Department of Computer Engineering

University of Peradeniya

CO226: Database Systems

Lab 7: Views, Triggers, Stored Procedures

Note: Use only a command line application for this exercise

Following table contains grade records of some final year students of a faculty.

Name	Registration Number	GPA	Convocation Registration Number	Class
Sameera	425	3.25		
Kasun	210	3.40		
Kalpa	201	3.10		
Chathura	312	3.85		
Lakmali	473	3.75		
Sidath	352	3.30		
Kumudu	111	3.70		
Nalin	456	3.05		
Rohani	324	3.70		
Chithra	231	3.30		

Lab Task:

Write the following SQL queries using MySQL, to retrieve the data.

1. Create a table named **Student** to insert the above data. Determine a suitable primary key for this table. Populate your table with these data.

2. Create another table named **Convocation** to store the details about the registration to the convocation. Table should have fields to hold the **Last Name, Address, Age, Registration Number** and **Convocation Registration Number** of each student. The **Convocation Registration Number** is given when a student registers for the convocation. Determine a suitable primary key and a foreign key for this table.

3. Create a stored procedure to store the details about the students as **one student at a time** in the **Convocation** table when they register for the convocation. (In the registration a unique convocation registration number should be given to each student and at the same time **Convocation Registration Number column** in the **Student** table should be updated by inserting relevant registration number for that student.)

4. Perform the registration for Sameera, Chathura, Lakmali, Sidath and Nalin with registration numbers 1, 2, 3, 4 and 5 respectively. Give suitable meaningful values for the rest of the columns for each of these students. Observe the updates made to the Student table.

5. Create a view called **Registered** to retrieve the details **Name, Registration Number, GPA, Convocation Registration Number, Address** and **Age** of those students who have registered for the convocation. Observe the view with the respective data.

6. Create a view called **NotRegistered** to retrieve the details **Name, Registration Number, GPA, Address** and **Age** of those students who have not registered for the convocation. Observe the view with the respective data.

7. Create a table called **LateRegistration** with the same columns as **Convocation** table to store the details about the students who do the late registration.

8. Write a trigger to monitor the state of **LateRegistration** table, so that after a late registration is done in this table, the Student table should be updated with the relevant **Convocation Registration Number** for that student.

9. Perform the registration for Kasun, Kalpa, Kumudu, Rohani and Chithra with registration numbers 6, 7, 8, 9 and 10 respectively. Give suitable meaningful values for the rest of the columns for each of these students. Observe the updates made to the **Student** table.

10. Create a stored procedure to and fill the class column as follows.

    a. GPA >=3.7 First class honors
    b. GPA =3.3 Second class honors-upper division
    c. GPA =2.7 Second class honors-lower division
    d. GPA =2.0 Third class honors

    Call the stored procedure which you created at this step and observe the class values assigned to each student

Due Date: 6th June 2023 before 12midnight

Submission: Submit the **queries and respective results** of task in a text file named as E19XXX.txt. No submission are allowed after the deadline for any reason.