ASSIGNMENT – 2

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COURSE: MODERN APPLICATION DEVELOPMENT (JAVA SPRING BOOT)

CREATE UPDATE AND DELETE COMMANDS IN MYSQL

CREATE

```
mysql> use Shreeya
Database changed
mysql>  CREATE TABLE employee(name varchar(20), DOB date, DOJ date, Gender v
archar(10), SKILL1 varchar(10), SKILL2 varchar(10), SALARY int);
Query OK, 0 rows affected (0.06 sec)
```

```
mysql> insert into employee values('ANITHA', 'F', 'C++', 'ASP.NET', 1000);
Query OK, 1 row affected (0.00 sec)

mysql> insert into employee values('KAMALA', 'F', 'DBASE', 'C#.NET', 2000);
Query OK, 1 row affected (0.01 sec)

mysql> insert into employee values('MARY', 'F', 'C++', 'DBASE', 2020);
Query OK, 1 row affected (0.01 sec)

mysql> insert into employee values('ANAND', 'M', 'ORACLE', 'C', 2100);
Query OK, 1 row affected (0.01 sec)

mysql> insert into employee values('KARTHICK', 'M', 'JAVA', 'C++', 2500);
Query OK, 1 row affected (0.01 sec)

mysql> insert into employee values('VIJAY', 'M', 'C#.NET', 'C++', 2520);
Query OK, 1 row affected (0.01 sec)

mysql> insert into employee values('JAGADESH', 'M', 'COBOL', 'C++', 2500);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> SELECT * FROM employee;
+----------+--------+--------+---------+--------+
| name     | Gender | SKILL1 | SKILL2  | SALARY |
+----------+--------+--------+---------+--------+
| name     | Gender | SKILL1 | SKILL2  |   NULL |
| ANITHA   | F      | C++    | ASP.NET |   1000 |
| KAMALA   | F      | DBASE  | C#.NET  |   2000 |
| MARY     | F      | C++    | DBASE   |   2020 |
| ANAND    | M      | ORACLE | C       |   2100 |
| KARTHICK | M      | JAVA   | C++     |   2500 |
| VIJAY    | M      | C#.NET | C++     |   2520 |
| JAGADESH | M      | COBOL  | C++     |   2500 |
+----------+--------+--------+---------+--------+
8 rows in set (0.00 sec)
```

UPDATE

```
mysql> UPDATE employee SET SKILL1 = 'JAVA',SALARY = 4000 WHERE name = MARY;
ERROR 1054 (42S22): Unknown column 'MARY' in 'where clause'
mysql> UPDATE employee SET SKILL1 = 'JAVA',SALARY = 4000 WHERE name = 'MARY'
;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM employee;
+-----------+--------+--------+---------+--------+
| name      | Gender | SKILL1 | SKILL2  | SALARY |
+-----------+--------+--------+---------+--------+
| name      | Gender | SKILL1 | SKILL2  |  NULL  |
| ANITHA    | F      | C++    | ASP.NET |  1000  |
| KAMALA    | F      | DBASE  | C#.NET  |  2000  |
| MARY      | F      | JAVA   | DBASE   |  4000  |
| ANAND     | M      | ORACLE | C       |  2100  |
| KARTHICK  | M      | JAVA   | C++     |  2500  |
| VIJAY     | M      | C#.NET | C++     |  2520  |
| JAGADESH  | M      | COBOL  | C++     |  2500  |
+-----------+--------+--------+---------+--------+
8 rows in set (0.00 sec)
```

DELETE

```
mysql> DELETE FROM employee WHERE name = 'name';
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM employee;
+-----------+--------+--------+---------+--------+
| name      | Gender | SKILL1 | SKILL2  | SALARY |
+-----------+--------+--------+---------+--------+
| ANITHA    | F      | C++    | ASP.NET |  1000  |
| KAMALA    | F      | DBASE  | C#.NET  |  2000  |
| MARY      | F      | JAVA   | DBASE   |  4000  |
| ANAND     | M      | ORACLE | C       |  2100  |
| KARTHICK  | M      | JAVA   | C++     |  2500  |
| VIJAY     | M      | C#.NET | C++     |  2520  |
| JAGADESH  | M      | COBOL  | C++     |  2500  |
+-----------+--------+--------+---------+--------+
7 rows in set (0.00 sec)
```

