# CSLR51 DBMS - Session 2

**1. Create a Student schema using the student details given in Q.No.1 and execute the following basic queries.**

**Table Creation :**
**Query :**

```
CREATE TABLE Student(
        std_rollno INT PRIMARY KEY,
        std_name VARCHAR(20),
        dept VARCHAR(10),
        course1 CHAR(10),
        course2 CHAR(10),
        course3 CHAR(10),
        course4 CHAR(10));
```

**Output :**

```
mysql> DESCRIBE Student;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| std_rollno | int         | NO   | PRI | NULL    |       |
| std_name   | varchar(20) | YES  |     | NULL    |       |
| dept       | varchar(10) | YES  |     | NULL    |       |
| course1    | char(10)    | YES  |     | NULL    |       |
| course2    | char(10)    | YES  |     | NULL    |       |
| course3    | char(10)    | YES  |     | NULL    |       |
| course4    | char(10)    | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
7 rows in set (0.00 sec)
```

**a. Insert at least 5 student records into the Student table.**
**Query :**

```
        INSERT INTO Student (std_rollno, std_name, dept, course1, course2, course3, course4)
VALUES
        (1, 'Harry', 'CSE', 'DBMS', 'OS', 'CN', 'CA'),
        (2, 'David', 'CSE', 'OS', 'CO', 'DSD', 'FLAT'),
        (3, 'George', 'CSE', 'DBMS', 'OS', 'DSA', NULL),
        (4, 'Mat', 'CSE', 'OS', 'CA', 'AIML', 'DBMS'),
        (5, 'Winston', 'CSE', 'OS', 'DBMS', 'DS', NULL);
```

**Output :**

```
mysql> TABLE Student;
+------------+----------+------+---------+---------+---------+---------+
| std_rollno | std_name | dept | course1 | course2 | course3 | course4 |
+------------+----------+------+---------+---------+---------+---------+
|          1 | Harry    | CSE  | DBMS    | OS      | CN      | CA      |
|          2 | David    | CSE  | OS      | CO      | DSD     | FLAT    |
|          3 | George   | CSE  | DBMS    | OS      | DSA     | NULL    |
|          4 | Mat      | CSE  | OS      | CA      | AIML    | DBMS    |
|          5 | Winston  | CSE  | OS      | DBMS    | DS      | NULL    |
+------------+----------+------+---------+---------+---------+---------+
5 rows in set (0.00 sec)
```

**b. Delete Course2 and Course3 attributes from the Student table.**
**Query :**

> ALTER TABLE Student DROP COLUMN course2;
> ALTER TABLE Student DROP COLUMN course3;

**Output :**

```
mysql> TABLE Student;
+------------+----------+------+---------+---------+
| std_rollno | std_name | dept | course1 | course4 |
+------------+----------+------+---------+---------+
|          1 | Harry    | CSE  | DBMS    | CA      |
|          2 | David    | CSE  | OS      | FLAT    |
|          3 | George   | CSE  | DBMS    | NULL    |
|          4 | Mat      | CSE  | OS      | DBMS    |
|          5 | Winston  | CSE  | OS      | NULL    |
+------------+----------+------+---------+---------+
5 rows in set (0.00 sec)
```

**c. Insert two new columns DoB and email into the Student table.**
**Query :**

> ALTER TABLE Student
> ADD dob DATE NOT NULL DEFAULT '2004-01-01',
> ADD email VARCHAR(30) DEFAULT 'name0roll@nitt.edu',
> ADD CONSTRAINT email_check CHECK (email LIKE '%@nitt.edu');

**Output :**

```
mysql> TABLE Student;
+------------+----------+------+---------+---------+------------+------------------------+
| std_rollno | std_name | dept | course1 | course4 | dob        | email                  |
+------------+----------+------+---------+---------+------------+------------------------+
|          1 | Harry    | CSE  | DBMS    | CA      | 2004-01-01 | name0roll@nitt.edu     |
|          2 | David    | CSE  | OS      | FLAT    | 2004-01-01 | name0roll@nitt.edu     |
|          3 | George   | CSE  | DBMS    | NULL    | 2004-01-01 | name0roll@nitt.edu     |
|          4 | Mat      | CSE  | OS      | DBMS    | 2004-01-01 | name0roll@nitt.edu     |
|          5 | Winston  | CSE  | OS      | NULL    | 2004-01-01 | name0roll@nitt.edu     |
+------------+----------+------+---------+---------+------------+------------------------+
5 rows in set (0.00 sec)
```

## d. Change Course1 datatype to varchar2.

**Query :**

ALTER TABLE Student MODIFY COLUMN Course1 VARCHAR(5);

**Output :**

```
mysql> DESCRIBE Student;
+------------+-------------+------+-----+--------------------+-------+
| Field      | Type        | Null | Key | Default            | Extra |
+------------+-------------+------+-----+--------------------+-------+
| std_rollno | int         | NO   | PRI | NULL               |       |
| std_name   | varchar(20) | YES  |     | NULL               |       |
| dept       | varchar(10) | YES  |     | NULL               |       |
| Course1    | varchar(5)  | YES  |     | NULL               |       |
| course4    | char(10)    | YES  |     | NULL               |       |
| dob        | date        | NO   |     | 2004-01-01         |       |
| email      | varchar(30) | YES  |     | name0roll@nitt.edu |       |
+------------+-------------+------+-----+--------------------+-------+
7 rows in set (0.01 sec)
```

