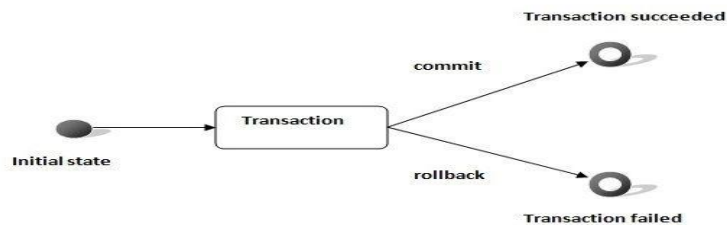# EXPERIMENT NO. 10

AIM:- Perform TCL Commands

OBJECTIVES :-Implementation TCL Commands

THEORY:-

TCL is abbreviation of **Transactional Control Language**. It is used to manage different transactions occurring within a database.

➢ COMMIT – Saves work done in transactions

➢ ROLLBACK – Restores database to original state since the last COMMIT command in transactions

➢ SAVE TRANSACTION – Sets a savepoint within a transaction

The following is diagram for transaction Control System

- **BEGIN:** To initiate a transaction.
- **COMMIT:** To save changes. After the commit command, the transaction can't rollback.
- **SAVEPOINT:** Provides points where the transaction can rollback to.

- **ROLLBACK**: To rollback to a previous saved state.

```
mysql> set autocommit=0;
Query OK, 0 rows affected (0.00 sec)

mysql> create table student(rollno int, name varchar(90),address varchar(90),mobile_no bigint);
Query OK, 0 rows affected (0.04 sec)

mysql> insert into student values(1,'archana kotangale','thane',9898989898);
Query OK, 1 row affected (0.00 sec)

mysql> insert into student values(2,'atharva bhaisare','mumbai',9090909090);
Query OK, 1 row affected (0.00 sec)

mysql> select * from student;
+--------+-------------------+---------+------------+
| rollno | name              | address | mobile_no  |
+--------+-------------------+---------+------------+
|      1 | archana kotangale | thane   | 9898989898 |
|      2 | atharva bhaisare  | mumbai  | 9090909090 |
+--------+-------------------+---------+------------+
2 rows in set (0.00 sec)

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

mysql> select * from student;
Empty set (0.00 sec)
```

```
mysql> set autocommit=0;
Query OK, 0 rows affected (0.00 sec)

mysql> create table student(rollno int, name varchar(90),address varchar(90),mobile_no bigint);
Query OK, 0 rows affected (0.04 sec)

mysql> insert into student values(1,'archana kotangale','thane',9898989898);
Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(2,'atharva bhaisare','mumbai',9090909090);
Query OK, 1 row affected (0.00 sec)

mysql> select * from student;
+--------+-------------------+---------+------------+
| rollno | name              | address | mobile_no  |
+--------+-------------------+---------+------------+
|      1 | archana kotangale | thane   | 9898989898 |
|      2 | atharva bhaisare  | mumbai  | 9090909090 |
+--------+-------------------+---------+------------+
2 rows in set (0.00 sec)

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

mysql> rollback;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from student;
+--------+-------------------+---------+------------+
| rollno | name              | address | mobile_no  |
+--------+-------------------+---------+------------+
|      1 | archana kotangale | thane   | 9898989898 |
|      2 | atharva bhaisare  | mumbai  | 9090909090 |
+--------+-------------------+---------+------------+
2 rows in set (0.00 sec)
```

```
mysql> insert into student values(1,'archana kotangale','thane',9898989898);
Query OK, 1 row affected (0.01 sec)

mysql> insert into student values(2,'atharva bhaisare','mumbai',9090909090);
Query OK, 1 row affected (0.00 sec)

mysql> select * from student;
+--------+-------------------+---------+------------+
| rollno | name              | address | mobile_no  |
+--------+-------------------+---------+------------+
|      1 | archana kotangale | thane   | 9898989898 |
|      2 | atharva bhaisare  | mumbai  | 9090909090 |
+--------+-------------------+---------+------------+
2 rows in set (0.00 sec)

mysql> savepoint A;
Query OK, 0 rows affected (0.00 sec)

mysql> insert into student values(3,'avnish patil','thane',9191919191);
Query OK, 1 row affected (0.00 sec)

mysql> insert into student values(4,'karan rathod','pune',9393929393);
Query OK, 1 row affected (0.00 sec)

mysql> rollback to savepoint A;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from student;
+--------+-------------------+---------+------------+
| rollno | name              | address | mobile_no  |
+--------+-------------------+---------+------------+
|      1 | archana kotangale | thane   | 9898989898 |
|      2 | atharva bhaisare  | mumbai  | 9090909090 |
+--------+-------------------+---------+------------+
2 rows in set (0.00 sec)
```

```
mysql> set autocommit=0;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from product;
+---------+-----------+-----------+------------+
| prod_id | prod_name | prod_cost | prod_price |
+---------+-----------+-----------+------------+
|      11 | TV        |     12000 |      15000 |
|      12 | AC        |     22000 |      25500 |
|      13 | Printer   |     16000 |      17000 |
+---------+-----------+-----------+------------+
3 rows in set (0.00 sec)

mysql> update product set prod_cost=25000 where prod_id=11;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from product;
+---------+-----------+-----------+------------+
| prod_id | prod_name | prod_cost | prod_price |
+---------+-----------+-----------+------------+
|      11 | TV        |     25000 |      15000 |
|      12 | AC        |     22000 |      25500 |
|      13 | Printer   |     16000 |      17000 |
+---------+-----------+-----------+------------+
3 rows in set (0.00 sec)

mysql> rollback;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from product;
+---------+-----------+-----------+------------+
| prod_id | prod_name | prod_cost | prod_price |
+---------+-----------+-----------+------------+
|      11 | TV        |     12000 |      15000 |
|      12 | AC        |     22000 |      25500 |
|      13 | Printer   |     16000 |      17000 |
+---------+-----------+-----------+------------+
3 rows in set (0.00 sec)
```

CONCLUSION :- hence studied TCL commands.