Question Set Number : 2

Register Number : 19BCE2074

Name : Kulvir Singh

RDBMS : MYSQL

TABLE CREATION

Create TABLE City(

   City_No int not null,

   City_Name varchar(255) not null,

   State varchar(255) not null,

   Country varchar(255) not null,

   Population int not null,

   Airport varchar(3) not null check (Airport="YES" or Airport = "NO"),

   Railway_Station varchar(3) not null check (Railway_Station="YES" or Railway_Station = "NO"),

   total_mayors int not null,

   PRIMARY key (City_No)

);

Create table Mayor(

   Mayor_ID varchar(5) not null check (substr(Mayor_ID,1,1)="M"),

   Mayor_Name varchar(255) not null,

   Age int not null check (Age<=100),

   Address varchar(255) not null,

   Phone int not null,

   Mayor_Start_Date Date not null,

   Mayor_End_Date Date not null,

   City int not null,

   FOREIGN key (City) REFERENCES City(City_No),

PRIMARY KEY (Mayor_ID)

);

RECORD INSERTION

insert into City values (1,"ABC","Tamilnadu","India",29987,"YES","YES",1),

(2,"DEF","Tamilnadu","India",2873521,"YES","YES",1),

(3,"GHI","Tamilnadu","India",287351,"NO","YES",1),

(4,"XYZ","Uttar Pradesh","India",1233,"NO","YES",1),

(5,"XUV","Andhra Pradesh","India",87673,"YES","YES",1);

insert into Mayor values ("M101","Ajay",66,"A Block",123456,"2018-04-22","2019-04-22",1),

("M102","Bale",46,"B Block",133456,"2014-04-22","2019-04-22",2),

("M103","Carl",55,"C Block",423456,"2016-04-22","2020-04-22",3),

("M104","Dominic",56,"D Block",553456,"2017-04-22","2019-04-22",4),

("M105","Eugene",36,"E Block",553326,"2016-04-22","2019-04-22",5);

```
mysql> insert into City values (1,"ABC","Tamilnadu","India",29987,"YES","YES",1),(2,"DEF","Tamilnadu","India",2873521,"YES","YES",1),
    -> (3,"GHI","Tamilnadu","India",287351,"NO","YES",1),(4,"XYZ","Jharkhand","India",1233,"NO","YES",1),(5,"XUV","Gujarat","India",876
73,"YES","YES",1);
Query OK, 5 rows affected (0.02 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql>
mysql> insert into Mayor values ("M101","Ajay",66,"A Block",123456,"2018-04-22","2019-04-22",1),
    -> ("M102","Bale",46,"B Block",133456,"2014-04-22","2019-04-22",2),
    -> ("M103","Carl",55,"C Block",423456,"2016-04-22","2020-04-22",3),
    -> ("M104","Dominic",56,"D Block",553456,"2017-04-22","2019-04-22",4),
    -> ("M105","Eugene",36,"E Block",553326,"2016-04-22","2019-04-22",5);
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

```
mysql> select * from city;
+---------+-----------+----------------+---------+------------+---------+-----------------+-------------+
| City_No | City_Name | State          | Country | Population | Airport | Railway_Station | total_mayors |
+---------+-----------+----------------+---------+------------+---------+-----------------+-------------+
|       1 | ABC       | Tamilnadu      | India   |      29987 | YES     | YES             |           1 |
|       2 | DEF       | Tamilnadu      | India   |    2873521 | YES     | YES             |           1 |
|       3 | GHI       | Tamilnadu      | India   |     287351 | NO      | YES             |           1 |
|       4 | XYZ       | Uttar Pradesh  | India   |       1233 | NO      | YES             |           1 |
|       5 | XUV       | Andhra Pradesh | India   |      87673 | YES     | YES             |           1 |
+---------+-----------+----------------+---------+------------+---------+-----------------+-------------+
5 rows in set (0.00 sec)
```

