DBMS Lab 2020-21 Spring Semester

Lab Day 6 (Due March 5, 2021) 30 Marks Time 2 Hours

[Penalty for plagiarism/copying: You will be awarded 0 for all the problems for the lab day you were involved in plagiarism/copying and an additional 5 marks will be deducted out of the total of 40 in Lab. All persons involved will be awarded the same penalty irrespective of who has copied from whom. Decision of the lab teachers is final in this respect.]

1. Consider that we have the following tables in a database (primary keys are underlined):

   Student (roll_no int, student_name varchar(30) not null, year_of_admission int, dept_cd char(2) not null, cgpa decimal(5,2), percentage_marks decimal(5,2), hall_cd char(2))

   Course (course_cd char(5), course_name varchar(30) not null, credits int not null, max_marks decimal(5,2) not null, dept_cd char(2) not null)

   Registration (roll_no int, course_cd char(5), grade_point int, marks_obtained decimal(5,2))

   Write a trigger on the Registration table so that whenever there is a change in the rows (insert, update, delete), the column value for **CGPA** will be updated in the Student table. **[10]**

2. Consider the same tables used in Problem 1.

   Write a database procedure that will take a roll_no as input and update the column value for **CGPA** in the Student table. It will also return the CGPA. **[10]**

3. Consider that we have the following table in a database (primary key is underlined):

   Employee (emp_cd int, manager_emp_cd int)

   Assume that the seniormost manager will have his/her own emp_cd as his/her manager_emp_cd

   Write a recursive query which will take an emp_cd as input (i.e., somewhere in your SELECT, there will be a clause "AND emp_cd = 5" or "WHERE emp_cd = 5") and return one row for each reporting manager higher in the hierarchy starting from the input emp_cd. **[10]**

Through Moodle, submit a single text file containing all your SQL and PL/SQL statements. (Name it as Lab6_<Roll_no>.txt).