SQL Tasks

Task 2.

1. Create table Student with Schema(roll_no, name, division,branch, city, marks.

CREATE TABLE Student(Roll_no int NOT NULL PRIMARY KEY, Name varchar(255) NOT NULL, Division varchar(255) NOT NULL, Branch varchar(255) NOT NULL, City varchar(255) NOT NULL, Marks int NOT NULL);

```
MySQL  localhost:33060+ ssl  training  SQL > CREATE  TABLE Student(Roll_no int NOT NULL PRIMARY KEY, Name var
char(255) NOT NULL, Division varchar(255) NOT NULL, Branch varchar(255) NOT NULL, City varchar(255) NOT NULL,
Marks int NOT NULL);
Query OK, 0 rows affected (0.0659 sec)
```

```
MySQL  localhost:33060+ ssl  training  SQL > show columns from training.Student;
+----------+--------------+------+-----+---------+-------+
| Field    | Type         | Null | Key | Default | Extra |
+----------+--------------+------+-----+---------+-------+
| Roll_no  | int          | NO   | PRI | NULL    |       |
| Name     | varchar(255) | NO   |     | NULL    |       |
| Division | varchar(255) | NO   |     | NULL    |       |
| Branch   | varchar(255) | NO   |     | NULL    |       |
| City     | varchar(255) | NO   |     | NULL    |       |
| Marks    | int          | NO   |     | NULL    |       |
+----------+--------------+------+-----+---------+-------+
6 rows in set (0.0022 sec)
```

2. Insert 10 Records to the Student table

INSERT INTO Student(Roll_no, Name, Division, Branch, City, Marks) values (1,”Abhishek Dubey”,”B”, “Computer”, “Mumbai”, 50) …… repeat this 10 times to insert 10 records.

```
MySQL localhost:33060+ ssl training SQL > insert into Student( Roll_no, Name, Division, Branch, City, Marks) values (1, "Abhishek Dubey","B", "Computer", "Mumbai", 50), (2, "Abhishek Banerjee", "A", "Computer", "Kolkata", 100), (3, "Aditya S", "C", "IT", "Delhi", 80), (4, "Zulfa", "A", "AI", "Pune", 100);
Query OK, 4 rows affected (0.0150 sec)

Records: 4  Duplicates: 0  Warnings: 0
MySQL localhost:33060+ ssl training SQL > select * from student;
+---------+-------------------+----------+-----------+---------+-------+
| Roll_no | Name              | Division | Branch    | City    | Marks |
+---------+-------------------+----------+-----------+---------+-------+
|       1 | Abhishek Dubey    | B        | Computer  | Mumbai  |    50 |
|       2 | Abhishek Banerjee | A        | Computer  | Kolkata |   100 |
|       3 | Aditya S          | C        | IT        | Delhi   |    80 |
|       4 | Zulfa             | A        | AI        | Pune    |   100 |
+---------+-------------------+----------+-----------+---------+-------+
4 rows in set (0.0010 sec)
```

```
MySQL localhost:33060+ ssl training SQL > insert into Student (Name, Division, Branch, City, Marks) values ("Prathmesh","B", "EXTC", "Mumbai", 69), ("Dev Ayush", "A", "Computer", "Nagpur", 97), ( "Devansh", "A", "IT", "Delhi", 89), ("Arjun", "A", "AI", "Pune", 100);
Query OK, 4 rows affected (0.0106 sec)

Records: 4  Duplicates: 0  Warnings: 0
MySQL localhost:33060+ ssl training SQL >
MySQL localhost:33060+ ssl training SQL > select * from student;
+---------+-------------------+----------+-----------+---------+-------+
| Roll_no | Name              | Division | Branch    | City    | Marks |
+---------+-------------------+----------+-----------+---------+-------+
|       1 | Abhishek Dubey    | B        | Computer  | Mumbai  |    50 |
|       2 | Abhishek Banerjee | A        | Computer  | Kolkata |   100 |
|       3 | Aditya S          | C        | IT        | Delhi   |    80 |
|       4 | Zulfa             | A        | AI        | Pune    |   100 |
|       5 | Prathmesh         | B        | EXTC      | Mumbai  |    69 |
|       6 | Dev Ayush         | A        | Computer  | Nagpur  |    97 |
|       7 | Devansh           | A        | IT        | Delhi   |    89 |
|       8 | Arjun             | A        | AI        | Pune    |   100 |
+---------+-------------------+----------+-----------+---------+-------+
```

```
MySQL localhost:33060+ ssl training SQL > insert into Student (Name, Division, Branch, City, Marks) values ( "Swaraj", "c", "EXTC", "Delhi", 90), ("Devyansh", "A", "AI", "Pune", 75);
Query OK, 2 rows affected (0.0102 sec)

Records: 2  Duplicates: 0  Warnings: 0
MySQL localhost:33060+ ssl training SQL > select * from student;
+---------+-------------------+----------+-----------+---------+-------+
| Roll_no | Name              | Division | Branch    | City    | Marks |
+---------+-------------------+----------+-----------+---------+-------+
|       1 | Abhishek Dubey    | B        | Computer  | Mumbai  |    50 |
|       2 | Abhishek Banerjee | A        | Computer  | Kolkata |   100 |
|       3 | Aditya S          | C        | IT        | Delhi   |    80 |
|       4 | Zulfa             | A        | AI        | Pune    |   100 |
|       5 | Prathmesh         | B        | EXTC      | Mumbai  |    69 |
|       6 | Dev Ayush         | A        | Computer  | Nagpur  |    97 |
|       7 | Devansh           | A        | IT        | Delhi   |    89 |
|       8 | Arjun             | A        | AI        | Pune    |   100 |
|       9 | Swaraj            | c        | EXTC      | Delhi   |    90 |
|      10 | Devyansh          | A        | AI        | Pune    |    75 |
+---------+-------------------+----------+-----------+---------+-------+
10 rows in set (0.0006 sec)
```

