```
/*

ASSIGNMENT 7 : VIEW

Execute DDL/DML statements which demonstrate the use of views. Update the base

table using its corresponding view.


*/
mysql> CREATE DATABASE STUDENT_DATA;

Query OK, 1 row affected (0.01 sec)


mysql> USE STUDENT_DATA;

Database changed


mysql>-- ================= TABLE 1.CITY ===================


mysql> CREATE TABLE CITY(

    -> CITY_ID INT NOT NULL,

    ->    CITY_NAME VARCHAR(30) NOT NULL DEFAULT 'PUNE',

    ->    PRIMARY KEY(CITY_ID)

    -> );

Query OK, 0 rows affected (0.05 sec)


mysql> INSERT INTO CITY(CITY_ID,CITY_NAME)

    -> VALUES

    -> (1,DEFAULT),

    -> (2,'DELHI'),

    -> (3,'MUMBAI'),

    -> (4,'CHENNI');

Query OK, 4 rows affected (0.01 sec)

Records: 4  Duplicates: 0  Warnings: 0


MYSQL>-- ================= TABLE 2.COURSES =================


mysql> CREATE TABLE COURSES(

    -> COURSE_ID INT NOT NULL,
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    ->     COURSE_NAME VARCHAR(130) NOT NULL,

    -> PRIMARY KEY(COURSE_ID)

    -> );
Query OK, 0 rows affected (0.04 sec)


mysql> INSERT INTO COURSES(COURSE_ID,COURSE_NAME)

    -> VALUES

    -> (1001,'INFORMATION TECHNOLOGY'),

    -> (1002,'COMPUTER SCIENCE'),

    -> (1003,'ELECTRONIC AND TELECOMMUNICATION'),

    -> (1004,'MECHANICAL');
Query OK, 4 rows affected (0.01 sec)
Records: 4  Duplicates: 0  Warnings: 0


mysql>-- ================= TABLE 3.STUDENT ========================


mysql> CREATE TABLE STUDENT(

    -> STUDENT_ID BIGINT NOT NULL,

    -> STUDENT_NAME VARCHAR(120) NOT NULL,

    ->     STUDENT_CITY INT NOT NULL,

    ->     STUDENT_COURSES INT NOT NULL,

    ->     PRIMARY KEY(STUDENT_ID,STUDENT_COURSES),

    ->     FOREIGN KEY(STUDENT_CITY) REFERENCES CITY(CITY_ID),

    ->     FOREIGN KEY(STUDENT_COURSES) REFERENCES COURSES(COURSE_ID)

    -> );
Query OK, 0 rows affected (0.08 sec)


mysql> INSERT INTO STUDENT(STUDENT_ID,STUDENT_NAME,STUDENT_CITY,STUDENT_COURSES)

    -> VALUES

    -> (1122,'ROHAN KUMAR',1,1001),

    -> (1123,'ALLU ARJUN',4,1002),

    -> (2244,'NOBITA NOBI',3,1004),

    -> (2245,'PRATHAMESH PATIL',1,1002),

    -> (2246,'SIDDESH KUMBAR',2,1001);
Query OK, 5 rows affected (0.02 sec)
```

```
Records: 5  Duplicates: 0  Warnings: 0


mysql> SELECT * FROM STUDENT_DATA.CITY;


+---------+-----------+
| CITY_ID | CITY_NAME |
+---------+-----------+
|       1 | PUNE      |
|       2 | DELHI     |
|       3 | MUMBAI    |
|       4 | CHENNI    |
+---------+-----------+
4 rows in set (0.00 sec)


mysql> SELECT * FROM STUDENT_DATA.COURSES;
+-----------+--------------------------------+
| COURSE_ID | COURSE_NAME                    |
+-----------+--------------------------------+
|      1001 | INFORMATION TECHNOLOGY         |
|      1002 | COMPUTER SCIENCE               |
|      1003 | ELECTRONIC AND TELECOMMUNICATION |
|      1004 | MECHANICAL                     |
+-----------+--------------------------------+
4 rows in set (0.00 sec)


mysql> SELECT * FROM STUDENT_DATA.STUDENT;
+------------+------------------+--------------+-----------------+
| STUDENT_ID | STUDENT_NAME     | STUDENT_CITY | STUDENT_COURSES |
+------------+------------------+--------------+-----------------+
|       1122 | ROHAN KUMAR      |            1 |            1001 |
|       1123 | ALLU ARJUN       |            4 |            1002 |
|       2244 | NOBITA NOBI      |            3 |            1004 |
|       2245 | PRATHAMESH PATIL |            1 |            1002 |
|       2246 | SIDDESH KUMBAR   |            2 |            1001 |
+------------+------------------+--------------+-----------------+
5 rows in set (0.00 sec)


