**SUB QUERY**

A query written inside another query is known as **sub query.**

**Working principle:**

Diagram ( ref notes)

1. Let us consider 2 queries i.e. Inner query and Outer query respectively.
2. The inner query starts the execution and generates an output.
3. The output generated by the inner query is given as an input to the outer query.
4. The outer query generates the result.
5. Therefore we can state that the outer query is dependent on the inner query.

**When do we use sub query /why sub query?**

**Condition1:** Whenever we have unknown in the queries we write a sub query to find the unknown.

Ex: WAQTD details of the employees who are earning salary less than **Jones.**

Select \* from emp

Where sal < (select sal from emp

Where ename = ‘JONE’);

1. WAQTD name and deptno of the employees working in the designation same as miller.
2. WAQTD number of employees working in the same department as clark.
3. WAQTD name and salary of all the employees if the employee’s salary is equal to TURNER salary.

**NOTE:**

* **In sub query we can only select a single column name.**

**Ex:** select ename from emp

Where deptno > (select sal,deptno,ename -- >**invalid**

From emp

Where ename=’JONES’);

* **The data type of the operators must be similar.**

**Ex:** dno = dno ---- > valid

Dno = ename ---- > invalid

1. WAQTD details of all the employees hired before king.
2. WAQTD name,sal,dno of all the employees if the employees are earning salary less than KING and working in the dept 20.
3. WAQTD details of the employees earning less than king and working as clerk.
4. WAQTD ename and sal of the employees earning commission and sal less than Allen
5. WAQTD ename,sal, empno for all the employees hired after Smith and before Blake.
6. WAQTD details of the employees hired before Scott into the same department as Ward.
7. WAQTD all the details of employees if employees designation is same Miller’s designation and emp works in deptnum 10 or 20
8. WAQTD number of employees earning more than Blake in deptnum 30.