3. List all the student name with their corresponding city

SELECT Name, City FROM Students;

```
MySQL localhost:33060+ ssl training SQL > SELECT Name, City from student;
+-------------------+---------+
| Name              | City    |
+-------------------+---------+
| Abhishek Dubey    | Mumbai  |
| Abhishek Banerjee | Kolkata |
| Aditya S          | Delhi   |
| Zulfa             | Pune    |
| Prathmesh         | Mumbai  |
| Dev Ayush         | Nagpur  |
| Devansh           | Delhi   |
| Arjun             | Pune    |
| Swaraj            | Delhi   |
| Devyansh          | Pune    |
+-------------------+---------+
```

4. List all the distinct name of the student

   SELECT DISTINCT Name FROM Student;

```
MySQL  localhost:33060+ ssl  training  SQL > SELECT DISTINCT Name from Student;
+-------------------+
| Name              |
+-------------------+
| Abhishek Dubey    |
| Abhishek Banerjee |
| Aditya S          |
| Zulfa             |
| Prathmesh         |
| Dev Ayush         |
| Devansh           |
| Arjun             |
| Swaraj            |
| Devyansh          |
+-------------------+
```

5. List all the records of the students will all the attributes

   SELECT * FROM Students

```
MySQL  localhost:33060+ ssl  training  SQL > select * from student;
+---------+-------------------+----------+----------+---------+-------+
| Roll_no | Name              | Division | Branch   | City    | Marks |
+---------+-------------------+----------+----------+---------+-------+
|       1 | Abhishek Dubey    | B        | Computer | Mumbai  |    50 |
|       2 | Abhishek Banerjee | A        | Computer | Kolkata |   100 |
|       3 | Aditya S          | C        | IT       | Delhi   |    80 |
|       4 | Zulfa             | A        | AI       | Pune    |   100 |
|       5 | Prathmesh         | B        | EXTC     | Mumbai  |    69 |
|       6 | Dev Ayush         | A        | Computer | Nagpur  |    97 |
|       7 | Devansh           | A        | IT       | Delhi   |    89 |
|       8 | Arjun             | A        | AI       | Pune    |   100 |
|       9 | Swaraj            | c        | EXTC     | Delhi   |    90 |
|      10 | Devyansh          | A        | AI       | Pune    |    75 |
+---------+-------------------+----------+----------+---------+-------+
```

6. List all the students whose marks are greater than 75

   SELECT * FROM Student
   WHERE Marks>75;

```
MySQL  localhost:33060+ ssl  training  SQL > SELECT * FROM Student
                                          -> WHERE marks>75;
+---------+--------------------+----------+----------+---------+-------+
| Roll_no | Name               | Division | Branch   | City    | Marks |
+---------+--------------------+----------+----------+---------+-------+
|       2 | Abhishek Banerjee  | A        | Computer | Kolkata |   100 |
|       3 | Aditya S           | C        | IT       | Delhi   |    80 |
|       4 | Zulfa              | A        | AI       | Pune    |   100 |
|       6 | Dev Ayush          | A        | Computer | Nagpur  |    97 |
|       7 | Devansh            | A        | IT       | Delhi   |    89 |
|       8 | Arjun              | A        | AI       | Pune    |   100 |
|       9 | Swaraj             | c        | EXTC     | Delhi   |    90 |
+---------+--------------------+----------+----------+---------+-------+
7 rows in set (0.0010 sec)
```

