Friday, 12 April 2024

Experiment No. – 05

a) List the employees belonging to the department 20.

```
SQL> SELECT emp1.ename , emp1.sal FROM emp1 INNER JOIN dept ON emp1.Deptno = dept.Deptno WHERE dept.Deptno = 20;

ENAME            SAL
---------- ----------
SMITH             800
JONES            2975
SCOTT            3000
ADAMS            1100
FORD             3000
```

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

```
SQL> SELECT emp1.ename , emp1.sal FROM emp1 INNER JOIN dept ON emp1.Deptno = dept.Deptno WHERE emp1.sal>10

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

ENAME            SAL
---------- ----------
MILLER           1300

12 rows selected.
```

Or

```
SQL> select ename,sal from  emp1 where sal>1000;

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

ENAME            SAL
---------- ----------
MILLER           1300

12 rows selected.
```

c) List the employee number and the name of the manager.

```
SQL> select empno, ename from emp1 where job='MANAGER';

     EMPNO ENAME
---------- ----------
      7566 JONES
      7698 BLAKE
      7782 CLARK
```

d) List the names of the clerks working in the department 20.

```
SQL> SELECT ename from emp1 inner join dept on emp1.deptno=dept.deptno where job='CLERK'and dept.deptno=20;

ENAME
----------
SMITH
ADAMS
```

e) List the name of the analysts and salesman.

```
SQL> select ename from emp1 where job='ANALYST' OR JOb='SALESMAN';

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

6 rows selected.
```

f) List the details of the employees who have joined before the end of September 81.

```
SQL> select * from emp1 where hiredate<'01-oct-1981';

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7369 SMITH      CLERK           7902 17-DEC-80        800                    20
      7499 ALLEN      SALESMAN        7698 20-FEB-81       1600        300         30
      7521 WARD       SALESMAN        7698 22-FEB-81       1250        500         30
      7566 JONES      MANAGER         7839 02-APR-81       2975                    20
      7654 MARTIN     SALESMAN        7698 28-SEP-81       1250       1400         30
      7698 BLAKE      MANAGER         7839 01-MAY-81       2850                    30
      7782 CLARK      MANAGER         7839 09-JUN-81       2450                    10
      7844 TURNER     SALESMAN        7698 08-SEP-81       1500                    30

8 rows selected.
```

g) List the names of the employees ho are not managers.

```
SQL> select * from emp1 where job<>'MANAGER';

     EMPNO ENAME      JOB              MGR HIREDATE         SAL       COMM     DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7369 SMITH      CLERK           7902 17-DEC-80        800                    20
      7499 ALLEN      SALESMAN        7698 20-FEB-81       1600        300         30
      7521 WARD       SALESMAN        7698 22-FEB-81       1250        500         30
      7654 MARTIN     SALESMAN        7698 28-SEP-81       1250       1400         30
      7788 SCOTT      ANALYST         7566 09-DEC-82       3000                    20
      7839 KING       PRESIDENT            17-NOV-81       5000                    10
      7844 TURNER     SALESMAN        7698 08-SEP-81       1500                    30
      7876 ADAMS      CLERK           7788 12-JAN-83       1100                    20
      7900 JAMES      CLERK           7698 03-DEC-81        950                    30
      7902 FORD       ANALYST         7566 03-DEC-81       3000                    20
      7934 MILLER     CLERK           7782 23-JAN-82       1300                    10

11 rows selected.
```

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

```
SQL> select empno ,ename from emp1 where empno in(7369,7521,7839,7934,7788);

     EMPNO ENAME
---------- ----------
      7369 SMITH
      7521 WARD
      7788 SCOTT
      7839 KING
      7934 MILLER
```

i) List the employee details not belonging to the department 10,30 and 40.

```
SQL> select empno ,ename from emp1 join dept on emp1.deptno=dept.deptno where emp1.deptno not in(10,30,40);

     EMPNO ENAME
---------- ----------
      7369 SMITH
      7566 JONES
      7788 SCOTT
      7876 ADAMS
      7902 FORD
```