CREATING AND APPLYING JOINS TO TABLES

```
SQL> select * from Student1;

   ROLL_NO NAME              ADDRESS          PHONE            AGE
---------- ---------------- ---------------- ---------- ----------
         1 HARSH             DELHI            2345678077        18
         2 PRATIK            BIHAR            9473579823        19
         3 RIYANKA           SILIGURI         9876543210        20
         4 DEEP              RAMNAGAR         9123456563        18
         5 SAPTARTHI         KOLKATA          6573826472        19
         6 DHANRAJ           BARABAJAR        9236624640        20
         7 ROHIT             BALURGHAT        9846256471        18
         8 NIRAJ             ALIPUR           9024562734        19

8 rows selected.
```

```
SQL> select * from StudentCourse3;

   ROLL_NO  COURSE_ID
---------- ----------
         1          1
         2          2
         3          2
         4          3
         5          1
         9          4
        10          5
        11          4

8 rows selected.
```

INNER JOIN

```
SQL> SELECT * FROM Student1 INNER JOIN StudentCourse3 ON Student1.ROLL_NO = StudentCourse3.ROLL_NO;

   ROLL_NO NAME              ADDRESS          PHONE            AGE    ROLL_NO  COURSE_ID
---------- ---------------- ---------------- ---------- ---------- ---------- ----------
         1 HARSH             DELHI            2345678077        18          1          1
         2 PRATIK            BIHAR            9473579823        19          2          2
         3 RIYANKA           SILIGURI         9876543210        20          3          2
         4 DEEP              RAMNAGAR         9123456563        18          4          3
         5 SAPTARTHI         KOLKATA          6573826472        19          5          1

SQL>
```

SELF-JOIN

```
SQL> SELECT a.ROLL_NO, b.NAME, a.AGE FROM Student1 a, Student1 b WHERE a.age < b.AGE;

   ROLL_NO NAME                    AGE
---------- ---------------- ----------
         1 NIRAJ                     18
         1 SAPTARTHI                 18
         1 PRATIK                    18
         1 DHANRAJ                   18
         1 RIYANKA                   18
         4 NIRAJ                     18
         4 SAPTARTHI                 18
         4 PRATIK                    18
         4 DHANRAJ                   18
         4 RIYANKA                   18
         7 NIRAJ                     18

   ROLL_NO NAME                    AGE
---------- ---------------- ----------
         7 SAPTARTHI                 18
         7 PRATIK                    18
         7 DHANRAJ                   18
         7 RIYANKA                   18
         8 DHANRAJ                   19
         8 RIYANKA                   19
         5 DHANRAJ                   19
         5 RIYANKA                   19
         2 DHANRAJ                   19
         2 RIYANKA                   19

21 rows selected.
```

OUTER JOIN

LEFT JOIN

```
SQL> SELECT * FROM Student1 LEFT JOIN StudentCourse3 ON Student1.ROLL_NO = StudentCourse3.ROLL_NO;

   ROLL_NO NAME             ADDRESS          PHONE             AGE    ROLL_NO COURSE_ID
---------- ---------------- ---------------- ---------- ---------- ---------- ----------
         1 HARSH            DELHI            2345678077         18          1          1
         2 PRATIK           BIHAR            9473579823         19          2          2
         3 RIYANKA          SILIGURI         9876543210         20          3          2
         4 DEEP             RAMNAGAR         9123456563         18          4          3
         5 SAPTARTHI        KOLKATA          6573826472         19          5          1
         8 NIRAJ            ALIPUR           9024562734         19
         6 DHANRAJ          BARABAJAR        9236624640         20
         7 ROHIT            BALURGHAT        9846256471         18

8 rows selected.
```

RIGHT JOIN

```
SQL> SELECT * FROM Student1 RIGHT JOIN StudentCourse3 ON Student1.ROLL_NO = StudentCourse3.ROLL_NO;

   ROLL_NO NAME             ADDRESS          PHONE             AGE    ROLL_NO COURSE_ID
---------- ---------------- ---------------- ---------- ---------- ---------- ----------
         1 HARSH            DELHI            2345678077         18          1          1
         2 PRATIK           BIHAR            9473579823         19          2          2
         3 RIYANKA          SILIGURI         9876543210         20          3          2
         4 DEEP             RAMNAGAR         9123456563         18          4          3
         5 SAPTARTHI        KOLKATA          6573826472         19          5          1
                                                                          10          5
                                                                          11          4
                                                                           9          4

8 rows selected.
```