mysql> ALTER TABLE STUDENT
    -> RENAME COLUMN STUDENT_ID TO STUDENT_NO;
```

```
Query OK, 0 rows affected (0.03 sec)

Records: 0  Duplicates: 0  Warnings: 0


mysql> SELECT * FROM STUDENT_DATA.STUDENT;

+------------+-----------------+--------------+-----------------+
| STUDENT_NO | STUDENT_NAME    | STUDENT_CITY | STUDENT_COURSES |
+------------+-----------------+--------------+-----------------+
|       1122 | ROHAN KUMAR     |            1 |            1001 |
|       1123 | ALLU ARJUN      |            4 |            1002 |
|       2244 | NOBITA NOBI     |            3 |            1004 |
|       2245 | PRATHAMESH PATIL |           1 |            1002 |
|       2246 | SIDDESH KUMBAR  |            2 |            1001 |
+------------+-----------------+--------------+-----------------+

5 rows in set (0.00 sec)


mysql> ALTER TABLE STUDENT
    -> ADD COLUMN EMAIL VARCHAR(20);
Query OK, 0 rows affected (0.03 sec)

Records: 0  Duplicates: 0  Warnings: 0


mysql> SELECT * FROM STUDENT_DATA.STUDENT;

+------------+-----------------+--------------+-----------------+-------+
| STUDENT_NO | STUDENT_NAME    | STUDENT_CITY | STUDENT_COURSES | EMAIL |
+------------+-----------------+--------------+-----------------+-------+
|       1122 | ROHAN KUMAR     |            1 |            1001 | NULL  |
|       1123 | ALLU ARJUN      |            4 |            1002 | NULL  |
|       2244 | NOBITA NOBI     |            3 |            1004 | NULL  |
|       2245 | PRATHAMESH PATIL |           1 |            1002 | NULL  |
|       2246 | SIDDESH KUMBAR  |            2 |            1001 | NULL  |
+------------+-----------------+--------------+-----------------+-------+

5 rows in set (0.00 sec)


mysql> DESC STUDENT;

+-----------------+--------------+------+-----+---------+-------+
| Field           | Type         | Null | Key | Default | Extra |
+-----------------+--------------+------+-----+---------+-------+
| STUDENT_NO      | bigint       | NO   | PRI | NULL    |       |
| STUDENT_NAME    | varchar(120) | NO   |     | NULL    |       |
```

```
| STUDENT_CITY    | int         | NO   | MUL | NULL     |       |
| STUDENT_COURSES | int         | NO   | PRI | NULL     |       |
| EMAIL           | varchar(20) | YES  |     | NULL     |       |
+-----------------+-------------+------+-----+----------+-------+
5 rows in set (0.01 sec)


mysql> ALTER TABLE STUDENT
    -> DROP COLUMN EMAIL;
Query OK, 0 rows affected (0.02 sec)
Records: 0  Duplicates: 0  Warnings: 0


mysql> DESC STUDENT;
+-----------------+--------------+------+-----+----------+-------+
| Field           | Type         | Null | Key | Default  | Extra |
+-----------------+--------------+------+-----+----------+-------+
| STUDENT_NO      | bigint       | NO   | PRI | NULL     |       |
| STUDENT_NAME    | varchar(120) | NO   |     | NULL     |       |
| STUDENT_CITY    | int          | NO   | MUL | NULL     |       |
| STUDENT_COURSES | int          | NO   | PRI | NULL     |       |
+-----------------+--------------+------+-----+----------+-------+
4 rows in set (0.01 sec)


mysql>
mysql> SELECT * FROM STUDENT;
+------------+-----------------+--------------+-----------------+
| STUDENT_NO | STUDENT_NAME    | STUDENT_CITY | STUDENT_COURSES |
+------------+-----------------+--------------+-----------------+
|       1122 | ROHAN KUMAR     |            1 |            1001 |
|       1123 | ALLU ARJUN      |            4 |            1002 |
|       2244 | NOBITA NOBI     |            3 |            1004 |
|       2245 | PRATHAMESH PATIL|            1 |            1002 |
|       2246 | SIDDESH KUMBAR  |            2 |            1001 |
