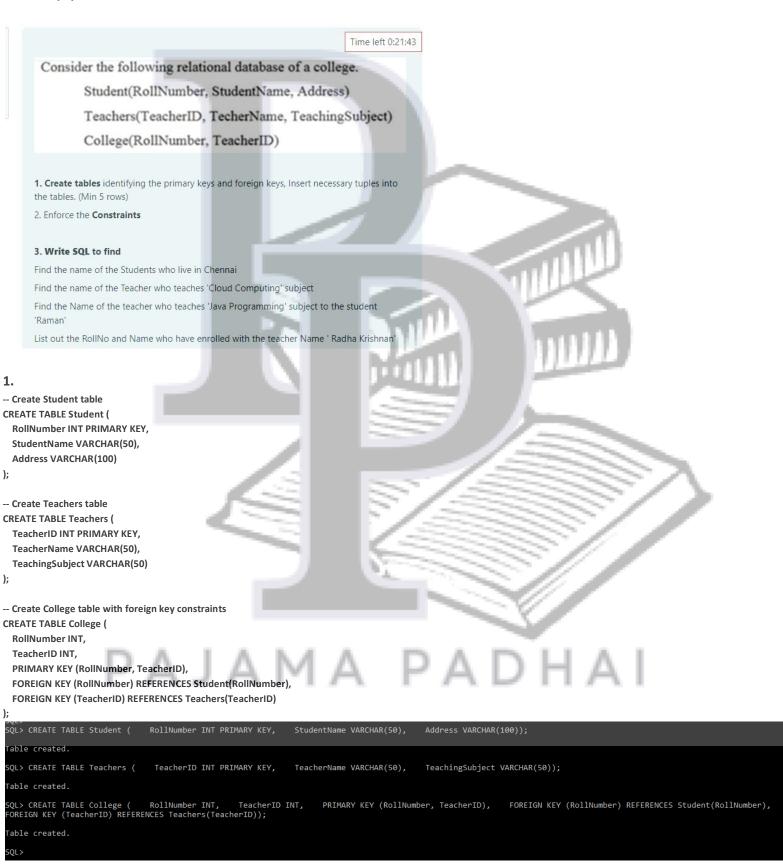
## **DBMS LAB MID TERM TEST**

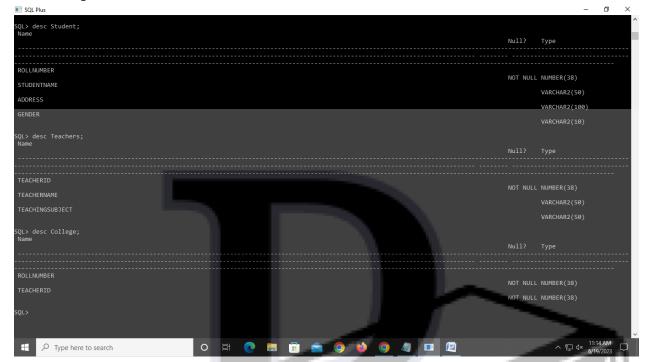
**COURSE CODE: BCSE302P** 

SLOT: L3 + L4 DATE: 19/6/23



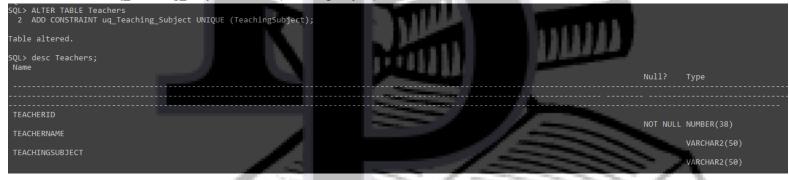
```
-- Insert tuples into Student table
INSERT INTO Student (RollNumber, StudentName, Address) VALUES (1, 'Raman', 'Chennai');
INSERT INTO Student (RollNumber, StudentName, Address) VALUES (2, 'Payal', 'Mumbai');
INSERT INTO Student (RollNumber, StudentName, Address) VALUES (3, 'Neha', 'Delhi');
INSERT INTO Student (RollNumber, StudentName, Address) VALUES (4, 'Shruti', 'Chennai');
INSERT INTO Student (RollNumber, StudentName, Address) VALUES (5, 'Ramesh', 'Kolkata');
-- Insert tuples into Teachers table
INSERT INTO Teachers (TeacherID, TeacherName, TeachingSubject) VALUES (1, 'Nina Singh', 'Mathematics');
INSERT INTO Teachers (TeacherID, TeacherName, TeachingSubject) VALUES (2, 'Rithwik Dhanjani', 'English Literature');
INSERT INTO Teachers (TeacherID, TeacherName, TeachingSubject) VALUES (3, 'Karan Wahi', 'Physics');
INSERT INTO Teachers (TeacherID, TeacherName, TeachingSubject) VALUES (4, 'Sham Sharma', 'Cloud Computing');
INSERT INTO Teachers (TeacherID, TeacherName, TeachingSubject) VALUES (5, 'Radha Krishnan', 'Java Programming');
-- Insert tuples into College table
INSERT INTO College (RollNumber, TeacherID) VALUES (1, 4);
INSERT INTO College (RollNumber, TeacherID) VALUES (2, 2);
INSERT INTO College (RollNumber, TeacherID) VALUES (3, 3);
INSERT INTO College (RollNumber, TeacherID) VALUES (4, 4);
INSERT INTO College (RollNumber, TeacherID) VALUES (5, 5);
 QL> INSERT INTO Student (RollNumber, StudentName, Address) VALUES (3, 'Neha', 'Delhi');
                                            (4, 'Shruti', 'Chennai');
 QL> INSERT INTO Teachers (TeacherID, TeacherName, TeachingSubject) VALUES (1, 'Nina Singh', 'Mathematics');
 QL> INSERT INTO Teachers (TeacherID, TeacherName, TeachingSubject) VALUES (2, 'Rithwik Dhanjani', 'English Literature');
 QL> INSERT INTO Teachers (TeacherID, TeacherName, TeachingSubject) VALUES
                                                 (4, 'Sham Sharma'
                                View Tables:
 SQL> set linesize 500;
 SQL> select*from Student;
 ROLLNUMBER STUDENTNAME
                                                                               ADDRESS
            1 Raman
                                                                               Chennai
            2 Payal
                                                                               Mumbai
            3 Neha
                                                                               Delhi
           4 Shruti
                                                                               Chennai
            5 Ramesh
                                                                               Kolkata
