COLLEGE OF ENGINEERING TRIVANDRUM

DEPARTMENT OF COMPUTER APPLICATIONS

20MCA134 ADVANCED DBMS LAB

LAB ASSIGNMENT -3

DATE: 07-June-2021

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Deadline: 21-June-2021 **Mark: 30 M**

Mode of submission :

1. **Submit the sql query along with the output screenshots in google class room. File naming convention : "Lab#3 _Two digit rollno_your name .pdf"**
   Eg:- Lab#3_ 01_Anu.pdf
2. **Upload the sql file in to lab3 repository in the github classroom.**

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A UNIVERSITY database for maintaining information concerning students, courses,and grades in a university environment is given below.

The STUDENT file stores data on each student, the COURSE file stores data on each course, the SECTION file stores data on each section of a course, the GRADE_REPORT file stores the grades that students receive in the various sections they have completed, and the PREREQUISITE file stores the prerequisites of each course.

STUDENT

Name	Student_number	Class	Major
Smith	17	1	CS
Brown	8	2	CS

COURSE

Course_name	Course_number	Credit_hours	Department
Intro to Computer Science	CS1310	4	CS
Data Structures	CS3320	4	CS
Discrete Mathematics	MATH2410	3	MATH
Database	CS3380	3	CS

SECTION

Section_identifier	Course_number	Semester	Year	Instructor
85	MATH2410	Fall	07	King
92	CS1310	Fall	07	Anderson
102	CS3320	Spring	08	Knuth
112	MATH2410	Fall	08	Chang
119	CS1310	Fall	08	Anderson
135	CS3380	Fall	08	Stone

GRADE_REPORT

Student_number	Section_identifier	Grade
17	112	B
17	119	C
8	85	A
8	92	A
8	102	B
8	135	A

PREREQUISITE

Course_number	Prerequisite_number
CS3380	CS3320
CS3380	MATH2410
CS3320	CS1310

1. Write appropriate MYSQL DDL statements to define the UNIVERSITY database.
2. Write queries to insert values in all the five tables.
3. Retrieve the list of all courses and grades of 'Smith'
4. List the names of students who took the section of the 'Database' course offered in fall 2008 and their grades in that section
5. List the prerequisites of the 'Database' course.
6. Retrieve the names of all senior students majoring in 'CS' (computer science).
7. Retrieve the names of all courses taught by Professor King in 2007 and 2008.
8. For each section taught by Professor King, retrieve the course number,semester, year, and number of students who took the section.
9. Retrieve the name and transcript of each senior student (Class = 4)majoring in CS. A transcript includes course name, course number, credit hours, semester, year, and grade for each course completed by the student.
10. Write SQL update statements to do the following on the database schema .

    A. Insert a new student, <'Johnson', 25, 1, 'Math'>, in the database.

    B. Change the class of student 'Smith' to 2.

C. Insert a new course, <‘Knowledge Engineering’, ‘CS4390’, 3, ‘CS’>.

D. Delete the record for the student whose name is ‘Smith’ and whose student number is 17.