1Q:

Perform and demonstrate the cross-join between the student and course table.

Ans:

// Student Table

```
mysql> select * from student;
+-----------+-----------+----------+-------------+--------+-----------------------+------------+
| studentid | firstname | lastname | dateofbirth | gender | email                 | phone      |
+-----------+-----------+----------+-------------+--------+-----------------------+------------+
|         1 | don       | seenu    | 2001-08-07  | m      | seenu156@gmail.com    | 8087655321 |
|         2 | shiva     | smith    | 2002-08-09  | m      | jane_smith@example.com | 1235698765 |
|         3 | ramesh    | danny    | 2001-07-08  | m      | danny124@gmail.com    | 2345678901 |
|         4 | laddu     | mahi     | 2003-07-09  | m      | mahi456@gmail.com     | 3456789012 |
|         5 | shiva     | swaraj   | 2002-08-08  | m      | swaraj456@gmail.com   | 9087654321 |
+-----------+-----------+----------+-------------+--------+-----------------------+------------+
5 rows in set (0.00 sec)
```

// Course Table

```
mysql> select * from Course;
+----------+-------------+---------+
| CourseID | CourseTitle | Credits |
+----------+-------------+---------+
|     1200 | MCA         | A       |
|     1240 | MBA         | A       |
|     1360 | MSC         | B       |
|     1460 | BSC         | O       |
|     1520 | BA          | O       |
+----------+-------------+---------+
5 rows in set (0.00 sec)
```

// The table looks like below

// After Performing Cross-Join

```
mysql> select student.studentID,student.FirstName,student.LastName,Course.CourseID,Course.CourseTitle
    -> FROM student
    -> cross join Course;
+-----------+-----------+----------+----------+-------------+
| studentID | FirstName | LastName | CourseID | CourseTitle |
+-----------+-----------+----------+----------+-------------+
|         1 | don       | seenu    |     1200 | MCA         |
|         2 | shiva     | smith    |     1200 | MCA         |
|         3 | ramesh    | danny    |     1200 | MCA         |
|         4 | laddu     | mahi     |     1200 | MCA         |
|         5 | shiva     | swaraj   |     1200 | MCA         |
|         1 | don       | seenu    |     1240 | MBA         |
|         2 | shiva     | smith    |     1240 | MBA         |
|         3 | ramesh    | danny    |     1240 | MBA         |
|         4 | laddu     | mahi     |     1240 | MBA         |
|         5 | shiva     | swaraj   |     1240 | MBA         |
|         1 | don       | seenu    |     1360 | MSC         |
|         2 | shiva     | smith    |     1360 | MSC         |
|         3 | ramesh    | danny    |     1360 | MSC         |
|         4 | laddu     | mahi     |     1360 | MSC         |
|         5 | shiva     | swaraj   |     1360 | MSC         |
|         1 | don       | seenu    |     1460 | BSC         |
|         2 | shiva     | smith    |     1460 | BSC         |
|         3 | ramesh    | danny    |     1460 | BSC         |
|         4 | laddu     | mahi     |     1460 | BSC         |
|         5 | shiva     | swaraj   |     1460 | BSC         |
|         1 | don       | seenu    |     1520 | BA          |
|         2 | shiva     | smith    |     1520 | BA          |
|         3 | ramesh    | danny    |     1520 | BA          |
|         4 | laddu     | mahi     |     1520 | BA          |
|         5 | shiva     | swaraj   |     1520 | BA          |
+-----------+-----------+----------+----------+-------------+
25 rows in set (0.00 sec)
```

2Q:

perform and demonstrate the inner join on student and score table based on common id.

