Pearson Edexcel International Advanced Level

Friday 16 June 2023

Afternoon (Time: 3 hours)

Paper reference **WIT14/01**

Information Technology
International Advanced Level
UNIT 4

You must have:
The files Staff.accdb, Staff extract.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 1(e) 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 2 6 0 6 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.

You must 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 1(e) and Question 5 must be typed in the appropriate places in your template.

Scenario

Lucian owns a company that employs staff to work in school kitchens.

Each member of staff has one job, e.g. Head Cook.

Once a year each member of staff meets with Lucian to discuss their performance throughout the year.

A performance grade (1–3) is agreed at the meeting.

Grade 1 is the best grade.

Lucian keeps a list of staff members in a single table within the database **Staff**.

He has provided the staff extract text file, which includes records of staff performance.

Lucian is finding it difficult to keep track of:

- the performance grades of each member of staff

- the schools that staff are employed in

- the job each member of staff is employed to do.

He wants a solution that will allow him to manage staff records 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 1(e) and Question 5 must be typed in the appropriate places in your template.

The staff database and the staff extract text file are provided in your examination area.

Study these files carefully.

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

   (i) Postcodes always use the letter, digit and space format as shown by the example BC4 7RU.

   A staff member's record must be saved **only** if the postcode uses the correct format.

   Set up a format check so that the postcode is valid.

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

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

   Re-save your template.

   (2)

   (ii) A staff record must be saved **only** if the staff name is present.

   Set up a presence check so that the staff name must be present.

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

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

   Re-save your template.

   (2)

   (iii) 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)

(b) Lucian needs a form to enter data about a new staff member.

The form must:

- open ready for data entry

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

- allow the input of the new staff member's:

  – name

  – telephone number

  – street

  – postcode

  – start date

- allow the staff type to be selected from a combo box

- automatically set the start date to today's date

- provide a button that:

  – saves the record in the table

  – displays a message to say that the record has been saved.

Create a user-friendly data entry form for the staff table that will allow Lucian 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.

(10)

(c) The staff extract text file is in your examination area.

It contains some records from a spreadsheet that Lucian uses to keep track of staff and their yearly performance reviews.

He wants to extend the staff database to add this functionality.

Develop the staff 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 places in your template.

Re-save your template.

(11)

(d) Import the data from the staff extract text file into the staff database.

Produce screen prints of **your** tables showing at least three 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 places in your template.

Re-save your template.

(3)

(e) Lucian has been told that the structure of the staff table is not entirely suitable for recording the details of a member of staff.

Analyse the data and recommend how the structure of the database could be improved to allow a more efficient recording of the details of a member of staff.

Type your response in the appropriate place in your template.

Do not amend the structure of your database.

Do not include any screen prints.

Re-save your template.

(9)

(Total for Question 1 = 38 marks)

2 (a) Lucian wants to know details of the best performing staff at Southview Secondary School.

Create a query that:

- finds staff who have a performance grade of 1 in 2022

- displays, in order of years of service from longest to shortest:

  – staff name

  – years of service

  – school.

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) Lucian would like to know more about the performance grades for assistants in each school.

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

Performance Grades by School and Job		

School	Southview Secondary School	
Job	**Best Grade**	**Worst Grade**
Kitchen Assistant	#	#
Catering Assistant	#	#
Assistant Cook	#	#

Best Grade: #

School	River Valley Technical School	
Job	**Best Grade**	**Worst Grade**
Kitchen Assistant	#	#
Catering Assistant	#	#
Assistant Cook	#	#

Best Grade: #

School	Edgewater Academy	
Job	**Best Grade**	**Worst Grade**
Kitchen Assistant	#	#
Catering Assistant	#	#
Assistant Cook	#	#

Best Grade: #

Figure 1

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

(4)

(ii) Lucian wants to print the standard report.

He 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.

(8)

(Total for Question 2 = 18 marks)

3 (a) Lucian needs to calculate the number of staff he employs in each job.

He is only interested in the jobs that have at least 6 members of staff.

Create a query that will do this.

The query should display the job and the number of staff who have that job.

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) Lucian would like the information in chart format to make it easier to understand.

The chart needs to show the job and the number of staff who have that job.

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 your 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   Lucian needs a dashboard for the database.

The buttons must:

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

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

- display a message asking Lucian if he wants to view the chart you created in Question 3(b):

    – if he does, the chart you created in Question 3(b) should open in Print Preview

    – if he does not, a message should be displayed saying **Operation cancelled**.

Create the dashboard to meet these requirements.

Screenprint the dashboard in **Form** view.

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

Re-save your template.

(Total for Question 4 = 5 marks)

5 **Figure 2** shows the information that is collected during a performance meeting.

It will become a form in the database.

Staff Name	Adam Briggs	Meeting Date	05/04/2023
Start Date	28/02/2019	Performance Grade Awarded (average of performance area grades)	2
Job	Assistant Cook	Change from Last Year	1 grade higher
Performance Grades for each Area			
Performance Area	**1**	**2**	**3**
Time Management		✓	
Verbal Communication	✓		
Teamwork	✓		
General Performance Comments			
Time management could be better. Adam was late to work on 13 occasions during 2022 due to traffic. He could leave for work earlier to solve this. His manager and colleagues have said that communication has been very good. Instructions passed to other staff have been clear, concise and accurate. They have also been given in a timely fashion. His Catering Manager has said that teamwork has been exemplary.			

Figure 2

Analyse why the present database structure does not allow Lucian to record/generate the performance data shown in **Figure 2**.

Recommend how the database structure could be modified to allow him to record/generate the performance data shown.

Type your response in the appropriate place in your template.

Do not amend the structure of your database.

Do not include any screen prints.

Re-save your template.

(Total for Question 5 = 9 marks)

TOTAL FOR PAPER = 80 MARKS