1. **Show those departments that do not have any employee.**

SELECT ename, job, dname

FROM emp right outer join dept

on emp.deptno = dept.deptno

minus

SELECT ename, job, dname

FROM emp join dept

on emp.deptno = dept.deptno

|  |  |  |
| --- | --- | --- |
| **ENAME** | **JOB** | **DNAME** |
| - | - | OPERATIONS |

1. **Show those employees that do not have any manager.**

SELECT e.ename "Emplyee", m.ename "manager"

FROM emp e left outer join emp m

on e.mgr=m.empno

minus

SELECT e.ename "Emplyee", m.ename "manager"

FROM emp e join emp m

on e.mgr=m.empno

|  |  |
| --- | --- |
| **Emplyee** | **manager** |
| KING | - |

1. **Show the manager of each employee.**

SELECT e.ename "Emplyee", m.ename "manager"

FROM emp e join emp m

on e.mgr=m.empno

|  |  |
| --- | --- |
| **Emplyee** | **manager** |
| SCOTT | JONES |
| FORD | JONES |
| ALLEN | BLAKE |
| WARD | BLAKE |
| MARTIN | BLAKE |
| TURNER | BLAKE |
| JAMES | BLAKE |
| ADAMS | SCOTT |
| JONES | KING |
| BLAKE | KING |
| CLARK | KING |
| SMITH | FORD |

1. **Show the employees of Sales department.**

SELECT e.ename,d.dname

FROM emp e, dept d

WHERE e.deptno = d.deptno and d.dname='SALES'

|  |  |
| --- | --- |
| **ENAME** | **DNAME** |
| ALLEN | SALES |
| WARD | SALES |
| MARTIN | SALES |
| BLAKE | SALES |
| TURNER | SALES |
| JAMES | SALES |

1. **Your query should show like each employee works in every department.**

select ename||' works in '||dname ||' Department' as "result" from emp,dept

order by ename

|  |
| --- |
| **result** |
| ADAMS works in RESEARCH Department |
| ADAMS works in OPERATIONS Department |
| ADAMS works in ACCOUNTING Department |
| ADAMS works in SALES Department |
| ALLEN works in OPERATIONS Department |

1. **Get the total salary of Sales Department.**

SELECT emp.deptno ,sum(sal)

FROM emp , dept

WHERE emp.deptno = dept.deptno and dept.dname='SALES'

group by emp.deptno

|  |  |
| --- | --- |
| **DEPTNO** | **MAX(SAL)** |
| 30 | 2850 |
| 10 | 5000 |
| 20 | 3000 |

1. **Get the no. of employees of Sales Department.**

SELECT emp.deptno ,count(\*) FROM emp , dept

WHERE emp.deptno = dept.deptno and dept.dname='SALES'

group by emp.deptno

|  |  |
| --- | --- |
| **DEPTNO** | **COUNT(\*)** |
| 30 | 6 |

1. **Get the lowest salaries of all the departments from dept table.**

SELECT emp.deptno ,min(sal)

FROM emp , dept

WHERE emp.deptno = dept.deptno

group by emp.deptno

|  |  |
| --- | --- |
| **DEPTNO** | **MIN(SAL)** |
| 30 | 950 |
| 10 | 2450 |
| 20 | 800 |

1. **Get the name of Clark’s manager.**

SELECT e.ename as "Emplyeee",m.ename as " manager"

FROM emp e, emp m

WHERE e.mgr=m.empno and e.ename='CLARK'

|  |  |
| --- | --- |
| **Emplyeee** | **manager** |
| CLARK | KING |

1. **Show the output like “ Smith is the Clerk of Sales Department with salary 1600 from NewYork.”**

SELECT e.ename ||' is the '||e.job ||' of ' || d.dname ||

' Department with salary '|| sal || ' from ' || d.loc as "output"

FROM emp e join dept d

on e.deptno=d.deptno

|  |
| --- |
| **output** |
| SMITH is the CLERK of RESEARCH Department with salary 800 from DALLAS |
| ALLEN is the SALESMAN of SALES Department with salary 1600 from CHICAGO |
| WARD is the SALESMAN of SALES Department with salary 1250 from CHICAGO |
| JONES is the MANAGER of RESEARCH Department with salary 2975 from DALLAS |
| MARTIN is the SALESMAN of SALES Department with salary 1250 from CHICAGO |
| BLAKE is the MANAGER of SALES Department with salary 2850 from CHICAGO |
| CLARK is the MANAGER of ACCOUNTING Department with salary 2450 from NEW YORK |
| SCOTT is the ANALYST of RESEARCH Department with salary 3000 from DALLAS |
| KING is the PRESIDENT of ACCOUNTING Department with salary 5000 from NEW YORK |
| TURNER is the SALESMAN of SALES Department with salary 1500 from CHICAGO |
| ADAMS is the CLERK of RESEARCH Department with salary 1100 from DALLAS |
| JAMES is the CLERK of SALES Department with salary 950 from CHICAGO |
| FORD is the ANALYST of RESEARCH Department with salary 3000 from DALLAS |

11. **Dsiplay ename, job, deptno, dname from emp and dept table using left outer join**

