**DBMS ASSIGNMENT**

**Assignment-1**

a) List the names and code of all employees

select empno,ename from emp

| **EMPNO** | **ENAME** |
| --- | --- |
| 7839 | KING |
| 7698 | BLAKE |
| 7782 | CLARK |
| 7566 | JONES |
| 7788 | SCOTT |
| 7902 | FORD |
| 7369 | SMITH |
| 7499 | ALLEN |
| 7521 | WARD |
| 7654 | MARTIN |
| 7844 | TURNER |
| 7876 | ADAMS |
| 7900 | JAMES |
| 7934 | MILLER |

**b) List the names, employee code and department code of all clerks.**

select empno,ename NAME,deptno from emp where job='CLERK'

| **EMPNO** | **NAME** | **DEPTNO** |
| --- | --- | --- |
| 7369 | SMITH | 20 |
| 7876 | ADAMS | 20 |
| 7900 | JAMES | 30 |
| 7934 | MILLER | 10 |

**c) List the names, employee code and salary of all managers.**

select ename NAME,empno "Employee Code",sal Salary from emp where job='MANAGER'

| **NAME** | **Employee Code** | **SALARY** |
| --- | --- | --- |
| BLAKE | 7698 | 2850 |
| CLARK | 7782 | 2450 |
| JONES | 7566 | 2975 |

d) List the names, employee code and hire date of all analysts.

select ename NAME,empno "Employee Code",hiredate "Hire Date" from emp where job='ANALYST'

| **NAME** | **Employee Code** | **Hire Date** |
| --- | --- | --- |
| SCOTT | 7788 | 12/09/1982 |
| FORD | 7902 | 12/03/1981 |

e) List the employees whose salary lies between 2000 and 3000.

select \* from emp where sal between 2000 and 3000

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7698 | BLAKE | MANAGER | 7839 | 05/01/1981 | 2850 | - | 30 |
| 7782 | CLARK | MANAGER | 7839 | 06/09/1981 | 2450 | - | 10 |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |

f) List the employees whose salary less than 1000.

select \* from emp where sal <1000

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7369 | SMITH | CLERK | 7902 | 12/17/1980 | 800 | - | 20 |
| 7900 | JAMES | CLERK | 7698 | 12/03/1981 | 950 | - | 30 |

g) List the employees whose salary greater than 4000.

select \* from emp where sal>4000

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | 10 |

h) List the employees whose salaries are 800, 1600 or 2450.

select \* from emp where sal in (800,1600,2450)

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7782 | CLARK | MANAGER | 7839 | 06/09/1981 | 2450 | - | 10 |
| 7369 | SMITH | CLERK | 7902 | 12/17/1980 | 800 | - | 20 |
| 7499 | ALLEN | SALESMAN | 7698 | 02/20/1981 | 1600 | 300 | 30 |

i) List the names of all employees who are either clerks or salesman or analysts.

select \* from emp where JOB in ('CLERK','SALESMAN','ANALYST')

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |
| 7369 | SMITH | CLERK | 7902 | 12/17/1980 | 800 | - | 20 |
| 7499 | ALLEN | SALESMAN | 7698 | 02/20/1981 | 1600 | 300 | 30 |
| 7521 | WARD | SALESMAN | 7698 | 02/22/1981 | 1250 | 500 | 30 |
| 7654 | MARTIN | SALESMAN | 7698 | 09/28/1981 | 1250 | 1400 | 30 |
| 7844 | TURNER | SALESMAN | 7698 | 09/08/1981 | 1500 | 0 | 30 |
| 7876 | ADAMS | CLERK | 7788 | 01/12/1983 | 1100 | - | 20 |
| 7900 | JAMES | CLERK | 7698 | 12/03/1981 | 950 | - | 30 |
| 7934 | MILLER | CLERK | 7782 | 01/23/1982 | 1300 | - | 10 |

j) List the employees those who are not getting commission.

select \* from emp where comm is NULL

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | 10 |
| 7698 | BLAKE | MANAGER | 7839 | 05/01/1981 | 2850 | - | 30 |
| 7782 | CLARK | MANAGER | 7839 | 06/09/1981 | 2450 | - | 10 |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |
| 7369 | SMITH | CLERK | 7902 | 12/17/1980 | 800 | - | 20 |
| 7876 | ADAMS | CLERK | 7788 | 01/12/1983 | 1100 | - | 20 |
| 7900 | JAMES | CLERK | 7698 | 12/03/1981 | 950 | - | 30 |
| 7934 | MILLER | CLERK | 7782 | 01/23/1982 | 1300 | - | 10 |

k) List the employees those who are getting commission.

select \* from emp where comm is NOT NULL

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7499 | ALLEN | SALESMAN | 7698 | 02/20/1981 | 1600 | 300 | 30 |
| 7521 | WARD | SALESMAN | 7698 | 02/22/1981 | 1250 | 500 | 30 |
| 7654 | MARTIN | SALESMAN | 7698 | 09/28/1981 | 1250 | 1400 | 30 |
| 7844 | TURNER | SALESMAN | 7698 | 09/08/1981 | 1500 | 0 | 30 |

l) List the employees name start with ‘F’.

select \*from emp where ename like 'F%'

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |

m)  **List all employees whose names start with ‘G’.**

select \*from emp where ename like 'G%'

no data found

n)  **List all employees whose names end with ‘N’.**

select \*from emp where ename like '%N'

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7499 | ALLEN | SALESMAN | 7698 | 02/20/1981 | 1600 | 300 | 30 |
| 7654 | MARTIN | SALESMAN | 7698 | 09/28/1981 | 1250 | 1400 | 30 |

o)  **List all employees whose job dose not start with “CL”.**

select \*from emp where job not like 'CL%'