## e. Update the column name 'Std_rollno' to 'Std_rno'.

**Query :**

ALTER TABLE Student RENAME COLUMN Std_rollno TO Std_rno;

**Output :**

```
mysql> TABLE Student;
+---------+----------+------+---------+---------+------------+------------------------+
| Std_rno | std_name | dept | Course1 | course4 | dob        | email                  |
+---------+----------+------+---------+---------+------------+------------------------+
|       1 | Harry    | CSE  | DBMS    | CA      | 2004-01-01 | name0roll@nitt.edu     |
|       2 | David    | CSE  | OS      | FLAT    | 2004-01-01 | name0roll@nitt.edu     |
|       3 | George   | CSE  | DBMS    | NULL    | 2004-01-01 | name0roll@nitt.edu     |
|       4 | Mat      | CSE  | OS      | DBMS    | 2004-01-01 | name0roll@nitt.edu     |
|       5 | Winston  | CSE  | OS      | NULL    | 2004-01-01 | name0roll@nitt.edu     |
+---------+----------+------+---------+---------+------------+------------------------+
5 rows in set (0.00 sec)
```

**f. Update all student records who pursue a course named "DBMS" to "OS".**

**Query :**

> UPDATE Student SET Course1 = 'OS' WHERE Course1 = 'DBMS';

**Output :**

```
mysql> TABLE Student;
+---------+----------+------+---------+---------+------------+--------------------+
| Std_rno | std_name | dept | Course1 | course4 | dob        | email              |
+---------+----------+------+---------+---------+------------+--------------------+
|       1 | Harry    | CSE  | OS      | CA      | 2004-01-01 | name0roll@nitt.edu |
|       2 | David    | CSE  | OS      | FLAT    | 2004-01-01 | name0roll@nitt.edu |
|       3 | George   | CSE  | OS      | NULL    | 2004-01-01 | name0roll@nitt.edu |
|       4 | Mat      | CSE  | OS      | DBMS    | 2004-01-01 | name0roll@nitt.edu |
|       5 | Winston  | CSE  | OS      | NULL    | 2004-01-01 | name0roll@nitt.edu |
+---------+----------+------+---------+---------+------------+--------------------+
5 rows in set (0.01 sec)
```

**g. Delete a student record with the student name starting with the letter 'S'.**

**Query :**

> DELETE FROM Student WHERE Std_name LIKE 'S%';

**Output :**

```
mysql> TABLE Student;
+---------+----------+------+---------+---------+------------+--------------------+
| Std_rno | std_name | dept | Course1 | course4 | dob        | email              |
+---------+----------+------+---------+---------+------------+--------------------+
|       1 | Harry    | CSE  | OS      | CA      | 2004-01-01 | name0roll@nitt.edu |
|       2 | David    | CSE  | OS      | FLAT    | 2004-01-01 | name0roll@nitt.edu |
|       3 | George   | CSE  | OS      | NULL    | 2004-01-01 | name0roll@nitt.edu |
|       4 | Mat      | CSE  | OS      | DBMS    | 2004-01-01 | name0roll@nitt.edu |
|       5 | Winston  | CSE  | OS      | NULL    | 2004-01-01 | name0roll@nitt.edu |
+---------+----------+------+---------+---------+------------+--------------------+
5 rows in set (0.00 sec)
```

**h. Display all records in which a student has born after the year 2005.**

**Query :**

> SELECT * FROM Student WHERE YEAR(dob) > 2005;

**Output :**

```
mysql> SELECT * FROM Student WHERE YEAR(dob) > 2005;
Empty set (0.00 sec)
```

**i. Simulate RENAME, COMMENT, TRUNCATE and DROP.**

## Rename :

**Query :**
> ALTER TABLE Student RENAME TO Student_Details;

**Output :**

```
mysql> TABLE Student_Details;
+---------+----------+------+---------+---------+------------+------------------+
| Std_rno | std_name | dept | Course1 | course4 | dob        | email            |
+---------+----------+------+---------+---------+------------+------------------+
|       1 | Harry    | CSE  | OS      | CA      | 2004-01-01 | name0roll@nitt.edu |
|       2 | David    | CSE  | OS      | FLAT    | 2004-01-01 | name0roll@nitt.edu |
|       3 | George   | CSE  | OS      | NULL    | 2004-01-01 | name0roll@nitt.edu |
|       4 | Mat      | CSE  | OS      | DBMS    | 2004-01-01 | name0roll@nitt.edu |
|       5 | Winston  | CSE  | OS      | NULL    | 2004-01-01 | name0roll@nitt.edu |
+---------+----------+------+---------+---------+------------+------------------+
5 rows in set (0.01 sec)
```

## COMMENT :

**Query:**  -- This is a comment

## TRUNCATE :

**Query :**
> TRUNCATE TABLE Student_Details;

**Output:**

```
mysql> TABLE Student_Details;
Empty set (0.00 sec)
```

## DROP :

**Query :**
> DROP TABLE Student_Details;

**Output :**

```
mysql> TABLE Student_Details;
ERROR 1146 (42S02): Table 'newtest.Student_Details' doesn't exist
```