

National University of Computer and Emerging Sciences, Lahore Campus



Course:	Fundamentals of Database Systems	Course Code:	CS213
Program:	BS (Electrical Engineering)	Semester:	Spring2021
Assessment Tool	Assignment # 2 (SQL)		
Total Marks:	50		

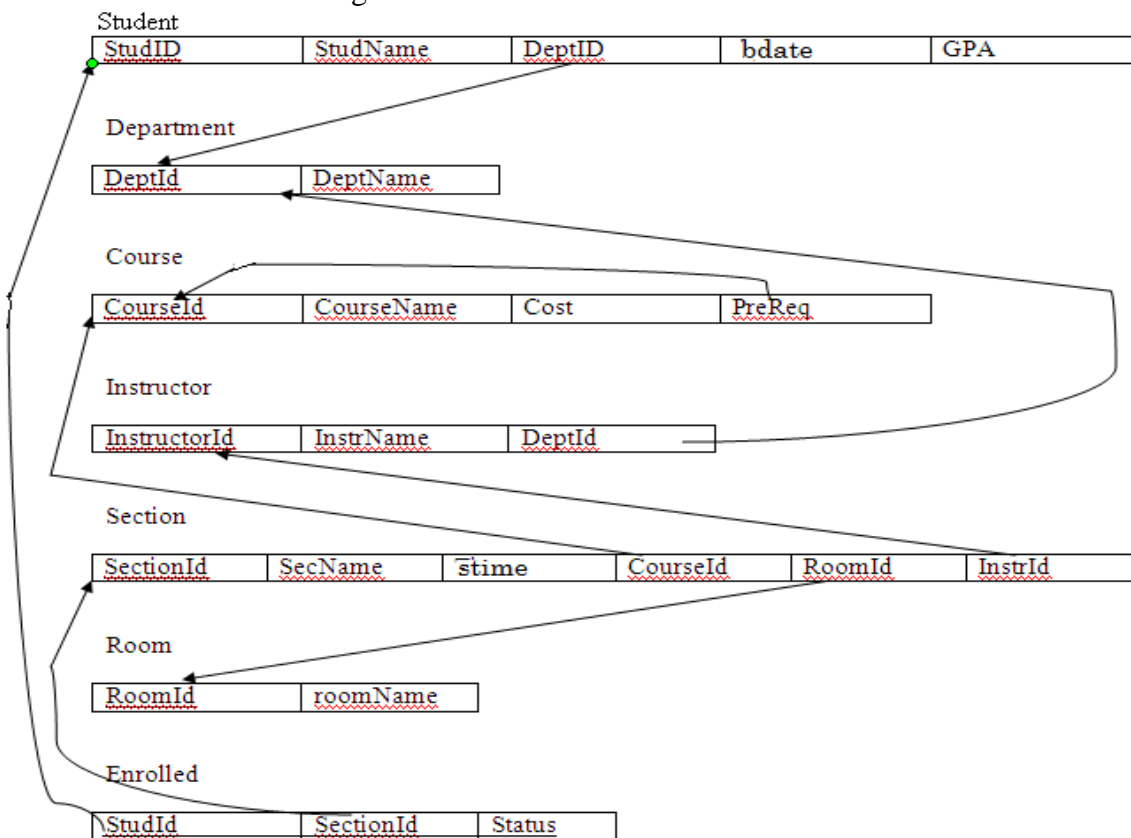
Please go through the following instructions very carefully.

Please upload a Microsoft Word file consisting of your rollnumber as filename on slate by **Monday 3rd May 2021 till 11a.m.**

You will only load the data that is provided in the accompanying data_for_assignment2.xls file. Please edit this file and add yourself as a student and enroll yourself in a few courses (taking care of the prerequisites) before uploading this data using the import utility.

For all questions in part 3, please include the select query as well as a screenshot of the results you get when you run your query in the database. **You wouldn't get any credit if the screenshot of the results you get on running the query is not there.**

Consider the following database schema:



1. **[CLO-2]** Give SQL(DDL) statements to create the above schema in the database (in order). Please ensure that for “status” column of “Enrolled” table there should only be two possible values of “Completed” and “Enrolled”.
2. **[CLO-3]** Please mention the order in which you uploaded the data in the accompanied file into the tables created in part. **Please don't forget to add yourself as a student and ensure that all the data is correctly loaded before proceeding with part 3.**
3. **[CLO-3]** Write an SQL statement to answer each of the following queries:
 - a) Give the names of students who are enrolled in both “Electronics-2” and “Database Systems”.
 - b) Give the names of sections (and the courses they belong to) which are taught in room ‘E&M-5’ or have more than 5 students enrolled in them.
 - c) Give the names of students who have spent Rs50000 or more in total.
 - d) For every age value, find the average gpa (rounded to 2 decimal places).
 - e) Find names of students who are enrolled in two (or more) sections that meet at the same time.
 - f) Find the instructor(s) who has taught in every room in which a section has been taught
 - g) Find the students who are eligible to take Electronics-2 (they would have completed the prerequisite(s) and wouldn't have yet taken Electronics-2).
 - h) Find the instructor(s) who has **only** ever taught in room “E&M-4”. Print the instructor's name and the total number of students s/he has taught.
 - i) List all the departments together with the names of instructor who belong to them. Note the department name must appear even if it has no instructor in it.
 - j) Find the course which has been taken by the maximum number of students, alongwith the number of students who have taken it.
 - k) A new student hasn't yet done any courses but wants to do “Electronics-2”. How much will it cost them to complete all pre-requisites including electronics-2? Would a procedural programming solution be more appropriate here? Why?