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | 10 |
| 7698 | BLAKE | MANAGER | 7839 | 05/01/1981 | 2850 | - | 30 |
| 7782 | CLARK | MANAGER | 7839 | 06/09/1981 | 2450 | - | 10 |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |
| 7499 | ALLEN | SALESMAN | 7698 | 02/20/1981 | 1600 | 300 | 30 |
| 7521 | WARD | SALESMAN | 7698 | 02/22/1981 | 1250 | 500 | 30 |
| 7654 | MARTIN | SALESMAN | 7698 | 09/28/1981 | 1250 | 1400 | 30 |
| 7844 | TURNER | SALESMAN | 7698 | 09/08/1981 | 1500 | 0 | 30 |

**p) List all managers who earn more than Rs. 4000/-.**

select \*from emp where job='MANAGER' AND sal>4000

no data found

**q) List all clerks and salesman who earn more than Rs. 1600/-.**

select \*from emp where job in ('CLERK','SALESMAN') AND sal>1600

no data found

**r) List the names and salaries of all employees who were joined as manager during 1981.**

select ename,sal from emp where job='MANAGER' and extract(year from hiredate)=1981

| **ENAME** | **SAL** |
| --- | --- |
| BLAKE | 2850 |
| CLARK | 2450 |
| JONES | 2975 |

**Assignment-2**

a) Calculate the average salary of all employees.

select deptno ,round(avg(sal),2)"Avg Salary" from emp group by deptno

| **DEPTNO** | **Avg Salary** |
| --- | --- |
| 30 | 1566.67 |
| 20 | 2175 |
| 10 | 2916.67 |

b) Calculate the average salary of all managers.

select round(avg(sal),2)"Avg Salary" from emp where job='MANAGER'

| **Avg Salary** |
| --- |
| 2758.33 |

c) Calcutate the total salary of all employees

select sum(sal) "Total Salary" from emp

| **Total Salary** |
| --- |
| 29025 |

d) Calcutate the total salary of all managers.

select sum(sal) "Total Salary" from emp where job='MANAGER'

| **Total Salary** |
| --- |
| 8275 |

e) Find the minimum salaries earned by the employees.

select min(sal) "Minimum Salary" from emp

| **Minimum Salary** |
| --- |
| 800 |

f) Find the maximum salaries earned by the employees.

select max(sal) "Maximum Salary" from emp

|  |  |  |  |
| --- | --- | --- | --- |

| **Maximum Salary** |
| --- |
| 5000 |

g) Find the minimum salaries earned by the clerks.

select min(sal) "Minimum Salary" from emp where job='CLERK'

| **Minimum Salary** |
| --- |
| 800 |

h) Find the maximum salaries earned by a salesman.

select max(sal) "Maximum Salary" from emp where job='SALESMAN'

| **Maximum Salary** |
| --- |
| 1600 |

i) Find the minimum and maximum and average salaries earned by a employees.

select max(sal)"Maximum Salary",min(sal)"Minimum Salary",round(avg(sal),2)"Avg Salary" from emp

| **Maximum Salary** | **Minimum Salary** | **Avg Salary** |
| --- | --- | --- |
| 5000 | 800 | 2073.21 |

j) Find the minimum and maximum and average salaries earned by a clerks.

select max(sal)"Maximum Salary",min(sal)"Minimum Salary",round(avg(sal),2)"Avg Salary" from emp where job='CLERK'

| **Maximum Salary** | **Minimum Salary** | **Avg Salary** |
| --- | --- | --- |
| 1300 | 800 | 1037.5 |

k) List the total number of employees and the average salaries of the different departments.

select count(deptno), round(avg(sal),2) from emp group by deptno

| **COUNT(DEPTNO)** | **ROUND(AVG(SAL),2)** |
| --- | --- |
| 6 | 1566.67 |
| 5 | 2175 |
| 3 | 2916.67 |

l) Calculate total number of employees.

select count(empno)"Total Emp" from emp

| **Total Emp** |
| --- |
| 14 |

m) Calculate total number of managers.

select count(empno)"Total Manager" from emp where job='MANAGER'

| **Total Manager** |
| --- |
| 3 |

n) Calculate the number of employees who are not getting any commission.

select count(empno)"Employee without commission" from emp where comm is NULL

| **Employee without commission** |
| --- |
| 10 |

o) Calculate the number of employees who are getting any commission.

select count(empno)"Employee with commission" from emp where comm is not NULL

| **Employee with commission** |
| --- |
| 4 |

p) List the details of all managers in ascending order of joining dates.

select \* from emp where job='MANAGER' order by hiredate

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7698 | BLAKE | MANAGER | 7839 | 05/01/1981 | 2850 | - | 30 |
| 7782 | CLARK | MANAGER | 7839 | 06/09/1981 | 2450 | - | 10 |

q) List the average salaries for each different job.

select deptno, round(avg(sal),2)"Avg Salary" from emp group by deptno order by deptno

| **DEPTNO** | **Avg Salary** |
| --- | --- |
| 10 | 2916.67 |
| 20 | 2175 |
| 30 | 1566.67 |

r) Display the minimum, maximum and average salaries for each job group.

select max(sal),min(sal), round(avg(sal),2)"Avg Sal",job from emp group by job

| **MAX(SAL)** | **MIN(SAL)** | **Avg Sal** | **JOB** |
| --- | --- | --- | --- |
| 1300 | 800 | 1037.5 | CLERK |
| 1600 | 1250 | 1400 | SALESMAN |
| 5000 | 5000 | 5000 | PRESIDENT |
| 2975 | 2450 | 2758.33 | MANAGER |
| 3000 | 3000 | 3000 | ANALYST |

s) Find all departments which have less 3 employees.

select deptno from emp group by deptno having count(deptno)<3

NO DATA FOUND

t) List the details of the employees in ascending order of department number and within each department in descending order of salary.

