

Paper Reference(s)

**6957/01**

# Edexcel GCE

## Applied Information and Communication Technology

### Unit 7: Using Database Software

5–23 May 2008

Assessment window 3 weeks

Time: 10 hours

#### Materials required for examination

Short treasury tag  
BidDetails\_exam.txt  
PlotDetails\_exam.txt  
Logo\_exam.jpg

#### Items included with question papers

Cover sheet

#### **Instructions to Candidates**

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Complete your candidate details on the cover sheet provided.

At the end of each session you should hand your materials in to your teacher.

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 for Candidates**

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There are **five** activities in this examination totalling **88** marks. **2** further marks are allocated to Standard Ways of Working giving a paper total of **90** marks.

Use relational database software to carry out the database activities in this examination.

The marks for each of the activities are shown in round brackets: e.g. **(Total 10 marks)**.

There are suggested timings against each activity: e.g. **(15 minutes)**.

#### **Advice to Candidates**

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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.

Printer's Log. No.

**N30267A**



*Turn over*

## The Green Bay Building Company



The Green Bay Building Company was founded by David Green in 2003. David trained as an architect and has been designing houses since 1985. Over time David had become concerned about global warming and has introduced into his house designs aspects to minimise the carbon footprint of the occupiers. Unfortunately these modifications tend to make the houses more expensive to produce. The building firm that

David worked for at the time did not like the modifications as it meant less profit. As a result David was instructed to remove them from his designs.

Unable to find a building company to take on his revolutionary designs, David decided the only way he was going to get his designs accepted was if he formed his own building company. Consequently the Green Bay Building Company was formed.

Since its inception the Green Bay Building Company has created many successful developments. David has found that some people will pay extra if they think the house is eco-friendly and would pay even more if they thought there would be a fuel saving.

The Green Bay Building Company has recently built a housing development on brown-field building land in Tewkesbury and is about to auction the different plots.

### The Auction

The auction will be taking place from May to July 2008. Prospective bidders will apply to the Green Bay Building Company for a userID and password. They may make a bid at any time between the start of the auction and the day the auction is closed. The development has 57 plots with eight different types of house and the number of each housing type within the development varies. As all the plots are more or less the same the bidders will bid for the housing type rather than a specific plot. When the auction is closed the Auction Manager allocates the plots to the highest bidders for that housing type. For example, if there are 10 three bedroom semi-detached houses, the top ten bidders for that housing type will be allocated a plot. Notification will be sent to successful bidders detailing the plot number they have been allocated.

Once bidders have received their userIDs they should be able to sign on to the bidding system. If they supply a correct userID and password they will be taken to the bidding screen. They can then choose which housing type they require. The userID and the bid value of those bids which are currently successful are displayed. For example, if there are eight plots containing a particular housing type then the top eight bids for these are displayed. Bidders can then submit their own bid. If their bid is lower than the lowest successful bid so far then a message is displayed stating that their bid was unsuccessful. If it is higher than the lowest successful bid so far then their bid is accepted. The list of successful bids is then refreshed to display the new list. Apart from the successful bids, bidders should not be able to see any details of other bidders.

### The proposed system

You need to create a new database which will hold the data required to undertake the auction and allocate the plots to the successful bidders. You are supplied with some computer generated test data to test out your system.

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 problem (suggested time 1 hour)

On **one** sheet of A4, write notes describing the requirements of the auction system in terms of:

- the processes the system needs to undertake
- the inputs to each process
- the outputs from each process.

#### Evidence to be submitted

Word processed notes on the proposed system.

**(Total 8 marks)**

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### Activity 2 – Structure (suggested time 2 hours)

- Use data modelling techniques to design an efficient database structure that minimises duplication of data
- Create the database structure
- Load the data from the text files into your database
- Use a range of validation checks and input masks to ensure correct input of data.

#### Evidence to be submitted

- A screen print showing the relationships in your database
- A screen print showing each table structure with data types
- Evidence of any validation checks applied
- Screen prints of the tables after import, showing **the number of records** and at least five records. (If the number of fields are too big to fit on one page, all the fields do not have to be displayed.)

**(Total 18 marks)**

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### Activity 3 – Making a bid (suggested time 4.5 hours)

- Create the interface the bidders will use to place a bid at the auction. (**Important note: It is not necessary to create a web interface. Use normal database forms for the interface.**)
- Process these bids:

➤ Bid A – Petra Irons

Use your system to enter this data.

