数据表：  
dept:

**deptno(primary key), dname, loc**  
emp:

**empno(primary key), ename, job, mgr(references emp(empno)), sal,**

**deptno(references dept(deptno))**

1 列出emp表中各部门的部门号，最高工资，最低工资  
select max(sal) as 最高工资,min(sal) as 最低工资,deptno from emp group by deptno;

2 列出emp表中各部门job为'CLERK'的员工的最低工资，最高工资  
select max(sal) as 最高工资,min(sal) as 最低工资,deptno as 部门号 from emp where job = 'CLERK' group by deptno;

3 对于emp中最低工资小于1000的部门，列出job为'CLERK'的员工的部门号，最低工资，最高工资  
select max(sal) as 最高工资,min(sal) as 最低工资,deptno as 部门号 from emp as b  
where job='CLERK' and 1000>(select min(sal) from emp as a where a.deptno=b.deptno) group by b.deptno

4 根据部门号由高而低，工资由低而高列出每个员工的姓名，部门号，工资  
select deptno as 部门号,ename as 姓名,sal as 工资 from emp order by deptno desc,sal asc

5 写出对上题的另一解决方法  
（请补充）

6 列出'张三'所在部门中每个员工的姓名与部门号  
select ename,deptno from emp where deptno = (select deptno from emp where ename = '张三')

7 列出每个员工的姓名，工作，部门号，部门名  
select ename,job,emp.deptno,dept.dname from emp,dept where emp.deptno=dept.deptno

8 列出emp中工作为'CLERK'的员工的姓名，工作，部门号，部门名  
select ename,job,dept.deptno,dname from emp,dept where dept.deptno=emp.deptno and job='CLERK'

9 对于emp中有管理者的员工，列出姓名，管理者姓名（管理者外键为mgr）  
select a.ename as 姓名,b.ename as 管理者 from emp as a,emp as b where a.mgr is not null and a.mgr=b.empno

10 对于dept表中，列出所有部门名，部门号，同时列出各部门工作为'CLERK'的员工名与工作  
select dname as 部门名,dept.deptno as 部门号,ename as 员工名,job as 工作 from dept,emp   
where dept.deptno \*= emp.deptno and job = 'CLERK'

11 对于工资高于本部门平均水平的员工，列出部门号，姓名，工资，按部门号排序  
select a.deptno as 部门号,a.ename as 姓名,a.sal as 工资 from emp as a  
where a.sal>(select avg(sal) from emp as b where a.deptno=b.deptno) order by a.deptno

12 对于emp，列出各个部门中平均工资高于本部门平均水平的员工数和部门号，按部门号排序  
select count(a.sal) as 员工数,a.deptno as 部门号 from emp as a  
where a.sal>(select avg(sal) from emp as b where a.deptno=b.deptno) group by a.deptno order by a.deptno

13 对于emp中工资高于本部门平均水平，人数多与1人的，列出部门号，人数，按部门号排序  
select count(a.empno) as 员工数,a.deptno as 部门号,avg(sal) as 平均工资 from emp as a  
where (select count(c.empno) from emp as c where c.deptno=a.deptno and c.sal>(select avg(sal) from emp as b where c.deptno=b.deptno))>1  
group by a.deptno order by a.deptno

14 对于emp中低于自己工资至少5人的员工，列出其部门号，姓名，工资，以及工资少于自己的人数  
select a.deptno,a.ename,a.sal,(select count(b.ename) from emp as b where b.sal<a.sal) as 人数 from emp as a  
where (select count(b.ename) from emp as b where b.sal<a.sal)>5