select \* from emp order by deptno,sal desc

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | 10 |
| 7782 | CLARK | MANAGER | 7839 | 06/09/1981 | 2450 | - | 10 |
| 7934 | MILLER | CLERK | 7782 | 01/23/1982 | 1300 | - | 10 |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7876 | ADAMS | CLERK | 7788 | 01/12/1983 | 1100 | - | 20 |
| 7369 | SMITH | CLERK | 7902 | 12/17/1980 | 800 | - | 20 |
| 7698 | BLAKE | MANAGER | 7839 | 05/01/1981 | 2850 | - | 30 |
| 7499 | ALLEN | SALESMAN | 7698 | 02/20/1981 | 1600 | 300 | 30 |
| 7844 | TURNER | SALESMAN | 7698 | 09/08/1981 | 1500 | 0 | 30 |
| 7521 | WARD | SALESMAN | 7698 | 02/22/1981 | 1250 | 500 | 30 |
| 7654 | MARTIN | SALESMAN | 7698 | 09/28/1981 | 1250 | 1400 | 30 |
| 7900 | JAMES | CLERK | 7698 | 12/03/1981 | 950 | - | 30 |

u) Display the name ,departno and annual salary of each employee in order salary and deptno.

select ename,deptno, 12\*sal Annual\_Salary from emp order by deptno,Annual\_Salary

| **ENAME** | **DEPTNO** | **ANNUAL\_SALARY** |
| --- | --- | --- |
| MILLER | 10 | 15600 |
| CLARK | 10 | 29400 |
| KING | 10 | 60000 |
| SMITH | 20 | 9600 |
| ADAMS | 20 | 13200 |
| JONES | 20 | 35700 |
| SCOTT | 20 | 36000 |
| FORD | 20 | 36000 |
| JAMES | 30 | 11400 |
| MARTIN | 30 | 15000 |
| WARD | 30 | 15000 |
| TURNER | 30 | 18000 |
| ALLEN | 30 | 19200 |
| BLAKE | 30 | 34200 |

v) Display the name of employee who earns maximum salary.

select ename,sal from emp where sal=(select max(sal) from emp)

| **ENAME** | **SAL** |
| --- | --- |
| KING | 5000 |

w) Display the name of employee who earns minimum salary.

select ename,sal from emp where sal=(select min(sal) from emp)

| **ENAME** | **SAL** |
| --- | --- |
| SMITH | 800 |

x) Display the name of employee who earns maximum salary whose job is a salesman.

select ename,sal from emp where sal=(select max(sal) from emp where job='SALESMAN')

| **ENAME** | **SAL** |
| --- | --- |
| ALLEN | 1600 |

y) Display the name of employee who earns minimum salary whose job is a clerk.

select ename,sal from emp where sal=(select min(sal) from emp where job='CLERK')

| **ENAME** | **SAL** |
| --- | --- |
| SMITH | 800 |

z) Display the department number whose average salary is maximum.

select deptno,avgsal from (select deptno,round(avg(sal),2)avgsal from emp group by deptno) where avgsal=(select max(avgsal) from (select deptno, round(avg(sal),2) avgsal from emp group by deptno ))

| DEPTNO | AVGSAL |
| --- | --- |
| 10 | 2916.67 |

**Assignment 3**

***a) select ename,dname,loc from emp,dept where emp.deptno=dept.deptno order by dname***

| **ENAME** | **DNAME** | **LOC** |
| --- | --- | --- |
| CLARK | ACCOUNTING | NEW YORK |
| MILLER | ACCOUNTING | NEW YORK |
| KING | ACCOUNTING | NEW YORK |
| FORD | RESEARCH | DALLAS |
| SCOTT | RESEARCH | DALLAS |
| JONES | RESEARCH | DALLAS |
| SMITH | RESEARCH | DALLAS |
| ADAMS | RESEARCH | DALLAS |
| WARD | SALES | CHICAGO |
| MARTIN | SALES | CHICAGO |
| TURNER | SALES | CHICAGO |
| JAMES | SALES | CHICAGO |
| ALLEN | SALES | CHICAGO |
| BLAKE | SALES | CHICAGO |

***b) select ename,deptno,dname, sal from emp natural join dept order by sal***

| **ENAME** | **DEPTNO** | **DNAME** | **SAL** |
| --- | --- | --- | --- |
| SMITH | 20 | RESEARCH | 800 |
| JAMES | 30 | SALES | 950 |
| ADAMS | 20 | RESEARCH | 1100 |
| MARTIN | 30 | SALES | 1250 |
| WARD | 30 | SALES | 1250 |
| MILLER | 10 | ACCOUNTING | 1300 |
| TURNER | 30 | SALES | 1500 |
| ALLEN | 30 | SALES | 1600 |
| CLARK | 10 | ACCOUNTING | 2450 |
| BLAKE | 30 | SALES | 2850 |
| JONES | 20 | RESEARCH | 2975 |
| FORD | 20 | RESEARCH | 3000 |
| SCOTT | 20 | RESEARCH | 3000 |
| KING | 10 | ACCOUNTING | 5000 |

***c) select \* from emp natural join dept where loc='DALLAS' order by sal***

| **DEPTNO** | **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DNAME** | **LOC** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 7369 | SMITH | CLERK | 7902 | 12/17/1980 | 800 | - | RESEARCH | DALLAS |
| 20 | 7876 | ADAMS | CLERK | 7788 | 01/12/1983 | 1100 | - | RESEARCH | DALLAS |
| 20 | 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | RESEARCH | DALLAS |
| 20 | 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | RESEARCH | DALLAS |
| 20 | 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | RESEARCH | DALLAS |

