

Database Management Systems
Lab Assignment III: Database Connectivity
Topic: Online Course Management Platform
Due: January 28, 2026, 5PM (Individual Submission)

An Educational Technology Company offers Massively Online Open Courses to its customers. You have to build a platform to manage all the data related to the courses, teachers, partner universities, and students.

Create the tables in SQL to capture the above data. Populate the tables with few artificial data such that the following queries return non-null answers. Write SQL queries to return the following:

1. Names of all “certificate” courses on the topic of “AI” of duration less than or equal six months.
2. Names of all “certificate” courses on the topic of “AI” of duration less than or equal six months that are offered in partnership with “IITKGP”.
3. Names of all students having age less than 18 years or more than 60 years who have done the course named “GenAI”.
4. Names of all students who are not Indians and have done a course having the topic “AI” that was offered in partnership with “IITKGP”.
5. Names of all countries from where a student has done a course instructed by “Andrew Ng”.
6. Names of all instructors who have taught courses where at least one student was from India.
7. Name of courses such that at least one student who have taken this course has also taken the course named “GenAI”.
8. Name of all courses such that all the students who have taken this course has taken the course named “GenAI”.
9. Name of the most popular course (in terms of number of students) that is offered in partnership with “IITKGP”.
10. Name of the Indian student who has got the highest average marks considering all course on the topic “AI”.

Print the result of the above queries from C/C++/Java and python programs (you may consider one or more of the above languages). Perform formatted print along with some description text. Use appropriate connectivity libraries.

Submission Deliverables:

A pdf file (rollnumberA3.pdf) containing the SQL program and the high-level language programs and a brief writeup. Mention your name roll number in the top of the file. You should also demonstrate running of your program in the terminal in Lab.