Ans:

// Student Table

```
mysql> select * from student;
+-----------+-----------+----------+-------------+--------+-----------------------+------------+
| studentid | firstname | lastname | dateofbirth | gender | email                 | phone      |
+-----------+-----------+----------+-------------+--------+-----------------------+------------+
|         1 | don       | seenu    | 2001-08-07  | m      | seenu156@gmail.com    | 8087655321 |
|         2 | shiva     | smith    | 2002-08-09  | m      | jane_smith@example.com | 1235698765 |
|         3 | ramesh    | danny    | 2001-07-08  | m      | danny124@gmail.com    | 2345678901 |
|         4 | laddu     | mahi     | 2003-07-09  | m      | mahi456@gmail.com     | 3456789012 |
|         5 | shiva     | swaraj   | 2002-08-08  | m      | swaraj456@gmail.com   | 9087654321 |
+-----------+-----------+----------+-------------+--------+-----------------------+------------+
5 rows in set (0.00 sec)
```

// Score Table

```
mysql> select * from Score;
+---------+----------+-----------+------------+----------------+
| ScoreID | CourseID | StudentID | DateofExam | CreditObtained |
+---------+----------+-----------+------------+----------------+
|      10 |     1220 |         1 | 1999-12-22 | 3.00           |
|      20 |     1240 |         2 | 2001-05-13 | 4.00           |
|      30 |     1360 |         3 | 2001-04-01 | 5.00           |
+---------+----------+-----------+------------+----------------+
3 rows in set (0.00 sec)
```

// After Applying Inner Join for above two tables

```
mysql> select student.studentID,student.FirstName,student.LastName,Score.CourseID,Score.CreditObtained
    -> FROM student
    -> inner join Score on student.studentID = Score.studentID;
+-----------+-----------+----------+----------+----------------+
| studentID | FirstName | LastName | CourseID | CreditObtained |
+-----------+-----------+----------+----------+----------------+
|         1 | don       | seenu    |     1220 | 3.00           |
|         2 | shiva     | smith    |     1240 | 4.00           |
|         3 | ramesh    | danny    |     1360 | 5.00           |
+-----------+-----------+----------+----------+----------------+
3 rows in set (0.00 sec)
```

3Q:

Perform and demonstrate the left join instructor and student based on common id

Ans:

// Instructor Table

```
mysql> select * from Instructor;
+--------------+-----------+----------+---------------------+-----------+
| InstructorID | FirstName | LastName | Email               | StudentID |
+--------------+-----------+----------+---------------------+-----------+
|          123 | NULL      | NULL     | NULL                |      NULL |
|          124 | shiva     | swaraj   | swaraj456@gmail.com |        91 |
|          230 | shiva     | raj      | raj23@gmail.com     |         3 |
|          330 | veeresh   | krishna  | krishna@gmail.com   |         5 |
+--------------+-----------+----------+---------------------+-----------+
4 rows in set (0.00 sec)
```

//Student Table

```
mysql> select * from student;
+-----------+-----------+----------+-------------+--------+-----------------------+------------+
| studentid | firstname | lastname | dateofbirth | gender | email                 | phone      |
+-----------+-----------+----------+-------------+--------+-----------------------+------------+
|         1 | don       | seenu    | 2001-08-07  | m      | seenu156@gmail.com    | 8087655321 |
|         2 | shiva     | smith    | 2002-08-09  | m      | jane_smith@example.com | 1235698765 |
|         3 | ramesh    | danny    | 2001-07-08  | m      | danny124@gmail.com    | 2345678901 |
|         4 | laddu     | mahi     | 2003-07-09  | m      | mahi456@gmail.com     | 3456789012 |
|         5 | shiva     | swaraj   | 2002-08-08  | m      | swaraj456@gmail.com   | 9087654321 |
+-----------+-----------+----------+-------------+--------+-----------------------+------------+
5 rows in set (0.00 sec)
```

/

// After performing Left Join on above two Tables

// the Table will be look like below

```
mysql> Select Instructor.StudentID,Instructor.InstructorID,Student.FirstName,Student.StudentID
    -> From Student
    -> Left Join Instructor on
    -> Student.StudentID = Instructor.StudentID;
+-----------+--------------+-----------+-----------+
| StudentID | InstructorID | FirstName | StudentID |
+-----------+--------------+-----------+-----------+
|      NULL |         NULL | don       |         1 |
|      NULL |         NULL | shiva     |         2 |
|         3 |          230 | ramesh    |         3 |
|      NULL |         NULL | laddu     |         4 |
|         5 |          330 | shiva     |         5 |
+-----------+--------------+-----------+-----------+
5 rows in set (0.00 sec)
```