***d) select ename,job,sal,deptno from emp where job in ('MANAGER','PRESIDENT','ANALYST','SALESMAN') order by deptno,sal***

| **ENAME** | **JOB** | **SAL** | **DEPTNO** |
| --- | --- | --- | --- |
| CLARK | MANAGER | 2450 | 10 |
| KING | PRESIDENT | 5000 | 10 |
| JONES | MANAGER | 2975 | 20 |
| SCOTT | ANALYST | 3000 | 20 |
| FORD | ANALYST | 3000 | 20 |
| MARTIN | SALESMAN | 1250 | 30 |
| WARD | SALESMAN | 1250 | 30 |
| TURNER | SALESMAN | 1500 | 30 |
| ALLEN | SALESMAN | 1600 | 30 |
| BLAKE | MANAGER | 2850 | 30 |

***e) select ename,loc from emp natural join dept where loc=(select loc from emp natural join dept where ename= 'FORD')***

| **ENAME** | **LOC** |
| --- | --- |
| FORD | DALLAS |
| SCOTT | DALLAS |
| JONES | DALLAS |
| SMITH | DALLAS |
| ADAMS | DALLAS |

***f) select deptno,dname from dept where deptno not in (select deptno from emp)***

| **DEPTNO** | **DNAME** |
| --- | --- |
| 40 | OPERATIONS |

**ASSIGNMENT - 4**

a) List the employees belonging to the department 20

select ename from emp where deptno=20

| **ENAME** |
| --- |
| JONES |
| SCOTT |
| FORD |
| SMITH |
| ADAMS |

b) List the name and salary of the employees whose salary is more than 1000

select ename,sal from emp where sal>1000

| **ENAME** | **SAL** |
| --- | --- |
| KING | 5000 |
| BLAKE | 2850 |
| CLARK | 2450 |
| JONES | 2975 |
| SCOTT | 3000 |
| FORD | 3000 |
| ALLEN | 1600 |
| WARD | 1250 |
| MARTIN | 1250 |
| TURNER | 1500 |
| ADAMS | 1100 |
| MILLER | 1300 |

c) List the employee no and the name of the manager

select e1.ename "Employee",e2.ename "Manager" from emp e1, emp e2 where e1.mgr=e2.empno

| **Employee** | **Manager** |
| --- | --- |
| FORD | JONES |
| SCOTT | JONES |
| ALLEN | BLAKE |
| JAMES | BLAKE |
| TURNER | BLAKE |
| MARTIN | BLAKE |
| WARD | BLAKE |
| MILLER | CLARK |
| ADAMS | SCOTT |
| BLAKE | KING |
| CLARK | KING |
| JONES | KING |
| SMITH | FORD |

d) List the no of the clearks working in the department 20

select count(\*)"No of Clerk" from emp where job='CLERK' AND deptno=20

| **No of Clerk** |
| --- |
| 2 |

e) List the name of the analysts and salesman

select ename from emp where job in ('ANALYST','SALESMAN')

| **ENAME** |
| --- |
| SCOTT |
| FORD |
| ALLEN |
| WARD |
| MARTIN |
| TURNER |

f) List the name of the employees whose employee numbers 7369,7521,7839,7934,7788

select ename from emp where empno in (7369,7521,7839,7934,7788)

| **ENAME** |
| --- |
| SMITH |
| WARD |
| SCOTT |
| KING |
| MILLER |

g) List the name of the employee detail not belonging to the department 10,30 and 40

select \* from emp where deptno not in (10,30,40)

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |
| 7369 | SMITH | CLERK | 7902 | 12/17/1980 | 800 | - | 20 |
| 7876 | ADAMS | CLERK | 7788 | 01/12/1983 | 1100 | - | 20 |

h) List the different jobs available in the emp table

select distinct(job) from emp

| **JOB** |
| --- |
| CLERK |
| SALESMAN |
| PRESIDENT |
| MANAGER |
| ANALYST |

i) List the employee not assigned to any department

select \* from emp where deptno is NULL

no data found

j) List the details of the employees whose salary is greater than 2000 and not eligible for commission

select \* from emp where sal>2000 and comm is NULL

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | 10 |
| 7698 | BLAKE | MANAGER | 7839 | 05/01/1981 | 2850 | - | 30 |
| 7782 | CLARK | MANAGER | 7839 | 06/09/1981 | 2450 | - | 10 |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |

k) List the employee names having ‘I’ as second character

select ename from emp where ename like '\_I%'

| **ENAME** |
| --- |
| KING |
| MILLER |

m) List the name, salary and PF amount of all the employes (pF is calculated as 10% of salary).

select ename, sal, 0.1\*sal "PF" from emp

| **ENAME** | **SAL** | **PF** |
| --- | --- | --- |
| KING | 5000 | 500 |
| BLAKE | 2850 | 285 |
| CLARK | 2450 | 245 |
| JONES | 2975 | 297.5 |
| SCOTT | 3000 | 300 |
| FORD | 3000 | 300 |
| SMITH | 800 | 80 |
| ALLEN | 1600 | 160 |
| WARD | 1250 | 125 |
| MARTIN | 1250 | 125 |
| TURNER | 1500 | 150 |
| ADAMS | 1100 | 110 |
| JAMES | 950 | 95 |
| MILLER | 1300 | 130 |

n) List the employee number, name and salary in ascending order of salary.

select empno,ename,sal from emp order by sal

| **EMPNO** | **ENAME** | **SAL** |
| --- | --- | --- |
| 7369 | SMITH | 800 |
| 7900 | JAMES | 950 |
| 7876 | ADAMS | 1100 |
| 7654 | MARTIN | 1250 |
| 7521 | WARD | 1250 |
| 7934 | MILLER | 1300 |
| 7844 | TURNER | 1500 |
| 7499 | ALLEN | 1600 |
| 7782 | CLARK | 2450 |
| 7698 | BLAKE | 2850 |
| 7566 | JONES | 2975 |
| 7902 | FORD | 3000 |
| 7788 | SCOTT | 3000 |
| 7839 | KING | 5000 |

o) Lists the employee name and hiredate in descending order of hiredate.

