

Pearson Edexcel International Advanced Level

Time 3 hours

Paper
reference

WIT14/01

Information Technology

International Advanced Level

UNIT 4

You must have:

The files Quiz.accdb, Quiz record.xlsx, 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(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.
- Good luck with your examination.

Turn over ►

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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 should be copied into the appropriate places in the template.

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

Remember to save the template regularly.

Responses to Question 1(c) and Question 5 must be typed in the appropriate places in the template.

Scenario

Quizzer Land is a company owned by Veronica Lopez.

The company organises quizzes in a number of venues each week.

Quiz setters run the quizzes.

A quiz setter may run more than one quiz per week.

Quizzes have a type, for example music.

Teams compete in the quizzes.

Each team has a number of players.

Veronica keeps a list of venues in a single table within the database Quiz.

Veronica has provided the Quiz record spreadsheet file, which contains an extract of her records of quizzes.

Veronica is finding it increasingly difficult to keep track of:

- the venues
- who sets the quizzes
- when the quizzes take place.

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

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

Responses to Question 1(c) and Question 5 must be typed in the appropriate places in the template.

The Quiz database and the Quiz record spreadsheet files are provided in your examination area. Study these files carefully.

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

- (i) A venue record should only save if a telephone number is present and in the correct format.

Validate the telephone number field so that the telephone number must be present and in the correct format.

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

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

Re-save your template.

(2)

- (ii) Set up a list check on the quiz day field so that **only** the days of the week are accepted.

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

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

Re-save your template.

(3)

- (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 the template.

Re-save your template.

(1)

(b) Veronica needs a form to edit data about an existing venue.

The form must:

- allow Veronica to select the address of a venue
- update the form to show all of the data in the record for the venue selected
- not allow Veronica to edit the venue ID but allow her to edit any of the other data
- include a close button (it does not need to close the form)
- when Veronica clicks the close button, display a message if the data has been edited to let Veronica know it has not been saved.

Create a user-friendly data edit form for the venue table that will allow Veronica to edit existing records in the database.

Screenprint your form in **Form** view.

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

Re-save your template.

(8)

(c) Veronica has realised there is a problem with the venue table.

A venue can have more than one quiz per week, but only one per day.

The current database structure does not allow this to be recorded.

Analyse the stored data to help you understand why the structure of the database will not allow more than one quiz per week at a venue to be recorded.

Recommend how the structure of the database could be improved to allow more than one quiz per week at a venue to be recorded.

Type your response in the appropriate place in the template.

Re-save your template.

(9)

(d) Veronica currently uses a spreadsheet to keep a record of the quizzes that are held each week.

Quiz record is an extract of the spreadsheet.

Develop the quiz database to add this functionality. 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 the 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 the template.

Re-save your template.

(11)

(e) Import the data from the quiz record spreadsheet file into the quiz 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 the template.

Re-save your template.

(3)

(Total for Question 1 = 37 marks)

2 (a) Veronica wants to know the number of quizzes each quiz setter has run.

Create a query that calculates the number of quizzes each quiz setter has run.

Display only the full name of the quiz setter and the number of quizzes they have run.

The results should be displayed in order of highest number of quizzes run by the setter to the lowest.

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 the template.

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

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

Re-save your template.

(6)

(b) (i) Veronica would like to know the income that has been generated by the venues 23 Grove Way and 114 Albert Avenue.

The entry fee per player is £2.00. If there are more than 30 players it is reduced to £1.50 for each player.

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

| Venue Income | | | |
|-----------------------|-------------------|-----------|--------|
| Venue | | | |
| ##### | | | |
| Total Income: £#.## | | | |
| Week Beginning | Number of Players | Entry Fee | Income |
| ##/##/## | ## | £#.## | £#.## |
| ##/##/## | ## | £#.## | £#.## |
| Venue | | | |
| ##### | | | |
| Total Income: £#.## | | | |
| Week Beginning | Number of Players | Entry Fee | Income |
| ##/##/## | ## | £#.## | £#.## |
| ##/##/## | ## | £#.## | £#.## |
| Overall Income: £#.## | | | |

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 the template.

Re-save your template.

(5)

(ii) Veronica 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 the template.

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

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

Re-save your template.

(9)

(Total for Question 2 = 20 marks)

- 3 (a) Veronica needs to know the number of quiz types that have been used at least 14 times.

Create a query that will extract the quiz types that have been used at least 14 times and the number of times that each type has been used.

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 the template.

Re-save your template.

(3)

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

The chart needs to show the quiz types that have been used at least 14 times and the number of times that each type has been used.

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 the template.

Re-save your template.

(6)

(Total for Question 3 = 9 marks)

4 Veronica needs a dashboard for the database.

It must provide buttons that will allow her to:

- open the data edit form you created in Question 1(b)
- run the query you created in Question 2(a)
- display a message asking the user if they want to view the query you created in Question 3(a):
 - if they do, the query you created in Question 3(a) should run
 - if they do not, the chart you created in Question 3(b) should open.

Create a dashboard that meets 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 the template.

Re-save your template.

(Total for Question 4 = 5 marks)

5 Veronica knows that the database should use validation to reduce data input errors.

These types of validation could be used in a database.

- Presence check
- Range check
- Lookup check
- List check
- Format (picture) check
- Length of data check.

Assess the suitability of these types of validation for the fields in the tables **you** created in Question 1(d).

Type your response in the appropriate place in the template.

Re-save your template.

(Total for Question 5 = 9 marks)

TOTAL FOR PAPER = 80 MARKS