Pearson Edexcel International Advanced Level

Tuesday 11 June 2024

Afternoon (Time: 3 hours)

Paper reference **WIT14/01**

Information Technology
International Advanced Level
UNIT 4

You must have:
The files Sales.accdb, Art Sales.txt,
Candidate evidence template.docx

Instructions

- Answer **all** questions using the template provided.
- Paste your screen prints into the appropriate places in the template.
- Type your responses to Question 2(c) and Question 5 in the appropriate places in the template.

Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question*.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

P 7 5 8 7 9 A

Pearson

Instructions

A template for your evidence is provided in your examination area.

Open the template and type in your centre name, centre number, candidate name and candidate number in the boxes provided.

Save the template using a filename in this format:

Centre number_candidate number_surname_first letter of first name

For example, 12345_9212_Smith_J

The screen prints you produce must be copied into the appropriate places in your template.

After you add a screen print to your template check that all the text can be read and enlarge the image, if necessary.

Remember to save your template regularly.

Responses to Question 2(c) and Question 5 must be typed in the appropriate places in your template.

Scenario

Julietta owns a company that sells works of art.

Each work of art has a name and a minimum selling price.

The minimum selling price is the lowest price it can be sold for.

If more than one customer is interested in a work of art, the actual selling price may be more than the minimum selling price.

When a sale is made, the actual selling price is recorded.

A customer can purchase one or more works of art at a time.

Julietta keeps a list of works of art in a single table within the database **Sales**.

She has provided the **Art Sales** text file, which contains records of some sales.

Julietta is finding it increasingly difficult to keep track of:

- customers who have purchased works of art

- sales that are for more than one work of art

- whether the actual selling price is more than the minimum selling price.

She wants a solution that will allow her to manage the system more effectively.

The screen prints you produce must be copied into the appropriate places in your template. Remember to save your template regularly.

Responses to Question 2(c) and Question 5 must be typed in the appropriate places in your template.

The sales database and the art sales text file are provided in your examination area.

Study these files carefully.

1 (a) The art table in the sales database needs to be improved.

    (i) There is **one** error in the use of the data types in this table.

       Identify and correct the error.

       Screenprint the table in **Design** view, making sure that the data type you have changed can be clearly seen.

       Paste the screen print into the appropriate place in your template.

       Re-save your template.

                                          (1)

    (ii) A record must **only** be saved if the minimum selling price is at least £100 and no more than £1500.

       Set up a range check so that the minimum selling price is valid.

       Screenprint the table in **Design** view, making sure that the range check can be clearly seen.

       Paste the screen print into the appropriate place in your template.

       Re-save your template.

                                          (2)

(b) Julietta needs a form to enter data about a new work of art.

The form must:

- open ready for data entry

- generate the ArtID, which is one number higher than the number currently used

- allow the input of information about the work of art:

    – art name

    – minimum selling price

- automatically set the status to **Available**

- provide a button that:

    – asks the user if they want to save the details of the new work of art

    – saves the details in the table if the user wants to save them

    – displays a message to say the save has been cancelled if the user does not want to save them.

Create a user-friendly data entry form for the art table that will allow Julietta to add new records to the database.

Screenprint your form in **Form** view.

Paste the screen print into the appropriate place in your template.

Produce screen prints in **Design** view to show any macros, code, queries and/or properties you have used. Ensure that all fields and details can be clearly seen.

Paste the screen prints into the appropriate place in your template.

Re-save your template.

(11)

(c) The art sales text file is in your examination area.

It contains some records from a spreadsheet that Julietta uses to keep track of sales.

She wants to extend the sales database to add this functionality.

Develop the sales database to do this.

You must create an efficient data structure that minimises data duplication, uses correct data types and primary keys, and enforces referential integrity.

Produce a screen print that clearly shows the relationships including table names, field names, and primary keys.

Paste the screen print into the appropriate place in your template.

Produce screen prints showing the field names and data types in the tables **you** have created.

Paste the screen prints into the appropriate place in your template.

Re-save your template.

(11)

(d) Import the data from the art sales text file into the sales database.

Produce screen prints of **your** tables showing at least five records and the full record count. (If the fields are too wide to fit on one page, truncated data is allowed.)

Paste the screen prints into the appropriate place in your template.

Re-save your template.

(3)

(Total for Question 1 = 28 marks)

2 (a) Julietta wants to know details of works of art that have been sold.

Create a query that:

- finds works of art that:

  – have been sold

  – have a minimum selling price of at least £1000

- displays, in order of actual selling price, lowest to highest:

  – art name

  – minimum selling price

  – actual selling price.

