Ex no: 05	Subquery & Correlated Subquery
Date	13/02/2024

Aim:

To understand the concept of subqueries and correlated subqueries, their syntax, types, and usage in solving various types of problems in SQL.

Description:

Subqueries:

Subqueries are SQL queries embedded within another SQL statement. They are used to perform queries that depend on the result of another query. The primary purpose of subqueries is to simplify complex queries by breaking them down into smaller, more manageable parts. Subqueries execute independently and return a result set that can be used by the outer query.

Types of Subqueries:

1. Single-row subqueries: Return only one row and use single-row comparison operators.
2. Multiple-row subqueries: Return more than one row and use multiple-row comparison operators.

Single-row subquery:

```
SELECT last_name, job_id, salary
FROM employees
WHERE job_id = (SELECT job_id FROM employees WHERE employee_id = 141)
AND salary > (SELECT salary FROM employees WHERE employee_id = 143);
```

Multiple-row subquery:

```
SELECT employee_id, last_name, job_id, salary
FROM employees
WHERE salary < ANY (SELECT salary FROM employees WHERE job_id =
'IT_PROG')
AND job_id <> 'IT_PROG';
```

Correlated Subqueries:

Correlated subqueries are a type of subquery where the inner query references values from the outer query. Unlike regular subqueries, correlated subqueries execute once for each row processed by the outer query. They are used when the result of the inner query depends on the row being processed by the outer query.

Query:

```
SELECT last_name, salary
FROM employees e WHERE salary > ( SELECT AVG(salary)FROM employees
WHERE department_id = e.department_id );
```