# DBMS Assignment

**[Penalty for plagiarism/copying: You will be awarded 0 for all the questions if you are involved in plagiarism/copying. All persons involved will be awarded the same penalty irrespective of who has copied from whom.**

**READ THE FOLLOWING INSTRUCTIONS CAREFULLY**

A database schema and the Sets of questions are given below.

You have to write your SQLs in a single text file and submit through Ms Team as .txt/.pdf file. (Name it as Roll_no.txt/Roll_no.pdf). The first few lines of the file should have your roll number and name.

Note: For each question, you have to write a single SQL query which can have any number of sub-queries. You cannot split it into separate queries, views, etc. It is important that you use exactly the same table and column names as given in the question. Otherwise, there will be mismatch during evaluation and you will lose marks. For any query, you may write any assumption that you made. It will be considered only if the assumption is found to be reasonable.

**Consider the following database schema**

**RegUser** (RNo int, RName varchar(20), ROccu varchar(10), Age int, HighestQual varchar(5), PRIMARY KEY(RNo));

Possible values for ROccu are: FACULTY, STUDENT, STAFF
Possible values for HighestQual are: BTECH, MTECH, PHD

**Faculty** (FId int, ResearchArea varchar(4), FDept varchar(3),
PRIMARY KEY(FId),
FOREIGN KEY fk_std_0(FId) REFERENCES RegUser(RNo));

Possible values for FDept are: CS, EE, ECE, ME
Possible values for ResearchArea are: AI, ML, DBMS, ALGO

**Course** (CId int, CName varchar(10), CDuration varchar(10), CDept varchar(3), FId int,
PRIMARY KEY(CId),
FOREIGN KEY fk_std_1(FId) REFERENCES Faculty(FId));

Possible values for CDuration are: SHORT, MEDIUM and LONG
Possible values for CDept are: CS, EE, ECE, ME

**Prerequisite** (CId int, PreqCId int,
FOREIGN KEY fk_std2(CId) REFERENCES Course (CId),
FOREIGN KEY fk_std3(PreqCId) REFERENCES Course (CId),
PRIMARY KEY(CId, PreqCId));

**CourseReg** (RNo int, CId int, Score int,
PRIMARY KEY(RNo, CId),
FOREIGN KEY fk_std4(RNo) REFERENCES RegUser (RNo),
FOREIGN KEY fk_std5(CId) REFERENCES Course (CId));

| Srl No. | Query | Remarks |
|---|---|---|
| 1 | List all the registered users along with the courses they are enrolled in and their faculty (RId, RName, FId, FName, CId, CName) | FName refers to the name of the faculty, corresponding to its ID (Needs to be derived) |
| 2 | List all the registered STUDENTS along with the courses they are enrolled in and their faculty (RId, RName, FId, FName, CId, CName) | |
| 3 | List all the registered users with BTECH as their highest qualifications along with the courses they are enrolled in and their faculty (RId, RName, FId, FName, CId, CName) | |
| 4 | List all the registered users with MTECH as their highest qualifications along with the CS courses they are enrolled in and their faculty (RId, RName, FId, FName, CId, CName) | |
| 5 | List all the registered users who are NOT STAFF along with the SHORT courses they are enrolled in and their faculty from CS department (RId, RName, FId, FName, CId, CName) | |
| 6 | List all the registered users who does NOT have PHD as their highest qualification along with the courses they are enrolled in having faculty with research area in AI and ML or ALGO (RId, RName, FId, FName, CId, CName) | |
| 7 | List all the registered users who have enrolled in more than 1 CS courses and their faculty from NOT CS department (RId, RName, FId, FName, CId, CName) | |
| 8 | List all the registered users who have enrolled in CS and EE courses having SHORT or MEDIUM duration and their faculty (RId, RName, FId, FName, CId, CName) | |
| 9 | List all the registered users with BTECH as their highest qualification along with the courses they are enrolled in and their faculty such that the courses does NOT include any from EE or ME department and the faculty does Not have DBMS as their research area (RId, RName, FId, FName, CId, CName) | |
| 10 | List all the registered users with highest qualification as BTECH or MTECH and who have enrolled in EE or ECE courses of MEDIUM duration and their faculty such that they are NOT from ME department and has AI or ML as their research area (RId, RName, FId, FName, CId, CName) | |