need any annotations.

(2)

(b) A query is needed that will reduce the Number in Stock by the Number Ordered for the relevant product.

Create this query.

Screenprint the query in **DESIGN** view making sure that the criteria are fully visible.

It does not need any annotations.

(2)

(c) An automated method of saving the order details is required.

Create an automated method of saving the order details and reducing stock levels that uses the query produced in (b). There should be a message to Roderic when the save has been carried out and the process must start by clicking a save button.

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

Ensure that the detail can be seen in full.

(5)

(d) A form is needed to add the details of new customers.

(i) Create an Add Customer form for Roderic to use. The form should collect the customer name and address details.

(1)

(ii) Generate the new CustomerID, which is always one number higher than the last, and display this on the form.

Screenprint the form in **DESIGN** view.

It does not need any annotations.

Ensure that the detail can be seen in full.

(1)

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

Screenprint the form in **FORM** view.

It does not need any annotations.

(2)

(e) An automated method of saving the new customer record is required.

Create an automated method of saving the customer details. There should be a message to the user when the save has been carried out and the process must start by clicking a save button.

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

Ensure that the detail can be seen in full.

(4)

(f) The option to add a new customer needs to be added to the Order form.

(i) Add a button to the Order form similar to that shown:

Screenprint the updated Order form.

(1)

(ii) When the user clicks the new customer button the blank Add Customer form should open. Create a macro or use code to do this.

Screenprint the macro/code.

Ensure that the detail can be seen in full.

(2)

(iii) Attach the macro/code to the new customer button.

Screenprint the properties of the button.

Ensure that the detail can be seen in full.

(1)

(Total for Activity 3 = 29 marks)

Activity 4 – Testing (suggested time 30 mins)

(a) Use the Order form and Add Customer form you created in Activity 3 to place an order for this new customer.

Mrs Marion Jones
133 Seymour Gardens
Heartfield
Moreshire
HE3 4EE

(i) Enter the data into the Add Customer form and screenprint in **FORM** view.

(1)

(ii) Save the customer details and show:

- a screenprint of the message that appears telling the user that the customer details have been saved
- a screenprint of the new record in the customer table.

(2)

Marion Jones wants to order **2 x PR118**.

(iii) Screenprint the record for **PR118** in the product table clearly showing the Number in Stock before the order is entered.

(1)

(iv) Enter the order and show:

- a screenprint of the completed Order form in **FORM** view
- a screenprint of the order table showing the new order
- a screenprint of the updated record for **PR118** in the product table clearly showing the change to the number in stock.

(4)

(b) Enter the details of this new customer on the Add Customer form:

Mr Ahmed Al-Omran
23 The Grove
Heartfield
Moreshire

Click the save button and screenprint the message.

(1)

(Total for Activity 4 = 9 marks)

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PAPER CONTINUES OVER THE PAGE

Activity 5 – Reports (suggested time 2 hours)

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.)

Producing Stock Check Reports

Stock levels decrease when customers buy products. Each product has a re-order level so Roderic knows when to order more. He wants you to produce a report to do this for him.

To do this you must:

(a) Create a query that will find the products that are on or below their re-order level.

The query should include:
- all of the supplier information
- relevant product information.

Screenprint the query in **DESIGN** view making sure that the criteria are fully visible.

(2)

(b) (i) Create a report based on the query. The report should be grouped appropriately and have a suitable title in the Page Header.

(2)

(ii) Ensure that the group header shows:

These fields:
- SupplierID
- Supplier Name
- supplier address details.

These labels:
- ProductID
- Description
- Console/Game
- Cost
- Number in Stock
- Re-Order Level
- Re-Order Number
- total cost per product.

(2)

(iii) Ensure the detail section shows these fields:
- ProductID
- Description
- Console/Game
- Cost
- Number in Stock
- Re-Order Level
- Re-Order Number
- total cost per product (add a field to calculate this).

(2)

(iv) Ensure the group footer shows the total number of items ordered from each supplier.

(3)

(v) Format the report.

(3)

Screenprint the report in **DESIGN** view.

Print the database report.

Evidence to be submitted.

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

(Total for Activity 5 = 14 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 identified in the scenario, 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 a prototype. In this section of the evaluation describe what else you think the fully functioning version should do.

Marks will be awarded for the Quality of your Written Communication (QWC).