select ename,hiredate from emp order by hiredate desc

| **ENAME** | **HIREDATE** |
| --- | --- |
| ADAMS | 01/12/1983 |
| SCOTT | 12/09/1982 |
| MILLER | 01/23/1982 |
| FORD | 12/03/1981 |
| JAMES | 12/03/1981 |
| KING | 11/17/1981 |
| MARTIN | 09/28/1981 |
| TURNER | 09/08/1981 |
| CLARK | 06/09/1981 |
| BLAKE | 05/01/1981 |
| JONES | 04/02/1981 |
| WARD | 02/22/1981 |
| ALLEN | 02/20/1981 |
| SMITH | 12/17/1980 |

p) List the department number and the total salary payable in each department. List the jobs and number of employees in each job. The result should be in descending order of the number of employees.

select deptno , sum(sal)"Total Salary" from emp group by deptno order by deptno desc

| **DEPTNO** | **Total Salary** |
| --- | --- |
| 30 | 9400 |
| 20 | 10875 |
| 10 | 8750 |

select job,count(\*)"No of employee" from emp group by job order by count(\*) desc

| **JOB** | **No of employee** |
| --- | --- |
| CLERK | 4 |
| SALESMAN | 4 |
| MANAGER | 3 |
| ANALYST | 2 |
| PRESIDENT | 1 |

q) List the total salary, maximum, minimum and average salary of the employee's jobwise

select job,sum(sal)"Total Sal",max(sal)"Max sal",min(sal)"Min sal",round(avg(sal),2)"Avg Sal" from emp group by job

| **JOB** | **Total Sal** | **Max sal** | **Min sal** | **Avg Sal** |
| --- | --- | --- | --- | --- |
| CLERK | 4150 | 1300 | 800 | 1037.5 |
| SALESMAN | 5600 | 1600 | 1250 | 1400 |
| PRESIDENT | 5000 | 5000 | 5000 | 5000 |
| MANAGER | 8275 | 2975 | 2450 | 2758.33 |
| ANALYST | 6000 | 3000 | 3000 | 3000 |

r) List the average salary from each job excluding MANAGER.

select job, round(avg(sal),2)"Avg\_sal" from emp where job not in 'MANAGER' group by job

| **JOB** | **Avg\_sal** |
| --- | --- |
| CLERK | 1037.5 |
| SALESMAN | 1400 |
| PRESIDENT | 5000 |
| ANALYST | 3000 |

s) List average salary for all departments employing more than five people.

select deptno, round(avg(sal),2)"Avg\_sal" from emp group by deptno having count(empno)>5

| **DEPTNO** | **Avg\_sal** |
| --- | --- |
| 30 | 1566.67 |

t) List job of all the employees where maximum salary is greater than or equal to 3000.

select job, max(sal)"MAX SAL" from emp group by job having max(sal)>=3000

| **JOB** | **MAX SAL** |
| --- | --- |
| PRESIDENT | 5000 |
| ANALYST | 3000 |

u) List the total salary, maximum and minimum salary and the average salary of employees job wise for department number 20 and display only those rows having average salary greater-than 1000.

select job , round(avg(sal),2),max(sal),min(sal),sum(sal) from emp where deptno=20 group by job having avg(sal)>1000

| **JOB** | **ROUND(AVG(SAL),2)** | **MAX(SAL)** | **MIN(SAL)** | **SUM(SAL)** |
| --- | --- | --- | --- | --- |
| MANAGER | 2975 | 2975 | 2975 | 2975 |
| ANALYST | 3000 | 3000 | 3000 | 6000 |

**Assignment- 5**

a) List the employees earns more than any employee in ‘CHICAGO’.

select \* from emp natural join dept where sal>(select max(sal) from emp natural join dept where loc='CHICAGO')

| **DEPTNO** | **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DNAME** | **LOC** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | ACCOUNTING | NEW YORK |
| 20 | 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | RESEARCH | DALLAS |
| 20 | 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | RESEARCH | DALLAS |
| 20 | 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | RESEARCH | DALLAS |

b) List the employee who works in the same department as ‘SMITH’.

select \* from emp where deptno=(select deptno from emp where ename='SMITH') and ename not in ('SMITH')

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |
| 7876 | ADAMS | CLERK | 7788 | 01/12/1983 | 1100 | - | 20 |

c) List the name, employee number, their manager name and manager number.

select e1.empno,e1.ename,e2.ename,e2.empno from emp e1 , emp e2 where e1.mgr=e2.empno

| **EMPNO** | **ENAME** | **ENAME** | **EMPNO** |
| --- | --- | --- | --- |
| 7902 | FORD | JONES | 7566 |
| 7788 | SCOTT | JONES | 7566 |
| 7499 | ALLEN | BLAKE | 7698 |
| 7900 | JAMES | BLAKE | 7698 |
| 7844 | TURNER | BLAKE | 7698 |
| 7654 | MARTIN | BLAKE | 7698 |
| 7521 | WARD | BLAKE | 7698 |
| 7934 | MILLER | CLARK | 7782 |
| 7876 | ADAMS | SCOTT | 7788 |
| 7698 | BLAKE | KING | 7839 |
| 7782 | CLARK | KING | 7839 |
| 7566 | JONES | KING | 7839 |
| 7369 | SMITH | FORD | 7902 |

d) List the name of the employee job is same as ‘CLARK’.

select ename, job from emp where job='CLERK'

| **ENAME** | **JOB** |
| --- | --- |
| SMITH | CLERK |
| ADAMS | CLERK |
| JAMES | CLERK |
| MILLER | CLERK |

e) List the name of employee whose salary is more than ‘TURNER’.

select \* from emp where sal > (select sal from emp where ename='TURNER')

