DEPARTMENT OF ENTERPRISE AND DIGITAL INNOVATION

Student Name/ID:

**Bachelor of Information and Communication Technologies**

**BCDE 214 DATABASE ADMINISTRATION**

SQL PRACTICAL TEST

Semester Two 2020

Date: Monday 21 September 2020

Time: In Class

Time Allowed: 2 hour 10 minutes (10 min reading time included)

Instructions:

This is an open book test.

Read all questions carefully before attempting to answer any question.

Read page 2 for detailed instructions.



This test is worth 25% of the total marks for this course.

This paper has three (3) pages including the cover sheet.

**The Instructions:**

1. Copy **AlexMara2020.sql** script file from Moodle Test section.
2. It will be prudent to use the reverse engineering tool in MySQL to derive the ER-Diagram.
3. Modify the script file to create tables, triggers, views, and procedures as specified.
4. Rename the script as YourName.sql and upload it to the DE214 Moodle DropBox SQL Test.

**Table**

Create a table called ***FeeHistory*** (SlipID, MarinaNum, ChangeDate, OldFee, NewFee) with a primary key of SlipID + MarinaNum. This table keeps track of Rental Fee changes. Only 7one Fee change is allowed each day.

**Triggers – write the code for the following triggers:**

1. When the rental fee in MarinaSlip is changed a row is added to the FeeHistory table. The ChangeDate is the system date.
2. When inserting a row in the MarinaSlip table, add the rental fee to the total rental for the appropriate owner.
3. When updating a row in the MarinaSlip table, add the difference between the new rental fee and the old rental fee to the total rental for the appropriate owner.
4. When deleting a row in the MarinaSlip table, subtract the rental fee from the total rental for the appropriate owner.

**Views**

1. Create a view named ***LargeSlip*** using the data in the MarinaNum, SlipNum, RentalFee, BoatName, Length and OwnerNum columns in the MarinaSlip table for those slips with lengths of 40 feet. Display the data in the view.
2. Create a view named ***MarinaService*** using the SlipID, category number, category description, and estimated hours for every service request for which the spent hours are 5 or more. Display the data in the view.
3. Create a view named ***TypesOfBoats*** using the boat type and a count of all boats of each type. Display the data in the view.

**Procedure**

1. Write a procedure called ***ChangeRentalFee***, which will change the rental fee of a slip with a given slipID. Test the procedure to change the rental fee of slip ID 3 to 3,700.

**Indexes**

1. Create an index named BoatIndex on the length and boatname fields in the MarinaSlip table where lengths are in descending order.

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|  | **Marks** |
| **Table** |  |
| **FeeHistory table** | **4** |
| **Triggers** |  |
| **Trigger 1**  **Trigger 2**  **Trigger 3**  **Trigger 4** | **5**  **5**  **5 5** |
| **Views** |  |
| **LargeSlip**  **SpentHours**  **TypesOfBoats** | **5**  **5**  **5** |
| **Procedure** |  |
| **Change\_RentalFee** | **7** |
| **Index** |  |
| **BoatIndex** | **4** |
| **Total** | **50** |