Task 4: Independent and correlated Nested Queries

Aim: To implement and understand Nested Queries in SQL, including Independent and correlated Subqueries, with practical examples in a university database scenario.

Procedure

1. Create required tables (eg, customer ID, Customer name, Email, Address).

2. Insert sample data.

3. Write and execute Independent nested queries.

4. Write and execute correlated nested queries.

5. Observe and analyse the differences in execution and results.

1. Idependent (simple) Nested Queries

Syntax:

SELECT column_list

FROM table

WHERE column OPERATOR (SELECT column FROM table WHERE condition);

Eg 1:- Independent Nested Query

SELECT customer name FROM customer WHERE customer ID = (
    SELECT customer ID FROM customer WHERE customer name = 'Rohan');

Output:

Rohan

Ram

2. Correlated Nested Queries.

Syntax:

SELECT column_list FROM table 1 t1 WHERE EXISTS (SELECT 1
FROM table 2 t2 WHERE condition involving t1.column = t2.column);

eg: 2 Correlated Nested Query

SELECT c. customer Name FROM customer c WHERE EXISTS (SELECT 1
FROM Enrollments e WHERE e.customerID = c.customerID);

Output:

Rahul

Ram

Suresh

Ravi

Result: The Implementation of Independent and
correlated Nested Queries are executed successfully.