(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

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

10–28 January 2011

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 ▶

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N 3 7 9 8 9 A 0 1 0 4

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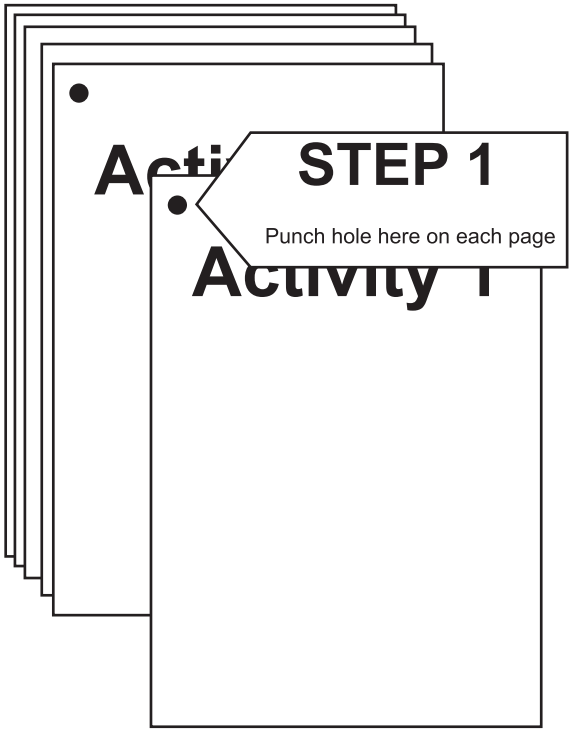
Put 'treasury tag' through this hole



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

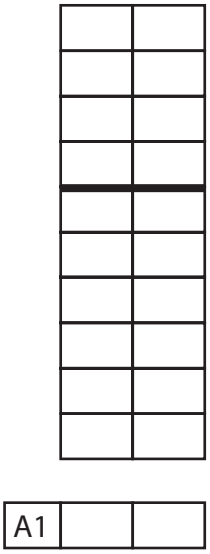
Activity 1
Activity 2
Activity 3
Activity 4
Activity 5
Activity 6

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

STEP 4 (last)

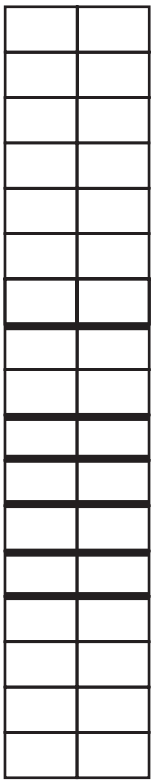
FOR EXAMINER'S USE ONLY

A1	
A2	
A3	
A4	
A5	
A6	
Total	

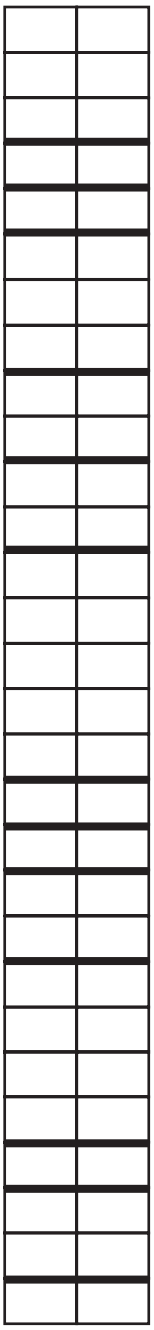


A1

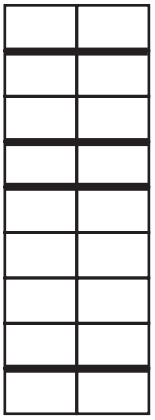
SWW



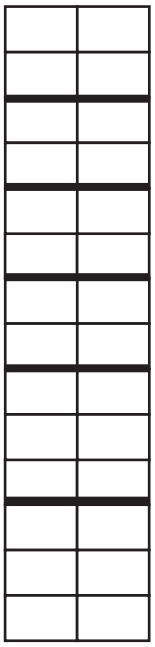
A2



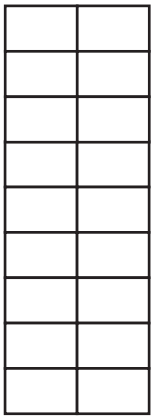
A3



A4



A5



A6

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