

# *Purpose of Sub query*

*Sub query is needed when it takes more than a single step to reach the answer.*

*I need to REFER some other Data*

<i>RNO</i>	<i>CNAME</i>	<i>AGE</i>	<i>LOC</i>	<i>CHANNEL</i>	<i>LOOK</i>
<i>101</i>	<i>PRIYA</i>	<i>14</i>	<i>CHN</i>	<i>POGO</i>	<i>CUTE</i>
<i>102</i>	<i>JOHN</i>	<i>12</i>	<i>MUM</i>	<i>NEO</i>	<i>CALM</i>
<i>103</i>	<i>SACHIN</i>	<i>13</i>	<i>CAL</i>	<i>NEO</i>	<i>ACTIVE</i>
<i>104</i>	<i>ISHA</i>	<i>14</i>	<i>DEL</i>	<i>NDTV</i>	<i>SERIOUS</i>
<i>105</i>	<i>SUNIL</i>	<i>10</i>	<i>CHN</i>	<i>POGO</i>	<i>LOVABLE</i>

<i>RNO</i>	<i>PNAME</i>	<i>JOB</i>	<i>DEGREE</i>	<i>SAL</i>
<i>101</i>	<i>NEHA</i>	<i>DBA</i>	<i>BA</i>	<i>10000</i>
<i>102</i>	<i>AJAY</i>	<i>DEV</i>	<i>BSC</i>	<i>30000</i>
<i>103</i>	<i>ANIL</i>	<i>DBA</i>	<i>BCA</i>	<i>50000</i>
<i>104</i>	<i>TABU</i>	<i>DOC</i>	<i>MBBS</i>	<i>25000</i>
<i>105</i>	<i>ARJUN</i>	<i>DOC</i>	<i>MBBS</i>	<i>20000</i>

*I would like to know name ,look,age,Rno  
of kids whose father's job is Developer*

*Select cname,look,age, Rno from kids*

*Where Rno in*

*(select Rno from parents where job='DEV')*

<i>102</i>	<i>JOHN</i>	<i>12</i>	<i>CALM</i>
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<b><i>DNO</i></b>	<b><i>DNAME</i></b>	<b><i>LOCATION</i></b>
<i>10</i>	<i>ACCOUNTING</i>	<i>NEW YORK</i>
<i>20</i>	<i>RESEARCH</i>	<i>DALLS</i>
<i>30</i>	<i>SALES</i>	<i>CHICAGO</i>
<i>40</i>	<i>OPERATIONS</i>	<i>BOSTON</i>

<i><b>ENO</b></i>	<i><b>ENAME</b></i>	<i><b>JOB</b></i>	<i><b>SAL</b></i>	<i><b>DNO</b></i>
7369	SMITH	CLERK	800	20
7499	ALLEN	SALESMAN	1600	30
7521	WARD	SALESMAN	1250	30
7566	JONES	MANAGER	2975	20
7654	MARTIN	SALESMAN	1250	30
7698	BLAKE	MANAGER	2850	30
7782	CLARK	MANAGER	2450	10
7788	SCOTT	ANALYST	3000	20
7839	KING	PRESISDENT	5000	10
7844	TURNER	SALESMAN	1500	30
7876	ADAMS	CLERK	1100	20
7900	JAMES	CLERK	950	30
7902	FORD	ANALYST	3000	20
7934	MILLER	CLERK	1300	10

*select empno,ename,job,sal,deptno from emp*

*where deptno in*

*(select deptno from dept where  
location='CHICAGO')*



*select empno,ename,job,sal,deptno from  
emp where deptno in  
(select deptno from dept where  
location='CHICAGO')*

<b>30</b>	<b>SALES</b>	<b>CHICAGO</b>
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<b>7499</b>	<b>ALLEN</b>	<b>SALESMAN</b>	<b>1600</b>	<b>30</b>
7521	WARD	SALESMAN	1250	30
<b>7654</b>	<b>MARTIN</b>	<b>SALESMAN</b>	<b>1250</b>	<b>30</b>
7698	BLAKE	MANAGER	2850	30
<b>7844</b>	<b>TURNER</b>	<b>SALESMAN</b>	<b>1500</b>	<b>30</b>
<b>7900</b>	<b>JAMES</b>	<b>CLERK</b>	<b>950</b>	<b>30</b>

```
Select ename, deptno from  
    (select ename, deptno from emp  
      where job = 'CLERK' )  
where    deptno > 20;
```

*Sub query on from clause — **Inline view***

```
select ename,  
       (select max(sal) from emp)  
       "maxsal",  
       sal,  
       ((select max(sal) from emp ) - sal )  
       "difference" from emp;
```

*Sub query on select clause --- **Scalar sub query***

## *1. Sub query*

*The sub query appears in the WHERE clause*

## *2. Inline View*

*The sub query appears in the FROM clause*

## *3. Scalar Sub query*

*The sub query appears in the SELECT clause*

## *Simple Sub query*

*A simple sub query is evaluated **once only** for each table.*

## *Correlated Sub query*

*A correlated sub query is evaluated **once for each row**.*

## Correlated Sub query

A correlated sub query is evaluated **once for each row**.

```
select ename ,sal ,deptno from emp a where  
    a.sal < (select avg(sal) from emp b  
              where a.deptno = b.deptno)  
order by deptno;
```