Task 4: Independent and Correlated nested Queries

Aim: To Implement and Understand nested queries in SQL, including independent and correlated subqueries.

Procedure:

1. Create required tables

2. Insert sample data

3. write and execute independent nested Queries

4. write and executed correlated nested queries

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

Types of Nested Queries:

1. Independent (simple) nested Queries

syntax:

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

Example 1: Independent Nested Query

pat id	pat name	dept	bill amount
101	Alice	cardiology	5000
102	Bob	oncology	7500
103	Carol	cardiology	6000
104	David	orthopedic	8200

query:

SELECT "pat name"
FROM patients
WHERE dept = (
        SELECT dept
        FROM patients
        WHERE "pat name" = 'Alice'
)

O/:

Alice
Carol

2. Correlated Nested Queries
Syntax:
SELECT column_list
FROM table1 t1
WHERE EXISTS (
        SELECT
        FROM table2 t2
        WHERE condition involving t1.column = t2.colu

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Example 2: correlated nested query

pat id	Pat name	dept
101	Alice	cardiology
102	Bob	oncology
103	carol	cardiology

bill id	Pat id	bill amount
1	101	5000
2	102	300
3	103	6000

Query:

```
SELECT p."pat name"
FROM patients p
WHERE EXISTS(
    SELECT 1
    FROM bills b
    WHERE b."pat id" = p."pat id"
```

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Alice
carol

RESULT: Thg, the correlated nested queried in SQL successfully