

DATE 8/9/25
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

PROCEDURE:

1. Create required tables
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

EXPLANATION

A Nested query (subquery) is a query written inside another query

Types of Nested Queries

- The inner query runs once independently of the outer query
- The result of the inner query

is passed to the outer query

Syntax:

SELECT column_list

FROM table

WHERE column. OPERATOR (SELECT column

FROM table WHERE condition);

1. Independent Nested Query :-

SELECT student Name

FROM students

WHERE DeptID = (

SELECT DeptID

FROM Students

WHERE studentName = 'Alice'

);

OUTPUT

Alice

charlie

2. correlated Nested queries

- The inner query is executed repeatedly

Syntax:

SELECT column_list

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

Example : Correlated Query

```
SELECT s.StudentName  
FROM students  
WHERE EXISTS (
```

```
  SELECT 1  
  FROM Enrollment e  
  WHERE e.StudentID = s.StudentID  
);
```

output.

Alice

Bob

Charlie

David

VEL TECH	
EX No.	4
PERFORMANCE (5)	3
RESULT AND ANALYSIS (5)	3
VIVA VOCE (5)	4
RECORD (5)	1
TOTAL (20)	14
SIGN WITH DATE	

3/9/23

Result: The Independent and correlated Nested queries are executed successfully.