j) List the employee names who have joined before 30th June’81 and after December ’81.

```
SQL> select ename , hiredate from emp1 where hiredate<'30-JUN-1981' or hiredate>'31-dec-1981';

ENAME      HIREDATE
---------- ---------
SMITH      17-DEC-80
ALLEN      20-FEB-81
WARD       22-FEB-81
JONES      02-APR-81
BLAKE      01-MAY-81
CLARK      09-JUN-81
SCOTT      09-DEC-82
ADAMS      12-JAN-83
MILLER     23-JAN-82

9 rows selected.
```

k) List the name of the employee and designation (job) of the employee who does not report to anybody (who doesn't have manager).

```
SQL> SELECT e1.Ename, e1.job FROM Emp1 e1 LEFT JOIN emp1 e2 ON e1.Mgr = e2.Empno WHERE e2.Empno IS NULL;

ENAME      JOB
---------- ---------
KING       PRESIDENT
```

Or

```
SQL> select ename ,job from emp1 where mgr is null;

ENAME      JOB
---------- ---------
KING       PRESIDENT
```

l) List the different jobs (designations) available in the emp table.

```
SQL> SELECT DISTINCT job FROM emp1;

JOB
---------
CLERK
SALESMAN
MANAGER
ANALYST
PRESIDENT
```

m)List the employees not assigned to any department.

```
SQL> select ename from emp1 where deptno is null;

no rows selected

SQL> SELECT e.EName, e.job FROM Emp1 e LEFT JOIN Dept d ON e.Deptno = d.deptno WHERE d.deptno IS NULL;

no rows selected
```

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

```
SQL> select ename ,sal from emp1 where sal>2000 and comm is null;

ENAME             SAL
---------- ----------
JONES            2975
BLAKE            2850
CLARK            2450
SCOTT            3000
KING             5000
FORD             3000

6 rows selected.
```

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

```
SQL> SELECT ename FROM emp1 WHERE SUBSTR(ename, 2, 1) = 'I';

ENAME
----------
KING
MILLER
```

p) List the name, salary and PF amount of all the employees (PF is calculated as 10% of salary).

```
SQL> select ename,sal,sal*0.10 as PF_AMOUNT from emp1;

ENAME             SAL  PF_AMOUNT
---------- ---------- ----------
SMITH             800         80
ALLEN            1600        160
WARD             1250        125
JONES            2975      297.5
MARTIN           1250        125
BLAKE            2850        285
CLARK            2450        245
SCOTT            3000        300
KING             5000        500
TURNER           1500        150
ADAMS            1100        110

ENAME             SAL  PF_AMOUNT
---------- ---------- ----------
JAMES             950         95
FORD             3000        300
MILLER           1300        130

14 rows selected.
```

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

```
SQL> select empno,ename,sal from emp1 order by sal asc;

     EMPNO ENAME             SAL
---------- ---------- ----------
      7369 SMITH              800
      7900 JAMES              950
      7876 ADAMS             1100
      7521 WARD              1250
      7654 MARTIN            1250
      7934 MILLER            1300
      7844 TURNER            1500
      7499 ALLEN             1600
      7782 CLARK             2450
      7698 BLAKE             2850
      7566 JONES             2975

     EMPNO ENAME             SAL
---------- ---------- ----------
      7788 SCOTT             3000
      7902 FORD              3000
      7839 KING              5000

14 rows selected.
```

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

```
SQL> select ename,hiredate from emp1 order by hiredate desc;

ENAME      HIREDATE
---------- ---------
ADAMS      12-JAN-83
SCOTT      09-DEC-82
MILLER     23-JAN-82
FORD       03-DEC-81
JAMES      03-DEC-81
KING       17-NOV-81
MARTIN     28-SEP-81
TURNER     08-SEP-81
CLARK      09-JUN-81
BLAKE      01-MAY-81
JONES      02-APR-81

ENAME      HIREDATE
---------- ---------
WARD       22-FEB-81
ALLEN      20-FEB-81
SMITH      17-DEC-80

14 rows selected.
```