 SQL> select*from Teachers;
  TEACHERID TEACHERNAME
                                                                                TEACHINGSUBJECT
            1 Nina Singh
                                                                               Mathematics
            2 Rithwik Dhanjani
                                                                               English Literature
            3 Karan Wahi
            4 Sham Sharma
                                                                               Cloud Computing
            5 Radha Krishnan
                                                                               Java Programming
 SQL> select*from College;
 ROLLNUMBER TEACHERID
```

## 2. Enforcing Constraints



-- Alter table to add TeachingSubject as unique and allow NULL ALTER TABLE Teachers

ADD CONSTRAINT uq\_Teaching\_Subject UNIQUE (TeachingSubject);



-- Enforce constraint: The default value of Address is 'Chennai' ALTER TABLE Student

MODIFY Address DEFAULT 'Chennai';



-- Alter table to add Gender column with check constraint

**ALTER TABLE Student** 

ADD Gender VARCHAR(10) CHECK (Gender IN ('Male', 'Female', 'Trans'));

```
SQL> ALTER TABLE Student ADD Gender VARCHAR(10) CHECK (Gender IN ('Male', 'Female', 'Trans'));
Table altered.

SQL> desc Student;
Name

Null? Type

ROLLNUMBER

ROLLNUMBER

STUDENTNAME

ADDRESS

GENDER

VARCHAR2(100)

VARCHAR2(100)

VARCHAR2(100)
```

-- Find the name of the Students who live in Chennai

**SELECT StudentName** 

**FROM Student** 

WHERE Address = 'Chennai';

-- Find the name of the Teacher who teaches 'Cloud Computing' subject

**SELECT TeacherName** 

**FROM Teachers** 

WHERE TeachingSubject = 'Cloud Computing';

-- Find the Name of the teacher who teaches 'Java Programming' subject to the student 'Raman'

SELECT t.TeacherName

**FROM Teachers t** 

JOIN College c ON t.TeacherID = c.TeacherID

JOIN Student s ON c.RollNumber = s.RollNumber

WHERE t.TeachingSubject = 'Java Programming' AND s.StudentName = 'Raman';

```
SQL> SELECT t.TeacherName

2 FROM Teachers t

3 JOIN College c ON t.TeacherID = c.TeacherID

4 JOIN Student s ON c.RollNumber = s.RollNumber

5 WHERE t.TeachingSubject = 'Java Programming' AND s.StudentName = 'Raman';

no rows selected
```

-- List out the RollNo and Name of students who have enrolled with the teacher Name 'Radha Krishnan' SELECT s.RollNumber, s.StudentName

**FROM Student s** 

JOIN College c ON s.RollNumber = c.RollNumber

JOIN Teachers t ON c.TeacherID = t.TeacherID

## WHERE t.TeacherName = 'Radha Krishnan';

SQL> SELECT s.RollNumber, s.StudentName

- 2 FROM Student s
- 3 JOIN College c ON s.RollNumber = c.RollNumber
- 4 JOIN Teachers t ON c.TeacherID = t.TeacherID 5 WHERE t.TeacherName = 'Radha Krishnan';

ROLLNUMBER STUDENTNAME

5 Ramesh

