**Assignment 12**

**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.**

**Assumptions**

* The orders table has columns: order\_id, customer\_id, order\_date, and total\_amount.

**SQL Statements**

**-- Begin the transaction**

BEGIN;

**-- Insert a new record into the orders table and set the first SAVEPOINT**

INSERT INTO orders (order\_id, customer\_id, order\_date, total\_amount)

VALUES (101, 1, '2024-05-23', 250.00);

SAVEPOINT savepoint1;

**-- Insert another record into the orders table and set the second SAVEPOINT**

INSERT INTO orders (order\_id, customer\_id, order\_date, total\_amount)

VALUES (102, 2, '2024-05-24', 150.00);

SAVEPOINT savepoint2;

**-- Insert another record into the orders table and set the third SAVEPOINT**

INSERT INTO orders (order\_id, customer\_id, order\_date, total\_amount)

VALUES (103, 3, '2024-05-25', 300.00);

SAVEPOINT savepoint3;

**-- Rollback to the second SAVEPOINT**

ROLLBACK TO savepoint2;

**-- Commit the overall transaction**

COMMIT;

**Explanation**

* BEGIN: Starts a new transaction.
* INSERT INTO orders: Adds a new record to the orders table.
* SAVEPOINT savepoint1: Creates a savepoint named savepoint1 after the first insert.
* INSERT INTO orders: Adds another new record to the orders table.
* SAVEPOINT savepoint2: Creates a savepoint named savepoint2 after the second insert.
* INSERT INTO orders: Adds a third new record to the orders table.
* SAVEPOINT savepoint3: Creates a savepoint named savepoint3 after the third insert.
* ROLLBACK TO savepoint2: Rolls back the transaction to savepoint2, undoing the third insert but keeping the first and second inserts intact.
* COMMIT: Commits the transaction, making the first two inserts permanent while the third insert is discarded due to the rollback.

This sequence ensures that the first two INSERT operations are saved in the database, while the third one is undone by rolling back to savepoint2. The final COMMIT confirms the transaction up to the state after the second savepoint.