

# SQL SUB QUERIES

# Sub Queries

A Subquery or Inner query or Nested query is a query within another SQL query, and embedded within the WHERE clause.

A subquery is used to return data that will be used in the main query as a condition to further restrict the data to be retrieved

There are a few rules that subqueries must follow:

- Subqueries must be enclosed within parentheses.
- A subquery can have only one column in the SELECT clause.
- An ORDER BY cannot be used in a subquery, although the main query can use an ORDER BY.
- Subqueries that return more than one row can only be used with multiple value operators, such as the IN operator.
- The BETWEEN operator cannot be used with a subquery; however, the BETWEEN can be used within the subquery.

# Simple Sub Queries

Subqueries are most frequently used with the SELECT statement. The basic syntax is as follows:

```
SELECT column_EID [, column_EID ]  
FROM  table1 [, table2 ]  
WHERE column_EID OPERATOR  
(SELECT column_EID [, column_EID ]  
FROM table1 [, table2 ]  
[WHERE])
```

***Note: Although Subqueries are commonly used with Select statement, these can also be used with Insert, Update or Delete Statements***

# Correlated Sub Queries

There are ways to incorporate the outer query's values into the subquery's clauses. These types of queries are called correlated subqueries, since the results from the subquery are connected, in some form, to values in the outer query. Correlated queries are sometimes called synchronized queries.

Eg:

Corelatted sub query for average salary of those delhi employees whose salary is >100000

```
select avg(salary) from emp_sal  
where eid in (select eid from emp where city='Delhi') and  
eid in (select eid from emp_sal where salary > 100000);
```

# SQL EXISTS Operator

- The EXISTS operator is used to test for the existence of any record in a subquery.
- The EXISTS operator returns true if the subquery returns one or more records.

```
SELECT column_EID(s)  
FROM table_EID  
WHERE EXISTS  
(SELECT column_EID FROM table_EID WHERE condition);
```

# ASSIGNMENT



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A-1 : EID, NAME, CITY OF GURGAON EMPLOYEES

A-2 : EID, NAME , DOJ ,DEPT, DESI & SALARY OF ALL MANAGERS

A-3: REDUCE THE SALARY OF ALL DELHI EMPLOYEES BY 10%.

A-4 : DISPLAY THE EID, NAME , CITY, DOJ ,DEPT, DESI & SALARY OF THE TEAM MEMBERS OF DAVID & RAMESH GUPTA.

A-5: CREATE A TRAINING TABLE CONTAINING EID, NAME, DEPT. INSERT THE DETAILS OF OPS TEAM MEMBERS IN THE TRAINING TABLE.

A-6: DETAILS OF DIRECTORS SHOULD BE DELETED FROM THE TRAINING TABLE.

A-7: DISPLAY THE SALARY DETAILS OFF ALL EMPLOYES IF ANY OF THE TEAM MEMBER HAS SALARY MORE THAN 200000.