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s) List the employee name, salary, PF, HRA, DA and gross salary;order the result in ascending order of gross.HRA is 50% of salary and DA is 30% of salary.

```
SQL> select ename,sal,sal*0.10 as PF ,sal*0.50 as hra , sal*0.30 as DA,(sal*0.10)+(sal*0.50)+(sal*0.30)+sal as gross_salary FROM Emp1 order by gross
_salary asc;

ENAME             SAL         PF        HRA         DA GROSS_SALARY
---------- ---------- ---------- ---------- ---------- ------------
SMITH             800         80        400        240         1520
JAMES             950         95        475        285         1805
ADAMS            1100        110        550        330         2090
WARD             1250        125        625        375         2375
MARTIN           1250        125        625        375         2375
MILLER           1300        130        650        390         2470
TURNER           1500        150        750        450         2850
ALLEN            1600        160        800        480         3040
CLARK            2450        245       1225        735         4655
BLAKE            2850        285       1425        855         5415
JONES            2975      297.5     1487.5      892.5       5652.5

ENAME             SAL         PF        HRA         DA GROSS_SALARY
---------- ---------- ---------- ---------- ---------- ------------
SCOTT            3000        300       1500        900         5700
FORD             3000        300       1500        900         5700
KING             5000        500       2500       1500         9500

14 rows selected.

SQL>
```

t) 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.

```
SQL> SELECT d.deptno, SUM(e.sal) AS total_salary FROM emp1 e JOIN dept d ON e.deptno = d.deptno GROUP BY d.deptno ORDER BY total_salary DESC;

    DEPTNO TOTAL_SALARY
---------- ------------
        20        10875
        30         9400
        10         8750
```

u) List the total salary, maximum, minimum and average salary of the employee's job wise.

```
SQL> SELECT JOB, SUM(SAL) AS TotalSalary, MAX(SAL) AS MaxSalary, MIN(SAL) AS MinSalary, AVG(SAL) AS AvgSalary FROM emp1 GROUP BY JOB;

JOB       TOTALSALARY  MAXSALARY  MINSALARY  AVGSALARY
--------- ----------- ---------- ---------- ----------
CLERK            4150       1300        800     1037.5
SALESMAN         5600       1600       1250       1400
MANAGER          8275       2975       2450 2758.33333
ANALYST          6000       3000       3000       3000
PRESIDENT        5000       5000       5000       5000
```

v) List the average salary from each job excluding manager.

```
SQL> SELECT JOB, AVG(SAL) AS AverageSalary FROM emp1 WHERE JOB <> 'MANAGER' GROUP BY JOB ORDER BY AverageSalary;

JOB       AVERAGESALARY
--------- -------------
CLERK            1037.5
SALESMAN           1400
ANALYST            3000
PRESIDENT          5000
```

w) List the average monthly salary for each job type within department.

```
SQL> SELECT DEPTNO,job, AVG(sal) AS average_monthly_salary FROM emp1 GROUP BY DEPTNO, job;

    DEPTNO JOB       AVERAGE_MONTHLY_SALARY
---------- --------- ----------------------
        20 CLERK                        950
        30 SALESMAN                    1400
        20 MANAGER                     2975
        30 MANAGER                     2850
        10 MANAGER                     2450
        20 ANALYST                     3000
        10 PRESIDENT                   5000
        30 CLERK                        950
        10 CLERK                       1300

9 rows selected.
```

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

```
SQL> SELECT DEPTNO, AVG(SAL) AS AverageSalary FROM EMP1 GROUP BY DEPTNO HAVING COUNT(EMPNO) > 5;

    DEPTNO AVERAGESALARY
---------- -------------
        30    1566.66667
```

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

```
SQL> SELECT DISTINCT JOB FROM EMP1 WHERE SAL>=3000;

JOB
---------
ANALYST
PRESIDENT
```

z) 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.

```
SQL> SELECT JOB, SUM(SAL) AS TotalSalary, MAX(SAL) AS MaxSalary, MIN(SAL) AS MinSalary, AVG(SAL) AS AvgSalary FROM emp1 WHERE DEPTNO=20 GROUP BY JOB
 HAVING AVG(SAL)>1000;

JOB       TOTALSALARY  MAXSALARY  MINSALARY  AVGSALARY
--------- ----------- ---------- ---------- ----------
MANAGER          2975       2975       2975       2975
ANALYST          6000       3000       3000       3000
```