SELECT e.ename,e.job, d.deptno, d.dname,d.loc

FROM emp e left outer join dept d

on e.deptno = d.deptno

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ENAME** | **JOB** | **DEPTNO** | **DNAME** | **LOC** |
| CLARK | MANAGER | 10 | ACCOUNTING | NEW YORK |
| KING | PRESIDENT | 10 | ACCOUNTING | NEW YORK |
| SMITH | CLERK | 20 | RESEARCH | DALLAS |
| JONES | MANAGER | 20 | RESEARCH | DALLAS |
| SCOTT | ANALYST | 20 | RESEARCH | DALLAS |
| ADAMS | CLERK | 20 | RESEARCH | DALLAS |
| FORD | ANALYST | 20 | RESEARCH | DALLAS |
| ALLEN | SALESMAN | 30 | SALES | CHICAGO |
| WARD | SALESMAN | 30 | SALES | CHICAGO |
| MARTIN | SALESMAN | 30 | SALES | CHICAGO |
| BLAKE | MANAGER | 30 | SALES | CHICAGO |
| TURNER | SALESMAN | 30 | SALES | CHICAGO |
| JAMES | CLERK | 30 | SALES | CHICAGO |

12.**Dsiplay ename, job, deptno, dname from emp and dept table using rightouter join.**

SELECT e.ename,e.job, d.deptno, d.dname,d.loc

FROM emp e right outer join dept d

on e.deptno = d.deptno

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ENAME** | **JOB** | **DEPTNO** | **DNAME** | **LOC** |
| SMITH | CLERK | 20 | RESEARCH | DALLAS |
| ALLEN | SALESMAN | 30 | SALES | CHICAGO |
| WARD | SALESMAN | 30 | SALES | CHICAGO |
| JONES | MANAGER | 20 | RESEARCH | DALLAS |
| MARTIN | SALESMAN | 30 | SALES | CHICAGO |
| BLAKE | MANAGER | 30 | SALES | CHICAGO |
| CLARK | MANAGER | 10 | ACCOUNTING | NEW YORK |
| SCOTT | ANALYST | 20 | RESEARCH | DALLAS |
| KING | PRESIDENT | 10 | ACCOUNTING | NEW YORK |
| TURNER | SALESMAN | 30 | SALES | CHICAGO |
| ADAMS | CLERK | 20 | RESEARCH | DALLAS |
| JAMES | CLERK | 30 | SALES | CHICAGO |
| FORD | ANALYST | 20 | RESEARCH | DALLAS |
| - | - | 40 | OPERATIONS | BOSTON |

13. **Create a query that will display the total number of employees and, the number of employees hired in 1981, 1982, and 1987. Create appropriate column headings.**

select count(ename) "total emp",

count(case when to\_char(hiredate,'yyyy') = '1985' then hiredate end) as "emp hired in 1985",

count(case when to\_char(hiredate,'yyyy') = '1982' then hiredate end) "emp hired in 1982",

count(case when to\_char(hiredate,'yyyy') = '1983' then hiredate end) "emp hired in 1983"

from emp

|  |  |  |  |
| --- | --- | --- | --- |
| **total emp** | **emp hired in 1985** | **emp hired in 1982** | **emp hired in 1983** |
| 13 | 0 | 1 | 1 |

**14.Create a query to display the job, the salary for that job based on the department number and the total salary for that job for all the departments.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **JOB** | | **dept10** | **dept20** | **dept30** | **Total** |
| CLERK | | - | 1900 | 950 | 2850 |
| SALESMAN | | - | - | 5600 | 5600 |
| ANALYST | | - | 6000 | - | 6000 |
| MANAGER | | 2450 | 2975 | 2850 | 8275 |
| PRESIDENT | | 5000 | - | - | 5000 |
| 5 | |  |

15. **Display all the employees names and hire dates along with their managers name and hire date for all the employees who were hired before their managers.**

SELECT e.ename, e.hiredate,m.ename ,m.hiredate

FROM emp e

join dept d on e.deptno = d.deptno

join emp m on e.mgr = m.empno

where e.hiredate < m.hiredate

|  |  |  |  |
| --- | --- | --- | --- |
| **ENAME** | **hiredate** | **MGR name** | **hiredate** |
| ALLEN | 20 FEB, 1981 | BLAKE | 1 MAY, 1981 |
| WARD | 22 FEB, 1981 | BLAKE | 1 MAY, 1981 |
| JONES | 2 APR, 1981 | KING | 17 NOV, 1981 |

**16. Write a query to display the department name, location name, number of employees and the average salary for all the employees in that department. Round the salary to two decimal points.**

select dname ,loc ,count(\*) "Num of emp",round(avg(sal),2) "Avg sal" from emp join dept

on emp.deptno=dept.deptno

group by dname,loc

|  |  |  |  |
| --- | --- | --- | --- |
| **DNAME** | **LOC** | **Num of emp** | **Avg sal** |
| RESEARCH | DALLAS | 5 | 2175 |
| ACCOUNTING | NEW YORK | 2 | 3725 |
| SALES | CHICAGO | 6 | 1566.67 |

17**. Write a query to display the name ,deptno ,sal for those employees who gets more salary than the employee whose empno is 7521.**

select ename,deptno,sal from emp

where sal>(select sal from emp where empno=7499 )

|  |  |  |
| --- | --- | --- |
| **ENAME** | **DEPTNO** | **SAL** |
| JONES | 20 | 2975 |
| BLAKE | 30 | 2850 |
| CLARK | 10 | 2450 |
| SCOTT | 20 | 3000 |
| KING | 10 | 5000 |
| FORD | 20 | 3000 |

**18. Find the manager of Smith.**

SELECT e.ename as "Emplyeee",m.ename as " manager"

FROM emp e, emp m

WHERE e.mgr=m.empno and e.ename='SMITH'

|  |  |
| --- | --- |
| **Emplyeee** | **manager** |
| SMITH | FORD |

**19. Find the job which has the highest average salary**

SELECT  job from emp

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

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

**20. Find all employees who have the same job as JONES.**

SELECT  \* from emp

where job=(select job from emp where ename='JONES') and ename!='JONES'

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |