

TASK-4.1: Study of nested queries

* A nested query (subquery) is a query written inside another query. It is used when the result of one query is needed by another.

Types of nested queries:-

1. single-row subquery - Returns one value.

Example:- Find employees with salary above the average salary.

```
SELECT EmpName, salary
FROM Employee
WHERE salary > (SELECT AVG(salary) FROM Employee);
```

2. Multi-row subquery - returns multiple values.

Example: Find employees who are in the same dept as

"Alice Johnson".

```
SELECT EmpName, Dept
FROM Employee
WHERE Dept IN (SELECT Dept FROM Employee WHERE EmpName = 'Alice Johnson');
```

3. Nested with IN/ANY/ALL operators:-

```
SELECT EmpName, salary
FROM Employee
WHERE salary > ANY(SELECT salary FROM Emp WHERE Dept = 'HR');
```

4. correlated subquery:- Inner query depends on outer query

```
SELECT EmpName, Dept, salary
FROM Employee
WHERE salary > (SELECT AVG(salary)
FROM Employee
WHERE Dept = e.Dept);
```

4.2 - performing query processing using nested queries

1. Find employees with the highest salary:

```
SELECT EmpName, salary
FROM Employee
WHERE salary = (SELECT MAX(salary) FROM Employee);
```

2. Find employees who joined after bob smith:-

```
SELECT EmpName, joiningdate
FROM Employee
WHERE joiningdate > (SELECT joiningdate FROM Employee WHERE EmpName = 'Bob Smith');
```

3. Find employees who earn more than the average salary of IT department.

```
SELECT EmpName, Dept, salary
FROM Employee
WHERE salary > (SELECT AVG(salary) FROM Employee WHERE Dept = 'IT');
```

4. Find employees from dept that have more than 2 emp:

```
SELECT EmpName, Dept
FROM Employee
WHERE Dept IN (SELECT Dept FROM Employee GROUP BY Dept HAVING count(*) > 2);
```

5. Find employees working in the same city as 'David Brown'.

```
SELECT EmpName, city
FROM Employee
WHERE city = (SELECT city FROM Employee WHERE EmpName = 'David Brown');
```

Result:-

Hence the performing query processing using nested queries are successfully verified.

VEL TECH - CSE	
EX NO.	4
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	15
GN WITH DATE	15/7/25