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**ICT502 DATABASE ENGINEERING  
LAB TEST (25 MARKS)**

STUDENT ID :  
NAME :  
GROUP :  
LECTURER'S NAME :

The database schema below shows the relations for MariahStudio Records.

COUNTRIES	(COUNTRYID, COUNTRYNAME, COUNTRYCODE)
MOVIES	(MOVID, MOVNAME, MOVGENRE, MOVBUDGET, MOVRATING)
COUNTRY_MOVIE	(COUNTRYID, MOVID, RELEASEDDATE, GROSSING)
WRITERS	(WRID, WRNAME, WRBIRTHDATE, WREMAIL)
MOVIE_WRITER	(MOVID, WRID, MAINWRITER)

MariahStudio Records is a company that records the details of movies on where they were released and their scriptwriters. A movie may be released in many countries and a country may release many movies in a year. Since there are a lot of scriptwriters involved to finish the storyline of a movie, the company also will record whether the scriptwriter is the main writer or not by storing 'Yes' or 'No' as the data in their database.

Answer the following questions in SQL.

1. Modify column WREMAIL in WRITERS table, set the column into default value of NULL.  
(2 marks)
  
  
  
  
  
  
  
  
  
  
2. Add two new columns into the COUNTRIES table according to the following:
  - CapitalCity variable character with size 15.
  - CountryIncome a number that can store 7 whole numbers with 2 decimal points. The default value for this column is 0.  
(3 marks)
  
  
  
  
  
  
  
  
  
  
3. Set the column that you have altered in (1) to an unused column.  
(1 mark)

4. After the operation in (3), if the DBA wants to add a new column, WREMAIL to WRITERS table, can it be done? Justify your answer.

(2 mark)

5. Do you need to perform **COMMIT** after changes in (2)? Explain your answer.

(2 marks)

6. Study the following table:

Movie Budget	Indicator
<1,500,000	Very Low
<2,700,000	Low
<4,000,000	Average
Others	High

Based on the indicator table above, by using SQL, display the movie title together with its indicator of Very Low, Low, Average or High budget for movies with 'PG13' rating.

(4 marks)

7. Retrieve these data with **SQL**.

a) Find the details of movies that have 'king' in their title.

(2 marks)

b) Show all the movies' titles that were released in Malaysia in 2018.

(4 marks)

- c) Display all the movies with its budget and grossing for movies that did not bring any return to its producer.

(5 marks)

**END OF LAB TEST QUESTION**