7. List all the students whose name starts with Alphabet “S”

SELECT * FROM Student WHERE Name LIKE “s%”;

```
MySQL  localhost:33060+ ssl  training  SQL > Select * FROM Student where Name LIKE "s%";
+---------+--------+----------+--------+-------+-------+
| Roll_no | Name   | Division | Branch | City  | Marks |
+---------+--------+----------+--------+-------+-------+
|       9 | Swaraj | c        | IT     | Delhi |    90 |
+---------+--------+----------+--------+-------+-------+
1 row in set (0.0012 sec)
```

8. List all the students whose marks are in the range of 50 to 60

SELECT * FROM Student WHERE Marks BETWEEN 50 AND 60

```
MySQL  localhost:33060+ ssl  training  SQL > SELECT * FROM Student WHERE marks BETWEEN 50 AND 60;
+---------+---------------+----------+----------+--------+-------+
| Roll_no | Name          | Division | Branch   | City   | Marks |
+---------+---------------+----------+----------+--------+-------+
|       1 | Abhishek Dubey | B        | Computer | Mumbai |    50 |
+---------+---------------+----------+----------+--------+-------+
1 row in set (0.0007 sec)
```

9. List all the Students whose branch is “Computer” and City is “Pune”

SELECT * FROM Student WHERE BRANCH = “Computer” AND City = “Pune”;

```
MySQL  localhost:33060+ ssl  training  SQL > SELECT * FROM Student WHERE BRANCH = "COMPUTER"AND city= "PUNE";
Empty set (0.0008 sec)
MySQL  localhost:33060+ ssl  training  SQL > SELECT * FROM Student WHERE BRANCH = "COMPUTER"AND city= "MUMBAI";
+---------+---------------+----------+----------+--------+-------+
| Roll_no | Name          | Division | Branch   | City   | Marks |
+---------+---------------+----------+----------+--------+-------+
|       1 | Abhishek Dubey | B        | Computer | Mumbai |    50 |
+---------+---------------+----------+----------+--------+-------+
1 row in set (0.0009 sec)
```

10. Update the branch of Student to “IT” whose roll_no is 9

UPDATE STUDENT set Branch = “IT” WHERE Roll_no = “9”;

```
MySQL  localhost:33060+ ssl  training  SQL > UPDATE STUDENT
                                          -> set Branch = "IT"
                                          -> WHERE Roll_no = "9";
Query OK, 1 row affected (0.0136 sec)
```

11. Delete the Student records whose division is BE(i have used B)

DELETE FROM Student WHERE Division = “B”;

```
MySQL  localhost:33060+ ssl  training  SQL > DELETE FROM Student where Division = "B";
Query OK, 2 rows affected (0.0105 sec)
```

12. Create another Table TE_Students with Schema(Roll_no, Name)

I have tried to create the table TE_Students from existing table Student.

```
MySQL  localhost:33060+ ssl  training  SQL > CREATE TABLE TE_Students  AS
                                          -> SELECT roll_no, name
                                          -> from Student;
Query OK, 8 rows affected (0.0482 sec)
```

13. List all the roll_no unionly in relation with Student and TE_Students

SELECT Roll_no FROM Student UNON SELECT Roll_no FROM TE_Students;

```
MySQL  localhost:33060+ ssl  training  SQL > SELECT Roll_no FROM Student UNION Select Roll_no FROM TE_Students;
+---------+
| Roll_no |
+---------+
|       2 |
|       3 |
|       4 |
|       6 |
|       7 |
|       8 |
|       9 |
|      10 |
|       1 |
+---------+
9 rows in set (0.0036 sec)
```

14. Display names of all students belonging to relation student in Upper Case.

SELECT UPPER(name) FROM Student;

```
Select UPPER(name) FROM Student;
+------------------+
| UPPER(name)      |
+------------------+
| ABHISHEK BANERJEE |
| ADITYA S         |
| ZULFA            |
| DEV AYUSH        |
| DEVANSH          |
| ARJUN            |
| SWARAJ           |
| DEVYANSH         |
+------------------+
8 rows in set (0.0036 sec)
```

15. Display the binary and hex equivalent of marks for all the students belonging to Student relation

SELECT conv(Marks, 10, 2) FROM Student
(here the 10 is decimal system, and 2 is for binary system)

```
MySQL  localhost:33060+ ssl  t...  SQL > Select conv(marks,10,2) from student;
+------------------+
| conv(marks,10,2) |
+------------------+
| 1100100          |
| 1010000          |
| 1100100          |
| 1100001          |
| 1011001          |
| 1100100          |
| 1011010          |
| 1001011          |
+------------------+
```

SELECT conv(Marks, 10, 16) FROM Student

```
MySQL  localhost:33060+ ssl  t...  SQL > Select conv(marks,10,16) from student;
+-------------------+
| conv(marks,10,16) |
+-------------------+
| 64                |
| 50                |
| 64                |
| 61                |
| 59                |
| 64                |
| 5A                |
| 4B                |
```