**Database Laboratory Assignment # 4**

1. Write database triggers for Q 3 and Q 5 of Assignment # 3. Test the correctness of the triggers with relevant DML operations (e.g. issue/return of books, withdraw/deposit transactions on account)
2. Consider the following relations for an OPD in an hospital:

Patient(patient-id, patient-name, DOB, Sex)

Doctor(Doctor-id, Name, specialization, Unit)

OPD\_Schedule(Doctor-id, date, time, fees)

Appointment (appointment-no, patient-id, doctor-id, date)

OPD\_payments(appointment-no, patient-id, amt, date\_payment)

Write SQL/PL-SQL program for the following tasks:

(i) Display the list of patients who has visited the same doctor in the hospital more than 2 times during a given time-period

(ii) The records in OPD\_payments to be automatically updated based on Schedule and Appointment table. If a patient visits twice the same doctor within a week, amt in OPD\_payments will be automatically set to 0. For senior citizen female patients, the fees to be reduced by 50% and entry should be automatically inserted in OPD\_payments table.

(iii) Display the number of patients visited to the doctors unit-wise and date-wise.

(iv) Change the date and time (not other field) in OPD\_Schedule of any given doctor through views.

(v) Create a OPD log including patient name, age, date\_of\_visits and doctor names for a given period.

(vi) Increase the fees of a given doctor through views.

1. Consider the following database:

Student(Sroll, Name, Branch, Batch, Programme)

Course(CID, Cname, Instructor Name)

Attendance(Sroll, Course ID, Period, Total#class, Attendance)

Period includes start-date and end-date, Total#class states total number of classes conducted during a period.

Write SQL/PL-SQL program for the following tasks:

(i) Display the name of students whose attendance is below 80% in a given course.

(ii) Create a view to list attendance records of the students in all subjects for a given batch.

(iii) Use the view in (ii) to list the student names whose attendance is below 70% in all the subjects.

(iv) Create a view to display attendance of students for a given course ID.

(v) Use this view in (iv) to update the attendance of a student (assume the update is done by a authorized user)

(vi) Internal marks for attendance for a student is to be calculated against a course as per the following rules:

Attendance % Marks

>=95 5

85-95 4

75-85 3

60-75 2

< 60 0

Write a PL/SQL function which takes sroll and course id as input and computes the attendance percentage for that course and returns the marks for that course. Then, Insert the Sroll and Marks in a newly created table called ATT\_Marks(Sroll, course-id, Marks). This complete task is to be done in a single PL/SQL program.