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | 10 |
| 7698 | BLAKE | MANAGER | 7839 | 05/01/1981 | 2850 | - | 30 |
| 7782 | CLARK | MANAGER | 7839 | 06/09/1981 | 2450 | - | 10 |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |
| 7499 | ALLEN | SALESMAN | 7698 | 02/20/1981 | 1600 | 300 | 30 |

f) List the name of employee who joined after ‘ALLEN’.

select \* from emp where hiredate > (select hiredate from emp where ename='ALLEN')

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | 10 |
| 7698 | BLAKE | MANAGER | 7839 | 05/01/1981 | 2850 | - | 30 |
| 7782 | CLARK | MANAGER | 7839 | 06/09/1981 | 2450 | - | 10 |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |
| 7521 | WARD | SALESMAN | 7698 | 02/22/1981 | 1250 | 500 | 30 |
| 7654 | MARTIN | SALESMAN | 7698 | 09/28/1981 | 1250 | 1400 | 30 |
| 7844 | TURNER | SALESMAN | 7698 | 09/08/1981 | 1500 | 0 | 30 |
| 7876 | ADAMS | CLERK | 7788 | 01/12/1983 | 1100 | - | 20 |
| 7900 | JAMES | CLERK | 7698 | 12/03/1981 | 950 | - | 30 |
| 7934 | MILLER | CLERK | 7782 | 01/23/1982 | 1300 | - | 10 |

g) Display the name of the dept. whose job is ‘SALESMAN’.

select distinct(dname),deptno from emp natural join dept where job='SALESMAN'

| **DNAME** | **DEPTNO** |
| --- | --- |
| SALES | 30 |

h) Display the name of the dept. in which ‘FORD’ works.

select dname, deptno from emp natural join dept where ename='FORD’

| **DNAME** | **DEPTNO** |
| --- | --- |
| RESEARCH | 20 |

i) Display the dept. whose salary is maximum.

select dname, deptno from emp natural join dept where sal=(select max(sal) from emp)

| **DNAME** | **DEPTNO** |
| --- | --- |
| ACCOUNTING | 10 |

k) Display the name of the city in which manager works.

select LOC from emp natural join dept where job='MANAGER'

| **LOC** |
| --- |
| NEW YORK |
| DALLAS |
| CHICAGO |

m) List the employees earn more than every employee in ‘DALLAS’.

select \* from emp natural join dept where sal>(select max(sal) from emp natural join dept where LOC='DALLAS')

| **DEPTNO** | **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DNAME** | **LOC** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | ACCOUNTING | NEW YORk |

.n) Display the name of the department which has no employee.

select dname,dept.deptno from dept LEFT OUTER JOIN emp on dept.deptno=emp.deptno where empno is NULL

| **DNAME** | **DEPTNO** |
| --- | --- |
| OPERATIONS | 40 |

p) List the name of the employee who joined in the same year of ‘ADAMS’.

select ename from emp where extract(YEAR from hiredate)=(select extract(YEAR from hiredate) from emp where ename='ADAMS') and ename not in ('ADAMS')

no data found

q) List the name of the employee who joined in the same month of ‘BLAKE’.

select ename from emp where extract(MONTH from hiredate)=(select extract(MONTH from hiredate) from emp where ename='BLAKE') and ename not in ('BLAKE')

no data found

r) List the name of the employee who joined in the same date of ‘ADAMS’

select ename from emp where extract(DAY from hiredate)=(select extract(DAY from hiredate) from emp where ename='ADAMS') and ename not in ('ADAMS')

no data found.

s) List the name of the department who gets commission.

select distinct(dname) from emp natural join dept where comm is not NULL

| **DNAME** |
| --- |
| SALES |

**Assignment -6**

(a) List all employee who work in Dallas or have joined the company as manager before 82.

select \* from emp natural join dept where loc='DALLAS'OR ( extract(YEAR from hiredate)<1982 AND job='MANAGER')

| **DEPTNO** | **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DNAME** | **LOC** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 7782 | CLARK | MANAGER | 7839 | 06/09/1981 | 2450 | - | ACCOUNTING | NEW YORK |
| 20 | 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | RESEARCH | DALLAS |
| 20 | 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | RESEARCH | DALLAS |
| 20 | 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | RESEARCH | DALLAS |
| 20 | 7369 | SMITH | CLERK | 7902 | 12/17/1980 | 800 | - | RESEARCH | DALLAS |
| 20 | 7876 | ADAMS | CLERK | 7788 | 01/12/1983 | 1100 | - | RESEARCH | DALLAS |
| 30 | 7698 | BLAKE | MANAGER | 7839 | 05/01/1981 | 2850 | - | SALES | CHICAGO |

(b) List all employees who work in New York and earn more than any employee working in Chicago.

select \* from emp natural join dept where loc='NEW YORK'OR sal>(select max(sal)from emp natural join dept where loc='CHICAGO')

| **DEPTNO** | **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DNAME** | **LOC** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 7782 | CLARK | MANAGER | 7839 | 06/09/1981 | 2450 | - | ACCOUNTING | NEW YORK |
| 10 | 7934 | MILLER | CLERK | 7782 | 01/23/1982 | 1300 | - | ACCOUNTING | NEW YORK |
| 10 | 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | ACCOUNTING | NEW YORK |
| 20 | 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | RESEARCH | DALLAS |
| 20 | 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | RESEARCH | DALLAS |
| 20 | 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | RESEARCH | DALLAS |

(c) List name of the employee who earns the minimum salary.

select ename,sal from emp where sal= (select min(sal) from emp)

| **ENAME** | **SAL** |
| --- | --- |
| SMITH | 800 |

(d) List all employees who work in the same post as Smith.

select \* from emp where job=(select job from emp where ename='SMITH')

