Instructions:

This is an individual assignment. It will be assessed over 100 marks and is worth 15% of the final marks for this module. Marks will typically be awarded on the basis of the following broad criteria, although other constructive factors will be taken into account:

- ✓ You can download and use Visual Paradigm or other tools to draw the ER- model.
- ✓ Using at least one of the tools "MYSQL server" or "phpMyAdmin" or "Oracle Database" or "MySQL Workbench" is required for database development.
- ✓ Fulfilment of requirements (i.e. No error, if your code does not compile, your mark will be capped at 60%)
- ✓ Correctness of logic and use of appropriate sequel scripting technique.

- ✓ Correct results/output - example output database, tables, relationship and data stored.
- ✓ Scripting style:
  - ➢ Adherence to MySQL/HeidiSQL/TOAD naming convention and program readability
  - ➢ Choice of attributes names and column naming has to adhere to MySQL Documentation.

Submission:

It should be made electronically to the assignment submission section through your TIMeS account. If there appears to be any problem at all with your submission, it is your responsibility to inform your lecturer immediately, via email,

Documentation: 2 separate files (Full assignment report & SQL File)
File name : StudentName_StudentNo

Hardcopy Format:

1. Cover page
2. Table of contents

- Comprises of the above with proper formatting, all answers must follow the question number and the labelling used in the assignment.

Note: Late submission will be capped at 60 %

Academic Impropriety:

Submitting the course work means you have agreed that your work is original and comply with the rules and regulations of Academic Impropriety.

In this assessment, you are required to demonstrate the personal ability to implement various use of database systems through visual, written and oral forms effectively over a set timeline.

Consider the data model given in Figure 1. Read the description, and write the SQL statement to answer the questions that follow. Do necessary assumptions and documents all the assumption at top of the answer for each question if there is any.

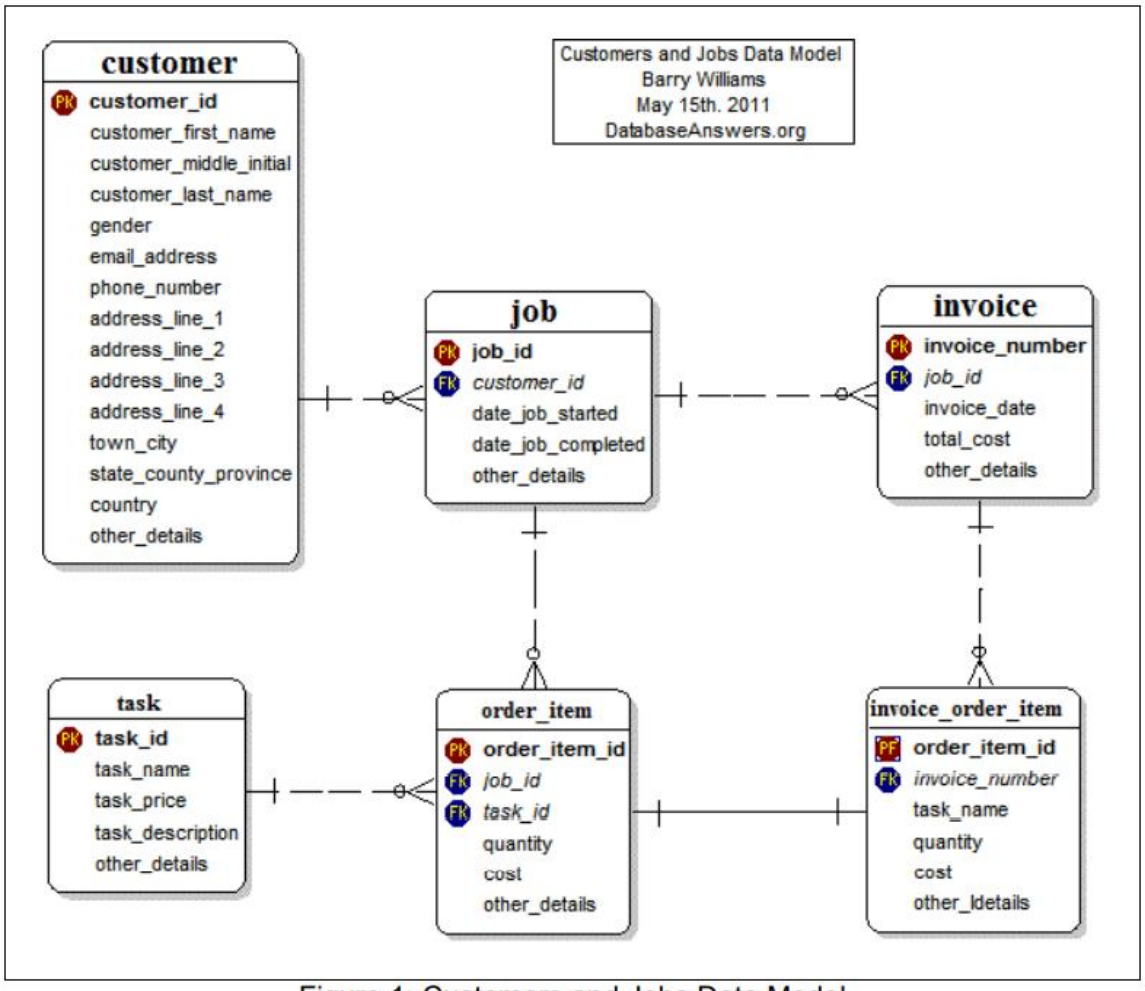

Figure 1: Customers and Jobs Data Model

Task 1: Create a database and name it **practicalTestDB**. (2 marks)

Task 2: Create all the six tables according to the data model in Figure 1.

(12 marks)

Task 3: Insert at least 3 records (if necessary, insert more records) into each table.
(12 marks)

Task 4: Write a query to list alphabetically ordered names, addresses, and IDs of all the customers whose country is in ('Malaysia', 'Indonesia', 'Singapore'). (5 marks)

Task 5: Delete 1 record from **order_item** table using its primary key. (2 marks)

Task 6: Add a column by the name **postcode** with datatype INTEGER and size 10 to the customer table. (4 marks)

Task 7: Delete the column **address_line_3** and **address_line_4** from the table **customer**.
(4 marks)

Task 8: Increase by 2 the value of the attribute **quantity** of one of the records in the table "invoice_order_item". (4 marks)

Task 9: Create a report to list Invoice Number, Invoice Date, Total Cost, Customer ID, and Job ID. For ordering of the report, the recent invoices must be at the top.

(10 marks)

Task 10: Write a query to list the total number of Invoices, minimum cost, maximum cost, and average cost of the invoices. (10 marks)

Task 11: Select the top 3 items that have been ordered more. (10 marks)

Task 12: Create a View with name "Completed_Jobs" in which a list of all Jobs that are completed in year 2020 can be reported. Test this View and prove it is working by adding screenshot of the script code and the result. (10 marks)

Task 13: Delete the View by using a proper command. (5 marks)

Task 14: Write a SQL statement to display all the customers full name, email address, and phone number, total number of jobs, total cost of all the jobs that are completed in the last 6 months. (10 marks)