FULL JOIN

```
SQL> SELECT Student1.*, StudentCourse3.* FROM Student1 FULL OUTER JOIN StudentCourse3 ON Student1.ROLL_NO = StudentCourse3.ROLL_NO ORDER BY Student1.NAME;

  ROLL_NO NAME            ADDRESS         PHONE          AGE    ROLL_NO COURSE_ID
--------- --------------- --------------- ---------- --------- --------- ----------
        4 DEEP            RAMNAGAR        9123456563     18         4        3
        6 DHANRAJ         BARABAJAR       9236624640     20
        1 HARSH           DELHI           2345678077     18         1        1
        8 NIRAJ           ALIPUR          9024562734     19
        2 PRATIK          BIHAR           9473579823     19         2        2
        3 RIYANKA         SILIGURI        9876543210     20         3        2
        7 ROHIT           BALURGHAT       9846256471     18
        5 SAPTARTHI       KOLKATA         6573826472     19         5        1
                                                                   11        4
                                                                   10        5
                                                                    9        4

11 rows selected.
```

CROSS JOIN

```
SQL> SELECT * FROM Student1 CROSS JOIN StudentCourse3;

  ROLL_NO NAME            ADDRESS         PHONE             AGE    ROLL_NO COURSE_ID
--------- --------------- --------------- ---------- ---------- ---------- ----------
        1 HARSH           DELHI           2345678077         18          1          1
        1 HARSH           DELHI           2345678077         18          2          2
        1 HARSH           DELHI           2345678077         18          3          2
        1 HARSH           DELHI           2345678077         18          4          3
        1 HARSH           DELHI           2345678077         18          5          1
        1 HARSH           DELHI           2345678077         18          9          4
        1 HARSH           DELHI           2345678077         18         10          5
        1 HARSH           DELHI           2345678077         18         11          4
        2 PRATIK          BIHAR           9473579823         19          1          1
        2 PRATIK          BIHAR           9473579823         19          2          2
        2 PRATIK          BIHAR           9473579823         19          3          2

  ROLL_NO NAME            ADDRESS         PHONE             AGE    ROLL_NO COURSE_ID
--------- --------------- --------------- ---------- ---------- ---------- ----------
        2 PRATIK          BIHAR           9473579823         19          4          3
        2 PRATIK          BIHAR           9473579823         19          5          1
        2 PRATIK          BIHAR           9473579823         19          9          4
        2 PRATIK          BIHAR           9473579823         19         10          5
        2 PRATIK          BIHAR           9473579823         19         11          4
        3 RIYANKA         SILIGURI        9876543210         20          1          1
        3 RIYANKA         SILIGURI        9876543210         20          2          2
        3 RIYANKA         SILIGURI        9876543210         20          3          2
        3 RIYANKA         SILIGURI        9876543210         20          4          3
        3 RIYANKA         SILIGURI        9876543210         20          5          1
        3 RIYANKA         SILIGURI        9876543210         20          9          4

  ROLL_NO NAME            ADDRESS         PHONE             AGE    ROLL_NO COURSE_ID
--------- --------------- --------------- ---------- ---------- ---------- ----------
        3 RIYANKA         SILIGURI        9876543210         20         10          5
        3 RIYANKA         SILIGURI        9876543210         20         11          4
        4 DEEP            RAMNAGAR        9123456563         18          1          1
        4 DEEP            RAMNAGAR        9123456563         18          2          2
        4 DEEP            RAMNAGAR        9123456563         18          3          2
        4 DEEP            RAMNAGAR        9123456563         18          4          3
        4 DEEP            RAMNAGAR        9123456563         18          5          1
        4 DEEP            RAMNAGAR        9123456563         18          9          4
        4 DEEP            RAMNAGAR        9123456563         18         10          5
        4 DEEP            RAMNAGAR        9123456563         18         11          4
        5 SAPTARTHI       KOLKATA         6573826472         19          1          1
```

```
   ROLL_NO NAME              ADDRESS          PHONE             AGE    ROLL_NO COURSE_ID
---------- ---------------- ---------------- ---------- ---------- ---------- ----------
         3 RIYANKA          SILIGURI         9876543210         20         10          5
         3 RIYANKA          SILIGURI         9876543210         20         11          4
         4 DEEP             RAMNAGAR         9123456563         18          1          1
         4 DEEP             RAMNAGAR         9123456563         18          2          2