+------------+-----------------+--------------+-----------------+
5 rows in set (0.00 sec)


mysql> # 3.MODIFY
mysql> # ALTER TABLE table_name
mysql> # MODIFY COLUMN column_name datatype
```

```
mysql> ALTER TABLE STUDENT

    -> MODIFY STUDENT_NO VARCHAR(20);

Query OK, 5 rows affected (0.11 sec)

Records: 5  Duplicates: 0  Warnings: 0


mysql> DESC STUDENT;

+-----------------+--------------+------+-----+---------+-------+
| Field           | Type         | Null | Key | Default | Extra |
+-----------------+--------------+------+-----+---------+-------+
| STUDENT_NO      | varchar(20)  | NO   | PRI | NULL    |       |
| STUDENT_NAME    | varchar(120) | NO   |     | NULL    |       |
| STUDENT_CITY    | int          | NO   | MUL | NULL    |       |
| STUDENT_COURSES | int          | NO   | PRI | NULL    |       |
+-----------------+--------------+------+-----+---------+-------+

4 rows in set (0.00 sec)


mysql> -- ========================= VIEWS ====================================

mysql> -- SYNTAX:

mysql> /*CREATE VIEW VIEW_NAME

          AS

          WRITE YOUR QUERY

mysql> */

mysql>

mysql> -- VIEW 1 TO DISPLAY INNER JOIN

mysql> CREATE VIEW INNER_JOIN

    -> AS

    -> SELECT STUDENT_NAME,STUDENT_CITY,CITY_NAME FROM STUDENT INNER JOIN CITY

    -> ON STUDENT.STUDENT_CITY = CITY.CITY_ID;

Query OK, 0 rows affected (0.01 sec)


mysql>

mysql> SELECT * FROM INNER_JOIN;

+------------------+--------------+-----------+
| STUDENT_NAME     | STUDENT_CITY | CITY_NAME |
+------------------+--------------+-----------+
| ROHAN KUMAR      |            1 | PUNE      |
| PRATHAMESH PATIL |            1 | PUNE      |
```

```
| SIDDESH KUMBAR   |            2 | DELHI    |
| NOBITA NOBI      |            3 | MUMBAI   |
| ALLU ARJUN       |            4 | CHENNI   |
+-----------------+-------------+----------+
5 rows in set (0.00 sec)


mysql> -- VIEW 2 TO DISPLAY RIGHT JOIN
mysql> INSERT INTO CITY (CITY_ID,CITY_NAME)
    -> VALUES
    -> (5,'LATUR'),
    -> (6,'NAGPUR');
Query OK, 2 rows affected (0.01 sec)
Records: 2  Duplicates: 0  Warnings: 0


mysql>
mysql> CREATE VIEW RIGHT_JOIN
    -> AS
    -> SELECT STUDENT_NAME,STUDENT_CITY,CITY_NAME FROM STUDENT RIGHT JOIN CITY
    -> ON STUDENT.STUDENT_CITY = CITY.CITY_ID;
Query OK, 0 rows affected (0.01 sec)


mysql> SELECT * FROM RIGHT_JOIN;
+-----------------+--------------+-----------+
| STUDENT_NAME    | STUDENT_CITY | CITY_NAME |
+-----------------+--------------+-----------+
| ROHAN KUMAR     |            1 | PUNE      |
| PRATHAMESH PATIL |           1 | PUNE      |
| SIDDESH KUMBAR  |            2 | DELHI     |
| NOBITA NOBI     |            3 | MUMBAI    |
| ALLU ARJUN      |            4 | CHENNI    |
| NULL            |         NULL | LATUR     |
| NULL            |         NULL | NAGPUR    |
+-----------------+--------------+-----------+
7 rows in set (0.00 sec)


mysql>
mysql> -- ===================== VIEW FOR DISPLAYING STUDENT NAME AND THERE CITY
====================
```

```
mysql>

mysql> DROP VIEW STUDENT_CITY;

ERROR 1051 (42S02): Unknown table 'student_data.student_city'

mysql> CREATE VIEW STUDENT_CITY

    -> AS

    -> SELECT S.STUDENT_NAME,C.CITY_NAME FROM STUDENT S ,CITY C

    -> WHERE STUDENT_CITY = CITY_ID

    -> ORDER BY (CITY_NAME);

Query OK, 0 rows affected (0.01 sec)


mysql> SELECT * FROM STUDENT_CITY;

+------------------+-----------+
| STUDENT_NAME     | CITY_NAME |
+------------------+-----------+
| ALLU ARJUN       | CHENNI    |
| SIDDESH KUMBAR   | DELHI     |
| NOBITA NOBI      | MUMBAI    |
| ROHAN KUMAR      | PUNE      |
| PRATHAMESH PATIL | PUNE      |