```
mysql> select * from mayor;
+----------+------------+-----+---------+--------+------------------+----------------+------+
| Mayor_ID | Mayor_Name | Age | Address | Phone  | Mayor_Start_Date | Mayor_End_Date | City |
+----------+------------+-----+---------+--------+------------------+----------------+------+
| M101     | Ajay       |  66 | A Block | 123456 | 2018-04-22       | 2019-04-22     |    1 |
| M102     | Bale       |  46 | B Block | 133456 | 2014-04-22       | 2019-04-22     |    2 |
| M103     | Carl       |  55 | C Block | 423456 | 2016-04-22       | 2020-04-22     |    3 |
| M104     | Dominic    |  56 | D Block | 553456 | 2014-04-22       | 2019-04-22     |    4 |
| M105     | Eugene     |  36 | E Block | 553326 | 2016-04-22       | 2019-04-22     |    5 |
+----------+------------+-----+---------+--------+------------------+----------------+------+
5 rows in set (0.00 sec)
```

SQL QUERIES

a

```
mysql>
mysql> select count(city_no) from City where state = "Tamilnadu";
+----------------+
| count(city_no) |
+----------------+
|              3 |
+----------------+
1 row in set (0.01 sec)
```

b

```
mysql> select * from mayor where city in (select city_no from city where state="Uttar Pradesh") and Mayor_Start_Date<="2015-01-01";
+----------+------------+-----+---------+--------+------------------+----------------+------+
| Mayor_ID | Mayor_Name | Age | Address | Phone  | Mayor_Start_Date | Mayor_End_Date | City |
+----------+------------+-----+---------+--------+------------------+----------------+------+
| M104     | Dominic    |  56 | D Block | 553456 | 2014-04-22       | 2019-04-22     |    4 |
+----------+------------+-----+---------+--------+------------------+----------------+------+
1 row in set (0.00 sec)
```

c

```
mysql> update city set Airport = "YES",Railway_Station = "YES" where state = "Andhra Pradesh";
Query OK, 0 rows affected (0.00 sec)
Rows matched: 1  Changed: 0  Warnings: 0

mysql> select * from city where state = "Andhra Pradesh";
+---------+-----------+----------------+---------+------------+---------+-----------------+--------------+
| City_No | City_Name | State          | Country | Population | Airport | Railway_Station | total_mayors |
+---------+-----------+----------------+---------+------------+---------+-----------------+--------------+
|       5 | XUV       | Andhra Pradesh | India   |      87673 | YES     | YES             |            1 |
+---------+-----------+----------------+---------+------------+---------+-----------------+--------------+
1 row in set (0.00 sec)
```

d

```
mysql> select state,count(city_no) from city group by state;
+----------------+----------------+
| state          | count(city_no) |
+----------------+----------------+
| Tamilnadu      |              3 |
| Uttar Pradesh  |              1 |
| Andhra Pradesh |              1 |
+----------------+----------------+
3 rows in set (0.00 sec)
```

PL/SQL PROGRAM

delimiter //

create trigger change_mayor_total

after insert on Mayor

for each row

update city set total_mayors = total_mayors+1;

end //

delimiter ;

insert into Mayor values ("M107","Faizal",66,"F Block",123451,"2018-04-22","2019-04-22",1);

```
mysql> insert into Mayor values ("M107","Faizal",66,"F Block",123451,"2018-04-22","2019-04-22",1);
Query OK, 1 row affected (0.02 sec)

mysql> select * from city where city_no=1;
+---------+-----------+-----------+---------+------------+---------+-----------------+--------------+
| City_No | City_Name | State     | Country | Population | Airport | Railway_Station | total_mayors |
+---------+-----------+-----------+---------+------------+---------+-----------------+--------------+
|       1 | ABC       | Tamilnadu | India   |      29987 | YES     | YES             |            2 |
+---------+-----------+-----------+---------+------------+---------+-----------------+--------------+
1 row in set (0.00 sec)
```