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7369 | SMITH | CLERK | 7902 | 12/17/1980 | 800 | - | 20 |
| 7876 | ADAMS | CLERK | 7788 | 01/12/1983 | 1100 | - | 20 |
| 7900 | JAMES | CLERK | 7698 | 12/03/1981 | 950 | - | 30 |
| 7934 | MILLER | CLERK | 7782 | 01/23/1982 | 1300 | - | 10 |

(e) List all employees who earn more than every employee in the ‘Sales’ department.

select \* from emp where sal>(select max(sal)from emp natural join dept where dname='SALES')

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | 10 |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |

(f) Find the job with the highest average salary.

select job from emp group by job having avg(sal)=(select max(avg(sal)) from emp group by job)

| **JOB** |
| --- |
| PRESIDENT |

(g) Find the highest salary of each job.

select job,max(sal) from emp group by job

| **JOB** | **MAX(SAL)** |
| --- | --- |
| CLERK | 1300 |
| SALESMAN | 1600 |
| PRESIDENT | 5000 |
| MANAGER | 2975 |
| ANALYST | 3000 |

**Assignment - 7**

(a) List the names, jobs and salaries of employees whose salary is greater than the highest salary in Operations department.

select ename,job,sal from emp where sal> (select sal from emp natural join dept where job='OPERATION')

no data found

(b) Find the department is not having any employee.

select dname from dept left outer join emp on dept.deptno=emp.deptno where ename is NULL

| **DNAME** |
| --- |
| OPERATIONS |

(c) List the top 10 earners in the company.

select rownum,ename,sal from (select \* from emp order by sal desc) where rownum<11

| **ROWNUM** | **ENAME** | **SAL** |
| --- | --- | --- |
| 1 | KING | 5000 |
| 2 | SCOTT | 3000 |
| 3 | FORD | 3000 |
| 4 | JONES | 2975 |
| 5 | BLAKE | 2850 |
| 6 | CLARK | 2450 |
| 7 | ALLEN | 1600 |
| 8 | TURNER | 1500 |
| 9 | MILLER | 1300 |
| 10 | WARD | 1250 |

(d) List the top 2 earners in each department.

(e) List the years and the number of people joining in that year.

select (extract(year from hiredate))Join\_Year, count(\*)"No of emp" from emp group by extract(year from hiredate)

| **JOIN\_YEAR** | **No of emp** |
| --- | --- |
| 1982 | 2 |
| 1983 | 1 |
| 1980 | 1 |
| 1981 | 10 |

(f) Give an increment of 20% to all employees who have joined before 1/1/82 or earner less than Rs. 3000/-.

select ename,(sal\*1.2)"Inc\_Sal",hiredate from emp where sal<3000 or hiredate< '01/01/1982'

| **ENAME** | **Inc\_Sal** | **HIREDATE** |
| --- | --- | --- |
| KING | 6000 | 11/17/1981 |
| BLAKE | 3420 | 05/01/1981 |
| CLARK | 2940 | 06/09/1981 |
| JONES | 3570 | 04/02/1981 |
| FORD | 3600 | 12/03/1981 |
| SMITH | 960 | 12/17/1980 |
| ALLEN | 1920 | 02/20/1981 |
| WARD | 1500 | 02/22/1981 |
| MARTIN | 1500 | 09/28/1981 |
| TURNER | 1800 | 09/08/1981 |
| ADAMS | 1320 | 01/12/1983 |
| JAMES | 1140 | 12/03/1981 |
| MILLER | 1560 | 01/23/1982 |

(g) Display the name of the employees whose subordinate has subordinate.

select distinct(e1.ename)"ENAME",e1.empno from emp e1,emp e2, emp e3 where e3.mgr=e2.empno and e2.mgr=e1.empno

| **ENAME** | **EMPNO** |
| --- | --- |
| KING | 7839 |
| JONES | 7566 |

(h) Display the name of the employees whose subordinate has not subordinates.

select ename from emp where ename not in (select distinct(e1.ename)"ENAME" from emp e1,emp e2, emp e3 where e3.mgr=e2.empno and e2.mgr=e1.empno)

| **ENAME** |
| --- |
| BLAKE |
| MARTIN |
| FORD |
| WARD |
| ALLEN |
| MILLER |
| JAMES |
| SMITH |
| TURNER |
| ADAMS |
| SCOTT |
| CLARK |

(i) Display the name of the employees and their subordinate’s subordinates.

select (e1.ename)"Super manager", e3.ename"Employee" from emp e1,emp e2, emp e3 where e3.mgr=e2.empno and e2.mgr=e1.empno

| **Super manager** | **Employee** |
| --- | --- |
| KING | SCOTT |
| KING | FORD |
| JONES | SMITH |
| KING | ALLEN |
| KING | WARD |
| KING | MARTIN |
| KING | TURNER |
| JONES | ADAMS |
| KING | JAMES |
| KING | MILLER |

(k) Display the department number, member of employees in each department and the total number of employees in the company

select deptno, count(\*) from emp group by rollup(deptno

| **DEPTNO** | **COUNT(\*)** |
| --- | --- |
| 10 | 3 |
| 20 | 5 |
| 30 | 6 |
| - | 14 |

**Assignment- 8**

a) Find the job which exist in department no 30 but not in 10

select job from emp where deptno=30

minus

select job from emp where deptno=10

| **JOB** |
| --- |
| SALESMAN |

b) Find the employees who earn the highest salary in each job type

select \* from emp where sal in (select max(sal)from emp group by job)

| **EMPNO** | **ENAME** | **JOB** | **MGR** | **HIREDATE** | **SAL** | **COMM** | **DEPTNO** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7839 | KING | PRESIDENT | - | 11/17/1981 | 5000 | - | 10 |
| 7566 | JONES | MANAGER | 7839 | 04/02/1981 | 2975 | - | 20 |
| 7788 | SCOTT | ANALYST | 7566 | 12/09/1982 | 3000 | - | 20 |
| 7902 | FORD | ANALYST | 7566 | 12/03/1981 | 3000 | - | 20 |
| 7499 | ALLEN | SALESMAN | 7698 | 02/20/1981 | 1600 | 300 | 30 |
| 7934 | MILLER | CLERK | 7782 | 01/23/1982 | 1300 | - | 10 |

c) Find the most recently hired employees in each department

select e.ename,e.job,e.hiredate from emp e where hiredate in (select max(hiredate) from emp where deptno=e.deptno)

| **ENAME** | **JOB** | **HIREDATE** |
| --- | --- | --- |
| ADAMS | CLERK | 01/12/1983 |
| JAMES | CLERK | 12/03/1981 |
| MILLER | CLERK | 01/23/1982 |

d) List the department having no employees (using sub query, using outer join, using correlated sub query, and using set operation.)

