

## Assignment-5

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**Assignment 5:** Begin a transaction, perform a series of INSERTs into 'orders', setting a SAVEPOINT after each, rollback to the second SAVEPOINT, and COMMIT the overall transaction.

Orders Table:

```
mysql> select * from orders;
+-----+-----+-----+-----+
| order_id | customer_id | order_date | order_amount |
+-----+-----+-----+-----+
| 1 | 1 | 2025-01-01 | 150.00 |
| 2 | 1 | 2025-01-15 | 200.00 |
| 3 | 2 | 2025-01-10 | 300.00 |
| 4 | 4 | 2025-01-12 | 250.00 |
| 5 | 5 | 2025-01-20 | 100.00 |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

## Starting The Transaction By Inserting and making SavePoints:

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

mysql> INSERT INTO orders (customer_id, order_date, order_amount)
-> VALUES (1, '2025-01-25', 100.00);
Query OK, 1 row affected (0.00 sec)

mysql> SAVEPOINT savepoint1;
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO orders (customer_id, order_date, order_amount)
-> VALUES (2, '2025-01-26', 200.00);
Query OK, 1 row affected (0.00 sec)

mysql> SAVEPOINT savepoint2;
Query OK, 0 rows affected (0.00 sec)

mysql> INSERT INTO orders (customer_id, order_date, order_amount)
-> VALUES (3, '2025-01-27', 300.00);
Query OK, 1 row affected (0.00 sec)

mysql> SAVEPOINT savepoint3;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM orders;
+-----+-----+-----+-----+
| order_id | customer_id | order_date | order_amount |
+-----+-----+-----+-----+
| 1 | 1 | 2025-01-01 | 150.00 |
| 2 | 1 | 2025-01-15 | 200.00 |
| 3 | 2 | 2025-01-10 | 300.00 |
| 4 | 4 | 2025-01-12 | 250.00 |
| 5 | 5 | 2025-01-20 | 100.00 |
| 6 | 3 | 2025-01-22 | 250.00 |
| 7 | 1 | 2025-01-25 | 100.00 |
| 8 | 2 | 2025-01-26 | 200.00 |
| 9 | 3 | 2025-01-27 | 300.00 |
+-----+-----+-----+-----+
9 rows in set (0.00 sec)
```

- We have 9 records after creating the savepoints.

## ROLLING BACK to Savepoint2:

```
mysql> ROLLBACK TO savepoint2;
Query OK, 0 rows affected (0.00 sec)

mysql> SELECT * FROM orders;
+-----+-----+-----+-----+
| order_id | customer_id | order_date | order_amount |
+-----+-----+-----+-----+
| 1 | 1 | 2025-01-01 | 150.00 |
| 2 | 1 | 2025-01-15 | 200.00 |
| 3 | 2 | 2025-01-10 | 300.00 |
| 4 | 4 | 2025-01-12 | 250.00 |
| 5 | 5 | 2025-01-20 | 100.00 |
| 6 | 3 | 2025-01-22 | 250.00 |
| 7 | 1 | 2025-01-25 | 100.00 |
| 8 | 2 | 2025-01-26 | 200.00 |
+-----+-----+-----+-----+
8 rows in set (0.00 sec)

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

- After Rolled back to savepoint2, it removes that insert or it was roll back the savepoint2
- Then we got 8 records only.

## After Commit the orders table:

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

mysql> SELECT * FROM orders;
+-----+-----+-----+-----+
| order_id | customer_id | order_date | order_amount |
+-----+-----+-----+-----+
| 1 | 1 | 2025-01-01 | 150.00 |
| 2 | 1 | 2025-01-15 | 200.00 |
| 3 | 2 | 2025-01-10 | 300.00 |
| 4 | 4 | 2025-01-12 | 250.00 |
| 5 | 5 | 2025-01-20 | 100.00 |
| 6 | 3 | 2025-01-22 | 250.00 |
| 7 | 1 | 2025-01-25 | 100.00 |
| 8 | 2 | 2025-01-26 | 200.00 |
+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

