Assignment-4

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Assignment 4: Compose SQL statements to BEGIN a transaction, INSERT a new record into the 'orders' table, COMMIT the transaction, then UPDATE the 'products' table, and ROLLBACK the transaction.

Orders Table & Products Table:

```
mysql> select * from products;
+------------+--------------+----------------+--------+
| product_id | product_name | stock_quantity | price  |
+------------+--------------+----------------+--------+
|          1 | Product A    |             50 | 10.00  |
|          2 | Product B    |            100 | 20.00  |
|          3 | Product C    |            150 | 30.00  |
+------------+--------------+----------------+--------+
3 rows in set (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 |
+----------+-------------+------------+--------------+
5 rows in set (0.00 sec)
```

Begin Transaction and Insert a New Record into orders:

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

mysql> INSERT INTO orders (customer_id, order_date, order_amount)
    -> VALUES (3, '2025-01-22', 250.00);
Query OK, 1 row 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 |
+----------+-------------+------------+--------------+
6 rows in set (0.00 sec)

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

Begin Another Transaction, Update products, and Rollback:

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

mysql> UPDATE products
    -> SET stock_quantity = stock_quantity - 10
    -> WHERE product_id = 1;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM products;
+------------+--------------+----------------+--------+
| product_id | product_name | stock_quantity | price  |
+------------+--------------+----------------+--------+
|          1 | Product A    |             40 |  10.00 |
|          2 | Product B    |            100 |  20.00 |
|          3 | Product C    |            150 |  30.00 |
+------------+--------------+----------------+--------+
3 rows in set (0.00 sec)

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

mysql> SELECT * FROM products;
+------------+--------------+----------------+--------+
| product_id | product_name | stock_quantity | price  |
+------------+--------------+----------------+--------+
|          1 | Product A    |             50 |  10.00 |
|          2 | Product B    |            100 |  20.00 |
|          3 | Product C    |            150 |  30.00 |
+------------+--------------+----------------+--------+
3 rows in set (0.00 sec)
```