<b>UserID</b>	Irons.Petra
<b>Password</b>	Petra
<b>House Type</b>	<b>Amount</b>
MT2 (2 Bedroom Terrace)	£119,000

Take screen prints of your forms at different stages in this bid and make notes to describe what happens. Take a screen shot of the relevant table showing the effect of this bid. (Note: some bids might not be undertaken successfully due to invalid data: do not attempt to correct the data but explain in your notes what has happened.)

➤ Bid B – Peter Jenkins

Use your system to enter this data.

<b>UserID</b>	Jenkins.Peter
<b>Password</b>	Peter
<b>House Type</b>	<b>Amount</b>
MT2 (2 Bedroom Terrace)	£118,500

Take screen prints of your forms at different stages in this bid and make notes to describe what happens. Take a screen shot of the relevant table showing the effect of this bid. (Note: some bids might not be undertaken successfully due to invalid data: do not attempt to correct the data but explain in your notes what has happened.)

➤ Bid C – Roger Kelly

Use your system to enter this data.

<b>UserID</b>	Kelly.Roger
<b>Password</b>	Roger
<b>House Type</b>	<b>Amount</b>
DT5 (5 Bedroom Detached)	£270,000

Take screen prints of your forms at different stages in this bid and make notes to describe what happens. Take a screen shot of the relevant table showing the effect of this bid. (Note: some bids might not be undertaken successfully due to invalid data: do not attempt to correct the data but explain in your notes what has happened.)

➤ Bid D – Kirk Bears

Use your system to enter this data.

<b>UserID</b>	Bears.Kirk
<b>Password</b>	Kirk
<b>House Type</b>	<b>Amount</b>
DT5 (5 Bedroom Detached)	£275,000

Take screen prints of your forms at different stages in this bid and make notes to describe what happens. Take a screen shot of the relevant table showing the effect of this bid. (Note: some bids might not be undertaken successfully due to invalid data: do not attempt to correct the data but explain in your notes what has happened.)

➤ Bid E – Rachel Kearns

Use your system to enter this data.

<b>UserID</b>	Cairns.Rachel
<b>Password</b>	Rachel
<b>House Type</b>	<b>Amount</b>
MT3 (3 Bedroom Terrace)	£124,000

Take screen prints of your forms at different stages in this bid and make notes to describe what happens. Take a screen shot of the relevant table showing the effect of this bid. (Note: some bids might not be undertaken successfully due to invalid data: do not attempt to correct the data but explain in your notes what has happened.)

➤ Bid F – Yvonne Card

Use your system to enter this data.

<b>UserID</b>	Card.Yvonne
<b>Password</b>	Yvonne
<b>House Type</b>	<b>Amount</b>
DT4 (4 Bedroom Detached)	£237,125

Take screen prints of your forms at different stages in this bid and make notes to describe what happens. Take a screen shot of the relevant table showing the effect of this bid. (Note: some bids might not be undertaken successfully due to invalid data: do not attempt to correct the data but explain in your notes what has happened.)

➤ Bid G – Alex Bears

Use your system to enter this data.

<b>UserID</b>	Bears.Alex
<b>Password</b>	Alex
<b>House Type</b>	<b>Amount</b>
DT4 (4 Bedroom Detached)	£237,125

Take screen prints of your forms at different stages in this bid and make notes to describe what happens. Take a screen shot of the relevant table showing the effect of this bid. (Note: some bids might not be undertaken successfully due to invalid data: do not attempt to correct the data but explain in your notes what has happened.)

### **Evidence to be submitted**

- A word processed description of how your interface works with screen prints of any forms, queries and macros you have created for this purpose
- Screen prints and notes of what happened when you entered each bid.

**(Total 44 marks)**

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### **Activity 4 – Assigning Plots (suggested time 1 hour)**

- Create a form so that the Auction Manager can assign plots to the successful bidders
- Use your form to assign plots to the successful bidders in your system.

### **Evidence to be submitted**

- A screen print of your form with notes on how it works
- Screen prints of any macros, queries etc required to undertake the task with an explanation of how they work
- A print out of the relevant table showing that the plots have been allocated.

**(Total 7 marks)**

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### **Activity 5 – Successful Bid Report (suggested time 1.5 hours)**

**Note: this activity requires you to produce a report. 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.)**

- Create a report to list the names, addresses and telephone numbers of the successful bidders. The amount of the successful bid should also be shown. Each housing type should start on a new page and the total amount of money bid for each housing type should be shown at the end of the list for each housing type. These totals should be repeated in a report footer and the report footer should also contain a total of all successful bids.

### **Evidence to be submitted**

The report.

**(Total 11 marks)**

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**(Standard ways of working: 2 marks)**

**TOTAL FOR PAPER: 90 MARKS**

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