+------------------+-----------+
5 rows in set (0.00 sec)


mysql>

mysql> -- ====================== VIEW FOR DISPLAYING STUDENT_NAME AND COURSES ENROLLED
==============

mysql>

mysql> DROP VIEW STUDENT_C;

ERROR 1051 (42S02): Unknown table 'student_data.student_c'

mysql> CREATE VIEW STUDENT_C

    -> AS

    -> SELECT * FROM STUDENT , COURSES

    -> WHERE STUDENT_COURSES = COURSE_ID;

Query OK, 0 rows affected (0.01 sec)


mysql> -- ORDER BY (STUDENT_NAME);

mysql>

mysql> SELECT * FROM STUDENT_C;
```

```
+-----------+-----------------+--------------+----------------+-----------+-----------------------+
| STUDENT_NO | STUDENT_NAME   | STUDENT_CITY | STUDENT_COURSES | COURSE_ID | COURSE_NAME           |
+-----------+-----------------+--------------+----------------+-----------+-----------------------+
| 1122      | ROHAN KUMAR     |            1 |           1001 |      1001 | INFORMATION TECHNOLOGY |
| 2246      | SIDDESH KUMBAR  |            2 |           1001 |      1001 | INFORMATION TECHNOLOGY |
| 1123      | ALLU ARJUN      |            4 |           1002 |      1002 | COMPUTER SCIENCE      |
| 2245      | PRATHAMESH PATIL |           1 |           1002 |      1002 | COMPUTER SCIENCE      |
| 2244      | NOBITA NOBI     |            3 |           1004 |      1004 | MECHANICAL            |
+-----------+-----------------+--------------+----------------+-----------+-----------------------+
5 rows in set (0.00 sec)

mysql> UPDATE STUDENT_C
    -> SET STUDENT_NAME = 'ROHAN MASNE'
    -> WHERE STUDENT_COURSES = 1001;
Query OK, 2 rows affected (0.01 sec)
Rows matched: 2  Changed: 2  Warnings: 0


mysql>
mysql> SELECT * FROM STUDENT;
+-----------+-----------------+--------------+----------------+
| STUDENT_NO | STUDENT_NAME   | STUDENT_CITY | STUDENT_COURSES |
+-----------+-----------------+--------------+----------------+
| 1122      | ROHAN MASNE     |            1 |           1001 |
| 1123      | ALLU ARJUN      |            4 |           1002 |
| 2244      | NOBITA NOBI     |            3 |           1004 |
| 2245      | PRATHAMESH PATIL |           1 |           1002 |
| 2246      | ROHAN MASNE     |            2 |           1001 |
+-----------+-----------------+--------------+----------------+
5 rows in set (0.00 sec)


mysql> -- ==========================================================
mysql> CREATE TABLE Employees (
    ->     EmployeeID INT PRIMARY KEY,
    ->     FirstName VARCHAR(50),
    ->     LastName VARCHAR(50),
    ->     Department VARCHAR(50)
    -> );
Query OK, 0 rows affected (0.06 sec)
```

```
mysql> INSERT INTO Employees (EmployeeID, FirstName, LastName, Department)
    -> VALUES (1, 'John', 'Doe', 'HR'),
    ->        (2, 'Jane', 'Smith', 'IT'),
    ->        (3, 'David', 'Johnson', 'Finance');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0


mysql> CREATE VIEW EmployeeView AS
    -> SELECT EmployeeID, FirstName, LastName, Department
    -> FROM Employees;
Query OK, 0 rows affected (0.01 sec)


mysql> SELECT * FROM EmployeeView;
+------------+-----------+----------+------------+
| EmployeeID | FirstName | LastName | Department |
+------------+-----------+----------+------------+
|          1 | John      | Doe      | HR         |
|          2 | Jane      | Smith    | IT         |
|          3 | David     | Johnson  | Finance    |
+------------+-----------+----------+------------+
3 rows in set (0.00 sec)


mysql> UPDATE EmployeeView
    -> SET Department = 'Sales'
    -> WHERE EmployeeID = 2;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0


mysql> -- ===================== + ================================
```