innopolis UNIVERSITY

Week 5 Lab
SQL QUERIES

[S23] Databases Course

Task

Write the following queries in SQL, using the university schema.

1) Find the names of courses in Computer science department which have 3 credits
2) For the student with ID 12345 (or any other value), show all course_id and title of all courses registered for by the student.
3) Modify 2 to show the total number of credits for such courses (taken by that student). Don't display the tot_creds value from the student table, you should use SQL aggregation on courses taken by the student.
4) Modify 3 to display the total credits for each of the students, along with the ID of the student; don't bother about the name of the student. (Don't bother about students who have not registered for any course, they can be omitted)
5) Find the names of all students who have taken any Comp. Sci. course ever (there should be no duplicate names)
6) Display the IDs of all instructors who have never taught a course.
7) Modify 6 to display the names of the instructors also, not just the IDs.

Task (Optional)

Write the following queries in SQL, using the university schema.

1. The university rules allow an F grade to be overridden by any pass grade (A, B, C, D). Now, create a view that lists information about all fail grades that have not been overridden (the view should contain all attributes from the takes relation).
2. Find all students who have 2 or more non-overridden F grades as per the takes relation, and list them along with the F grades.
3. Grades are mapped to a grade point as follows: A:10, B:8, C:6, D:4 and F:0. Create a table to store these mappings, and write a query to find the CPI of each student, using this table. Make sure students who have not got a non-null grade in any course are displayed with a CPI of null.
4. Find all rooms that have been assigned to more than one section at the same time. Display the rooms along with the assigned sections; I suggest you use a with clause or a view to simplify this query.
5. Create a view faculty showing only the ID, name, and department of instructors.