         4 DEEP             RAMNAGAR         9123456563         18          3          2
         4 DEEP             RAMNAGAR         9123456563         18          4          3
         4 DEEP             RAMNAGAR         9123456563         18          5          1
         4 DEEP             RAMNAGAR         9123456563         18          9          4
         4 DEEP             RAMNAGAR         9123456563         18         10          5
         4 DEEP             RAMNAGAR         9123456563         18         11          4
         5 SAPTARTHI        KOLKATA          6573826472         19          1          1

   ROLL_NO NAME              ADDRESS          PHONE             AGE    ROLL_NO COURSE_ID
---------- ---------------- ---------------- ---------- ---------- ---------- ----------
         5 SAPTARTHI        KOLKATA          6573826472         19          2          2
         5 SAPTARTHI        KOLKATA          6573826472         19          3          2
         5 SAPTARTHI        KOLKATA          6573826472         19          4          3
         5 SAPTARTHI        KOLKATA          6573826472         19          5          1
         5 SAPTARTHI        KOLKATA          6573826472         19          9          4
         5 SAPTARTHI        KOLKATA          6573826472         19         10          5
         5 SAPTARTHI        KOLKATA          6573826472         19         11          4
         6 DHANRAJ          BARABAJAR        9236624640         20          1          1
         6 DHANRAJ          BARABAJAR        9236624640         20          2          2
         6 DHANRAJ          BARABAJAR        9236624640         20          3          2
         6 DHANRAJ          BARABAJAR        9236624640         20          4          3

   ROLL_NO NAME              ADDRESS          PHONE             AGE    ROLL_NO COURSE_ID
---------- ---------------- ---------------- ---------- ---------- ---------- ----------
         6 DHANRAJ          BARABAJAR        9236624640         20          5          1
         6 DHANRAJ          BARABAJAR        9236624640         20          9          4
         6 DHANRAJ          BARABAJAR        9236624640         20         10          5
         6 DHANRAJ          BARABAJAR        9236624640         20         11          4
         7 ROHIT            BALURGHAT        9846256471         18          1          1
         7 ROHIT            BALURGHAT        9846256471         18          2          2
         7 ROHIT            BALURGHAT        9846256471         18          3          2
         7 ROHIT            BALURGHAT        9846256471         18          4          3
         7 ROHIT            BALURGHAT        9846256471         18          5          1
         7 ROHIT            BALURGHAT        9846256471         18          9          4
         7 ROHIT            BALURGHAT        9846256471         18         10          5

   ROLL_NO NAME              ADDRESS          PHONE             AGE    ROLL_NO COURSE_ID
---------- ---------------- ---------------- ---------- ---------- ---------- ----------
         7 ROHIT            BALURGHAT        9846256471         18         11          4
         8 NIRAJ            ALIPUR           9024562734         19          1          1
         8 NIRAJ            ALIPUR           9024562734         19          2          2
         8 NIRAJ            ALIPUR           9024562734         19          3          2
         8 NIRAJ            ALIPUR           9024562734         19          4          3
         8 NIRAJ            ALIPUR           9024562734         19          5          1
         8 NIRAJ            ALIPUR           9024562734         19          9          4
         8 NIRAJ            ALIPUR           9024562734         19         10          5
         8 NIRAJ            ALIPUR           9024562734         19         11          4

64 rows selected.
```

SEMI JOIN

```
SQL> SELECT * FROM Student1 WHERE EXISTS(SELECT 1 FROM StudentCourse3 WHERE Student1.ROLL_NO = StudentCourse3.ROLL_NO) ORDER BY Student1.NAME;

   ROLL_NO NAME              ADDRESS          PHONE             AGE
---------- ---------------- ---------------- ---------- ----------
         4 DEEP             RAMNAGAR         9123456563         18
         1 HARSH            DELHI            2345678077         18
         2 PRATIK           BIHAR            9473579823         19
         3 RIYANKA          SILIGURI         9876543210         20
         5 SAPTARTHI        KOLKATA          6573826472         19
```

ANTI JOIN

```
SQL> SELECT * FROM Student1 WHERE NOT EXISTS(SELECT 1 FROM StudentCourse3 WHERE Student1.ROLL_NO = StudentCourse3.ROLL_NO) ORDER BY Student1.NAME;

   ROLL_NO NAME              ADDRESS          PHONE             AGE
---------- ---------------- ---------------- ---------- ----------
         6 DHANRAJ          BARABAJAR        9236624640         20
         8 NIRAJ            ALIPUR           9024562734         19
         7 ROHIT            BALURGHAT        9846256471         18

SQL>
```