

Query: List the Lname of emp who earns the maximum salary.

Boss	55000
------	-------

1) select Lname, max(sal)
from Emp; X Smith 55000

2) select Lname, max(sal)
from Emp
where salary = max(sal); X
having salary = max(sal); X

3) select Lname, max(sal)
from Emp
Group By SSN X
HAVING max(salary);

4) select LName, salary
from Emp
where SALARY IN =
(select max(salary) from Emp); ✓

Query: List the dept # of emp who earns min salary.

select dno
from Emp
where salary =

(select min(salary) from Emp);

Query: Now select the Lname of emp that are in the dept where sal = min(salary).

Select Lname
from Emp
where Dno IN
(select Dno
from Emp
where salary =
(select min(salary) from Emp));

Query 1: For each department, retrieve the Dno & the # of emp who earn > 40000.

Dno	Count(*)
4	1

Select Dno, Count(*)
from Emp
where salary > 40000
Group by Dno;

HAVING count(*) > 1;

empty set

Query 2: For each dept with >1 emp,
retrieve Dno & the number of emp who
earn > 40000 .

Dno	Count(*)
4	1

```

Select E.Dno, Count(*)
from Emp E
where E.Salary > 40000
AND EXIST
(Select *
from Emp E1
where E.Dno = E1.Dno
Group by E1.Dno
HAVING count(*) > 1)
Group by E.Dno;
  
```

```

AND E.Dno IN
(Select E1.Dno
from Emp E1
Group by E1.Dno
having count(*) > 1)
  
```

Query: For every department with >1 emp
earning < 30000 , list the # of emp.

Dno	Count(*)
4	3

```

select Dno, Count(*)
from Emp E
where E.Dno IN
(Select E1.Dno
 from Emp E1
 where E1.Salary < 30000
 Group by E1.Dno
 HAVING Count(*) > 1)
Group by E.Dno;

```

ALL

```

select Lname, Fname
from Emp
where Salary >
(Select max(Salary) from Emp where Dno=5)

```

```

select Lname, Fname
from Emp
where Salary >
ALL (Select Salary from Emp where Dno=5)

```

ROLL UP

```

select Dno, Sum(Salary), Avg(Salary)

```

from Emp
 Group By Dno
 with ROLLUP;

Dept Dno	Sum	Avg
1	55000	55000
4	93000	31000
5	133000	33250
NULL	281000	35125
summary	281000	35125

select IFNULL(Dno, 'summary') AS dept, sum(sal), Avg(sal)
 from Emp
 Group by Dno
 with ROLLUP;

select Dno, SSN,
 sum(salary) OVER() AS GrandTotal,
 sum(salary) OVER(Partition by Dno) AS DeptTotal
 from Emp;

Dno	SSN	GrandTotal	DeptTotal
1	8886	281000	55000
4	9876	281000	93000

4	9879	281000	93000
4	9998	281000	93000
5	1234	281000	133000
5	3334	281000	133000
5	4534	281000	133000
5	6668	281000	133000

x — x — x

```

Select Dname, Dlocation
from Dept left join DeptLocation
on Dept.Dnumber = DeptLoc.Dnumber;

```

```

Select Dname, Dlocation
from Dept Left Join DeptLocation
using (Dnumber);

```