Date: 15/04/2024

Task

1. Create a table Customer with columns cid and cname. cid should be a primary key in the table and cname should be NOT NULL.

```
mysql> CREATE TABLE Customer (
    ->      cid INT PRIMARY KEY,
    ->      cname VARCHAR(255) NOT NULL
    -> );
Query OK, 0 rows affected (0.04 sec)
```

2. Insert three customer data into the table.

```
mysql> INSERT INTO Customer (cid, cname) VALUES
    -> (1, 'Customer 1'),
    -> (2, 'Customer 2'),
    -> (3, 'Customer 3');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

3. Add columns age, city and phnum. Age > 20, city default value should be 'Bangalore' and phnum should be unique.

```
mysql> ALTER TABLE Customer
    -> ADD COLUMN age INT CHECK (age > 20),
    -> ADD COLUMN city VARCHAR(255) DEFAULT 'Bangalore',
    -> ADD COLUMN phnum VARCHAR(255) UNIQUE;
Query OK, 3 rows affected (0.13 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

4. Turn on the transaction on.

```
mysql> START TRANSACTION;
Query OK, 0 rows affected (0.00 sec)
```

5. Insert another two customer data into the table without city value.

```
mysqt>
mysql> INSERT INTO Customer (cid, cname, age, city, phnum) VALUES
    -> (4, 'Customer 4', 25, 'Bangalore', '123-456-7890'),
    -> (5, 'Customer 5', 30, 'Bangalore', '098-765-4321');
Query OK, 2 rows affected (0.00 sec)
Records: 2  Duplicates: 0  Warnings: 0
```

6. Display data from the table.

```
mysqt>
mysql> SELECT * FROM Customer;
+-----+------------+------+-----------+--------------+
| cid | cname      | age  | city      | phnum        |
+-----+------------+------+-----------+--------------+
|   1 | Customer 1 | NULL | Bangalore | NULL         |
|   2 | Customer 2 | NULL | Bangalore | NULL         |
|   3 | Customer 3 | NULL | Bangalore | NULL         |
|   4 | Customer 4 |   25 | Bangalore | 123-456-7890 |
|   5 | Customer 5 |   30 | Bangalore | 098-765-4321 |
+-----+------------+------+-----------+--------------+
5 rows in set (0.00 sec)
```

7. Create a savepoint 'ins'.

```
mysql> SAVEPOINT ins;
Query OK, 0 rows affected (0.00 sec)
```

8. Update the first age of all the customers.

```
mysql> UPDATE Customer SET age = 25 WHERE cid IN (1, 2, 3);
Query OK, 3 rows affected (0.00 sec)
Rows matched: 3  Changed: 3  Warnings: 0
```

9. Display data from the table.

```
mysql> SELECT * FROM Customer;
+-----+------------+-----+-----------+--------------+
| cid | cname      | age | city      | phnum        |
+-----+------------+-----+-----------+--------------+
|   1 | Customer 1 |  25 | Bangalore | NULL         |
|   2 | Customer 2 |  25 | Bangalore | NULL         |
|   3 | Customer 3 |  25 | Bangalore | NULL         |
|   4 | Customer 4 |  25 | Bangalore | 123-456-7890 |
|   5 | Customer 5 |  30 | Bangalore | 098-765-4321 |
+-----+------------+-----+-----------+--------------+
5 rows in set (0.00 sec)
```

10.   Create savepoint 'up1';

```
mysql> SAVEPOINT up1;
Query OK, 0 rows affected (0.00 sec)
```

11.   Update all the customer's city of the first three customers.

```
mysql> UPDATE Customer SET city = 'Mumbai' WHERE cid IN (1, 2, 3);
Query OK, 3 rows affected (0.00 sec)
Rows matched: 3  Changed: 3  Warnings: 0
```

12.   Display data from the table.

```
mysql> SELECT * FROM Customer;
+-----+------------+-----+-----------+--------------+
| cid | cname      | age | city      | phnum        |
+-----+------------+-----+-----------+--------------+
|   1 | Customer 1 |  25 | Mumbai    | NULL         |
|   2 | Customer 2 |  25 | Mumbai    | NULL         |
|   3 | Customer 3 |  25 | Mumbai    | NULL         |
|   4 | Customer 4 |  25 | Bangalore | 123-456-7890 |
|   5 | Customer 5 |  30 | Bangalore | 098-765-4321 |
+-----+------------+-----+-----------+--------------+
5 rows in set (0.00 sec)
```

13. Create savepoint 'up2'.

```
mysql> SAVEPOINT up2;
Query OK, 0 rows affected (0.00 sec)
```

14. Roll back to up1.

```
mysql> ROLLBACK TO SAVEPOINT up1;
Query OK, 0 rows affected (0.00 sec)
```

15. Display data from the table.

```
mysql>
mysql> SELECT * FROM Customer;
+------+------------+------+-----------+--------------+
| cid  | cname      | age  | city      | phnum        |
+------+------------+------+-----------+--------------+
|    1 | Customer 1 |   25 | Bangalore | NULL         |
|    2 | Customer 2 |   25 | Bangalore | NULL         |
|    3 | Customer 3 |   25 | Bangalore | NULL         |
|    4 | Customer 4 |   25 | Bangalore | 123-456-7890 |
|    5 | Customer 5 |   30 | Bangalore | 098-765-4321 |
+------+------------+------+-----------+--------------+
5 rows in set (0.00 sec)
```

16. Commit.

```
mysql> COMMIT;
Query OK, 0 rows affected (0.01 sec)
```

17. Display data from the table.

```
mysql>
mysql> SELECT * FROM Customer;
+------+------------+------+-----------+--------------+
| cid  | cname      | age  | city      | phnum        |
+------+------------+------+-----------+--------------+
|    1 | Customer 1 |   25 | Bangalore | NULL         |
|    2 | Customer 2 |   25 | Bangalore | NULL         |
|    3 | Customer 3 |   25 | Bangalore | NULL         |
|    4 | Customer 4 |   25 | Bangalore | 123-456-7890 |
|    5 | Customer 5 |   30 | Bangalore | 098-765-4321 |
+------+------------+------+-----------+--------------+
5 rows in set (0.00 sec)
```

18. Turn off the transactions.

```
mysql> SET AUTOCOMMIT = 1;
Query OK, 0 rows affected (0.00 sec)
```