**Sub query**

select d.deptno,d.dname from dept d where d.deptno not in (select e.deptno from emp e)

**outer join**

select dept.deptno,dname from dept full outer join emp on dept.deptno=emp.deptno where empno is null

| **DEPTNO** | **DNAME** |
| --- | --- |
| 40 | OPERATIONS |

**Set operation**

select deptno from dept minus select deptno from emp

(e) Display the employee names getting salaries greater than their managers.

select e1.ename,e1.sal,e2.ename"Manager",e2.sal"Mgr\_Sal" from emp e1,emp e2 where e1.mgr=e2.empno and e2.sal < e1.sal

| **ENAME** | **SAL** | **Manager** | **Mgr\_Sal** |
| --- | --- | --- | --- |
| FORD | 3000 | JONES | 2975 |
| SCOTT | 3000 | JONES | 2975 |

(f) Select the third highest earner in the emp table.

select empno,sal from emp e1 where 2= (select count(distinct(sal)) from emp e2 where e2.sal>e1.sal)

| **EMPNO** | **SAL** |
| --- | --- |
| 7566 | 2975 |

**Assignment -9**

Borrower(Id,Name)

| **ID** | **NAME** |
| --- | --- |
| BR1 | Ram |
| BR2 | Shyam |
| BR4 | Modon |
| BR5 | Subho |
| BR3 | Jodu |

Book(Id,Title,Author,Subject)

| **ID** | **TITLE** | **AUTHOR** | **SUBJECT** |
| --- | --- | --- | --- |
| 1003 | Mind, Self and Society | George | Sociology |
| 1004 | The Happiness Hypothesis | Jonathan | Psychology |
| 1005 | The School of Life | Alain | Psychology |
| 1006 | Theory of Psychology | A. Das | Psychology |
| 1007 | The Idealism | Hegel | Philosophy |
| 1001 | Intro to CS | Charles | Computer Science |
| 1002 | The Socio Imagination | Wright | Sociology |
| 1008 | Life, the Universe | A. Das | Philosophy |
| 1009 | A Study of History | G.Morrison | History |
| 1010 | The guns of August | Souvik | History |

Borrows(Book\_Id,B\_Id,Date\_Of\_Issue,Date\_Of\_Return)

| **BOOK\_ID** | **B\_ID** | **DATE\_OF\_ISSUE** | **DATE\_OF\_RETURN** |
| --- | --- | --- | --- |
| 1010 | BR4 | 10/05/2020 | 11/05/2020 |
| 1009 | BR1 | 08/06/2020 | 10/09/2020 |
| 1008 | BR5 | 09/02/2020 | 10/03/2020 |
| 1002 | BR2 | 10/03/2020 | 11/05/2020 |
| 1009 | BR3 | 08/04/2020 | 10/06/2020 |
| 1004 | BR5 | 03/11/2021 | 04/15/2021 |
| 1003 | BR3 | 04/09/2021 | 05/14/2021 |
| 1005 | BR4 | 05/07/2021 | 06/12/2021 |
| 1006 | BR2 | 06/05/2021 | 07/06/2021 |
| 1007 | BR1 | 07/03/2021 | 08/09/2021 |
| 1002 | BR3 | 04/04/2021 | 05/06/2021 |
| 1005 | BR3 | 05/04/2021 | 07/09/2021 |
| 1009 | BR4 | 02/12/2021 | 03/09/2021 |

a) Display the details of all the books on sociology and psychology

select \* from book where subject in ('Sociology','Psychology')

| **ID** | **TITLE** | **AUTHOR** | **SUBJECT** |
| --- | --- | --- | --- |
| 1003 | Mind, Self and Society | George | Sociology |
| 1004 | The Happiness Hypothesis | Jonathan | Psychology |
| 1005 | The School of Life | Alain | Psychology |
| 1006 | Theory of Psychology | A. Das | Psychology |
| 1002 | The Socio Imagination | Wright | Sociology |

b) Find all the books written by A.Das on philosophy.

select \* from book where subject='Philosophy' and author='A. Das'

| **ID** | **TITLE** | **AUTHOR** | **SUBJECT** |
| --- | --- | --- | --- |
| 1008 | Life, the Universe | A. Das | Philosophy |

c) Find out the total number of books in the library.

select count(\*)"No\_Of\_Books" from book

| **No\_Of\_Books** |
| --- |
| 10 |

e) Display the names of the borrowers who have issued books written by G.Morrison.

select name from (select \* from borrower,borrows,book where borrower.id=borrows.b\_id and borrows.book\_id=book.id) where author='G.Morrison'

| **NAME** |
| --- |
| Ram |
| Jodu |
| Modon |

f) select title,author from (select \* from borrower,borrows,book where borrower.id=borrows.b\_id and borrows.book\_id=book.id) where b\_id='BR3'

| **TITLE** | **AUTHOR** |
| --- | --- |
| A Study of History | G.Morrison |
| Mind, Self and Society | George |
| The Socio Imagination | Wright |
| The School of Life | Alain |

**—----------THE END—------------**

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