Screenprint your query in **Design** view, making sure that all required tables, fields and criteria can be clearly seen.

Paste the screen print into the appropriate place in your template.

Screenprint your query in **Datasheet** view, making sure that the contents of all fields can be clearly seen.

Paste the screen print into the appropriate place in your template.

Re-save your template.

(6)

(b) (i) Julietta would like to know more about the customers who purchased works of art in March 2024 with an actual selling price of £500 or more.

She wants to use the standard report in **Figure 1**. This will use information from the database.

Customer Sales

Customer ID	Example customer ID
Customer	Example customer last name

Art Name	Actual Selling Price
Example art name	£####
Example art name	£####
Example art name	£####

Highest Selling Price: £####	Total Sales: £####

Customer ID	Example customer ID
Customer	Example customer last name

Art Name	Actual Selling Price
Example art name	£####
Example art name	£####

Highest Selling Price: £####	Total Sales: £####

Customer ID	Example customer ID
Customer	Example customer last name

Art Name	Actual Selling Price
Example art name	£####
Example art name	£####

Highest Selling Price: £####	Total Sales: £####

Figure 1

Create a query that will extract and use appropriate data from the database.

Screenprint your query in **Design** view, making sure that all required tables, fields and criteria can be clearly seen.

Paste the screen print into the appropriate place in your template.

Re-save your template.

(3)

(ii) Julietta wants to print the standard report.

She will use the report format shown in **Figure 1**.

Use your query from Question 2(b)(i) to extract the data for the report.

Create the report.

Screenprint your report in **Design** view.

Paste the screen print into the appropriate place in your template.

Screenprint your report in **Print Preview** view.

Paste the screen print into the appropriate place in your template.

Re-save your template.

(10)

(c) Julietta wants to invite customers who have bought more than five items in 2024 to a special event.

Analyse your database to determine:

- the information needed to produce the invitations

- the data that is already present and the additional data that would be needed.

Recommend how the database could be extended to extract and use appropriate data for this purpose.

Do **not** modify your database in any way.

Type your response in the appropriate place in your template.

Re-save your template.

(9)

(Total for Question 2 = 28 marks)

3 (a) Julietta needs to calculate the difference between the actual selling price and the minimum selling price for works of art. She is only interested in the works of art that have a difference of more than £150.

Create a query that will do this.

The query should display the art name and the difference between the actual selling price and the minimum selling price.

Screenprint your query in **Design** view, making sure that all required tables, fields and criteria can be clearly seen.

Paste the screen print into the appropriate place in your template.

Re-save your template.

(4)

(b) Julietta would like the information in chart format to make it easier to understand.

The chart needs to show the art name and the difference between the actual selling price and the minimum selling price.

Use the query you created in Question 3(a) to extract the data for the chart.

Create a report that displays this information as a chart.

Display your report in **Design** view.

Ensure the chart is visible on your screen.

Screenprint the entire window.

Paste the screen print of the entire window into the appropriate place in the template.

Screenprint your report in **Print Preview** view.

Paste the screen print into the appropriate place in your template.

Re-save your template.

(6)

(Total for Question 3 = 10 marks)

4 Julietta needs a dashboard for the database.

It must provide buttons that will allow her to:

- open the data entry form you created in Question 1(b)

- run the query you created in Question 2(a)

- open the report you created in Question 3(b) in Print Preview

- exit the database.

Create the dashboard to meet these requirements.

Screenprint the dashboard in **Form** view.

Paste the screen print into the appropriate place in the template.

Produce screen prints in **Design** view to show any macros or code you have used. Ensure that all details can be clearly seen.

Paste the screen prints into the appropriate place in your template.

Re-save your template.

(Total for Question 4 = 5 marks)

5 **Figure 2** shows the form completed by Julietta when a work of art is sold by a salesperson.

The salesperson receives a fee of 5% of the Actual Selling Price.

Julietta currently completes it by hand but it will become a form in the database.

JG Art Sales

Sale ID	1
Sale Date	01/03/2024
Salesperson	Carole Clark
Salesperson Fee %	5

Art ID	Art Category	Artist Name	Actual Selling Price	Salesperson Fee	Total Paid to Artist
21	Painting	Pierre Monet	£278	£13.90	£264.10
40	Sculpture	Sally Stimpson	£302	£15.10	£286.90

Figure 2

Analyse why your database structure may not allow Julietta to record/generate the sales data shown in **Figure 2**.

Recommend how your database structure could be modified to allow her to record/generate the sales data shown.

Type your response in the appropriate place in your template.

Re-save your template.

(Total for Question 5 = 9 marks)

TOTAL FOR PAPER = 80 MARKS