Objective:

To write a MySQL stored procedure using Cursor and Control Structure to merge new roll call data

from N_Roll_Call table into O_Roll_Call table, skipping duplicate records.

```sql
-- Step 1: Create Database
CREATE DATABASE RollCallDB;
USE RollCallDB;


-- Step 2: Create Tables
CREATE TABLE O_Roll_Call (
    roll_no INT PRIMARY KEY,
    name VARCHAR(50)
);


CREATE TABLE N_Roll_Call (
    roll_no INT,
    name VARCHAR(50)
);


-- Step 3: Insert Sample Data
INSERT INTO O_Roll_Call VALUES
(1, 'Shruti'),
(2, 'Amit'),
(3, 'Riya');


INSERT INTO N_Roll_Call VALUES
(2, 'Amit'),
(3, 'Riya'),
(4, 'Meena'),
(5, 'Sahil');


-- Step 4: Create Stored Procedure
DELIMITER //
CREATE PROCEDURE MergeRollCall()
BEGIN
    DECLARE v_roll INT;
    DECLARE v_name VARCHAR(50);
    DECLARE done INT DEFAULT 0;

    DECLARE c1 CURSOR FOR SELECT roll_no, name FROM N_Roll_Call;
```

```
        DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1;


    OPEN c1;


    read_loop: LOOP
        FETCH c1 INTO v_roll, v_name;
        IF done = 1 THEN
            LEAVE read_loop;
        END IF;


        IF NOT EXISTS (SELECT 1 FROM O_Roll_Call WHERE roll_no = v_roll) THEN
            INSERT INTO O_Roll_Call (roll_no, name)
            VALUES (v_roll, v_name);
        END IF;
    END LOOP;


    CLOSE c1;
    SELECT 'Data merged successfully!' AS message;
END //
DELIMITER ;


-- Step 5: Execute Procedure
CALL MergeRollCall();


-- Step 6: Verify Result
SELECT * FROM O_Roll_Call;
```

Viva Questions

Viva Questions:
1. What is a cursor in MySQL?
2. What is the difference between implicit and explicit cursors?
3. Can MySQL have parameterized cursors?
4. What is the use of the NOT FOUND handler in cursors?
5. Why is DELIMITER // used in stored procedures?
6. How can you avoid inserting duplicate records when merging data?
7. What is the difference between LEAVE and ITERATE in loops?
8. What is the use of IF NOT EXISTS in SQL?