Day 10:

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.

ANSWER:

Below are the SQL statements to achieve the described operations:

1. Begin a transaction.

2. Insert a new record into the `orders` table.

3. Commit the transaction.

4. Begin a new transaction.

5. Update the `products` table.

6. Rollback the transaction.

SQL Statements

```
-- Begin the first transaction
BEGIN TRANSACTION;

-- Insert a new record into the 'orders' table
INSERT INTO orders (order_id, customer_id, order_date, total_amount)
VALUES (101, 1, '2024-05-15', 250.00);

-- Commit the first transaction
COMMIT;

-- Begin the second transaction
BEGIN TRANSACTION;

-- Update the 'products' table
UPDATE products
SET stock_quantity = stock_quantity - 10
WHERE product_id = 5;

-- Rollback the second transaction
ROLLBACK;
```

Explanation 1.

Begin the first transaction:

BEGIN TRANSACTION;

This starts a new transaction.

2. Insert a new record into the 'orders' table:

INSERT INTO orders (order_id, customer_id, order_date, total_amount) VALUES (101, 1, '2024-05-15', 250.00);

This statement inserts a new record into the `orders` table. Adjust the values as needed.

3. Commit the first transaction:

COMMIT;

This commits all the changes made in the current transaction, making them permanent.

4. Begin the second transaction:

BEGIN TRANSACTION;

This starts a new transaction.

5. Update the 'products' table:

UPDATE products SET

stock_quantity = stock_quantity - 10

WHERE product_id = 5;

This statement updates the `products` table by decrementing the `stock_quantity` for a specific product. Adjust the `product_id` and the decrement value as needed.

6. Rollback the second transaction:

ROLLBACK;

This undoes all the changes made in the current transaction, reverting the `products` table back to its previous state before the update. These commands ensure that the first transaction (inserting into `orders`) is committed, while the second transaction (updating `products`) is rolled back.