```sql
# Practice - 3
create database emptest;
use emptest;

SET FOREIGN_KEY_CHECKS=0;
create table Emp(Eno int, Ename varchar(30), Job varchar(20), Salary int, Dno int, Grade
varchar(5), primary key(Eno), foreign key(Dno) references Dept(Dno));
create table Dept(Dno int, Dname varchar(30), Location varchar(20), primary key(Dno));
create table GradeSalary(Gid varchar(5), Lowsal int, Highsal int, primary key(Gid));

# add foreign key
alter table Emp add foreign key(Grade) references GradeSalary(Gid);

insert into Dept values (10, 'Banking', 'Chennai');
insert into Dept values (20, 'IT', 'Bangalore');
insert into Dept values (30, 'Finance', 'Delhi');
insert into Dept values (40, 'HR', 'Hydrabad');

insert into GradeSalary values('a', 50000, 99999);
insert into GradeSalary values('b', 100000, 149999);
insert into GradeSalary values('c', 149999, 199999);
insert into GradeSalary values('d', 200000, 250000);

insert into Emp values(1, 'Alice', 'Manager', 150000, 20, 'c');
insert into Emp values(2, 'Bob', 'Manager', 100000, 30, 'b');
insert into Emp values(3, 'Cindy', 'Programmer', 200000, 20, 'd');
insert into Emp values(4, 'Sam', 'Clerk', 50000, 10, 'a');
insert into Emp values(5, 'Eric', 'Clerk', 50000, 30, 'a');

#1 List all department having atleat one employee.
select Dname from Dept where  Dno in (select Dno from Emp);

#2 List all department having no employee.
select Dname from Dept where  Dno not in (select Dno from Emp);

#3 list all employee getting salary more than "Bob"
select Ename from Emp where Salary > (select Salary from Emp where Ename = 'Bob');

#4 list the employee names who do the same job as "Bob"
select Ename from Emp where Job = (select Job from Emp where Ename = 'Bob');

#5 list the name and salary of all employees whose salary is grater than all employee
working in department 30
select Ename, Salary from Emp where Salary > (select sum(Salary) from Emp where Dno = 30);

#6 list Lowsal of all employee where grade is same as that of "Bob"
select Lowsal from GradeSalary where Gid = (select Grade from Emp where Ename = 'Bob');

#7 list department name of employee havng highest salary
select Dname from Dept where Dno = (select Dno from Emp where Salary = (select max(Salary)
from Emp));

#8 list average salary of employees in It department
select avg(Salary) from Emp where Dno = (select Dno from Dept where Dname = 'IT');

#9 list the details of all employees and programemrs of IT department whose salary is >=
150000
select * from Emp where Job in ('Manager' , 'Programmer') and Salary >= 150000 and Dno =
(select Dno from Dept where Dname = 'IT');

#10 retrieve name and job of employyes in the IT department listed in the order of name
select Ename, Job from Emp where Dno = (select Dno from Dept where Dname = 'IT') order by
Ename;

#11 List the name of employees having salary greater thatn the average of Lowsal and
HighSal
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```sql
select ename from Emp where Salary > (select avg(Lowsal) from GradeSalary) and Salary >
(select avg(Highsal) from GradeSalary);

#12 List employee count of banking department.
select empCount from (select Dno, count(*) as empCount from Emp group by Dno ) AS T where
Dno = (select Dno from Dept where Dname = 'Banking');

#13 List department name having number of employees greater than employees in Banking
department
select Dname from Dept join  (select count(*) as empCount, Dno as deptNo from Emp group by
Dno having empCount > (select empCount from (select Dno, count(*) as empCount from Emp
group by Dno ) AS T where  Dno = (select Dno from Dept where Dname = 'Banking'))) as T1
where Dept.Dno = T1.deptNo;
```