**Fundamental of Database(CMPS352)**

**Homework #1 Solution**

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| --- | --- |
| **Student Name** |  |
| **ID Number** |  |
| **Total (100)** |  |

**Collect your answers to one text file.**

* Submit a printed copy to you instructor before the deadline.
* Submit a softcopy online to Blackboard.

**Using the database we learned in the laboratory. Write the SQL queries for all the following questions.**

1. Show the structure of the DEPT table.
2. Create a query to display the name, job, hire date, and employee number for each employee, with employee number appearing first.
3. Display the employee name and department number of all employees in departments 10 and 30 in alphabetical order by name.
4. Display the name of all employees who have two L’s in their name and are in department 30 or their manager is 7782.
5. Display the name, job, and salary for all employees whose job is Clerk or Analyst and their salary is not equal to $1000, $3000, or $5000
6. Display the employee number, name, salary, and salary increase by 15% expressed as a whole number. Label the column New Salary.
7. Display the minimum, maximum, sum, and average salary for each job type.
8. Determine the number of managers without listing them. Label the column Number of Managers.
9. Display the name, department number, and salary of any employee whose salary and commission match the salary and commission of any employee located in Dallas.
10. Create a query to display the name, hire date, and salary for all employees who have both the same salary and commission as Scott. Note: Do not display SCOTT in the result set.

1. SQL> desc dept

Name Null? Type

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DEPTNO NOT NULL NUMBER(2)

DNAME VARCHAR2(14)

LOC VARCHAR2(13)

2. SQL> select empno,ename,job,hiredate from emp ;

EMPNO ENAME JOB HIREDATE

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7369 SMITH CLERK 17-DEC-80

7499 ALLEN SALESMAN 20-FEB-81

7521 WARD SALESMAN 22-FEB-81

7566 JONES MANAGER 02-APR-81

7654 MARTIN SALESMAN 28-SEP-81

7698 BLAKE MANAGER 01-MAY-81

7782 CLARK MANAGER 09-JUN-81

7788 SCOTT ANALYST 19-APR-87

7839 KING PRESIDENT 17-NOV-81

7844 TURNER SALESMAN 08-SEP-81

7876 ADAMS CLERK 23-MAY-87

EMPNO ENAME JOB HIREDATE

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7900 JAMES CLERK 03-DEC-81

7902 FORD ANALYST 03-DEC-81

7934 MILLER CLERK 23-JAN-82

14 rows selected.

3. SQL> select ename,deptno from emp where deptno in (10,30) order by ename;

ENAME DEPTNO

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ALLEN 30

BLAKE 30

CLARK 10

JAMES 30

KING 10

MARTIN 30

MILLER 10

TURNER 30

WARD 30

9 rows selected.

4. SQL> select ename from emp where ename like '%L%L%' and deptno = 30 or mgr=7782;

ENAME

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ALLEN

MILLER

5. SQL> select ename,job,sal from emp where job='CLERK' or Job='ANALYST' and sal not in (1000,3000,5000);

ENAME JOB SAL

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SMITH CLERK 800

ADAMS CLERK 1100

JAMES CLERK 950

MILLER CLERK 1300

6. SQL> select empno,ename,sal, round(sal\*0.15+sal,0) newSalary from emp;

EMPNO ENAME SAL NEWSALARY

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7369 SMITH 800 920

7499 ALLEN 1600 1840

7521 WARD 1250 1438

7566 JONES 2975 3421

7654 MARTIN 1250 1438

7698 BLAKE 2850 3278

7782 CLARK 2450 2818

7788 SCOTT 3000 3450

7839 KING 5000 5750

7844 TURNER 1500 1725

7876 ADAMS 1100 1265

EMPNO ENAME SAL NEWSALARY

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7900 JAMES 950 1093

7902 FORD 3000 3450

7934 MILLER 1300 1495

14 rows selected.

7. SQL> select job,max(sal), min(sal), sum(sal),avg(sal) from emp group by job;

JOB MAX(SAL) MIN(SAL) SUM(SAL) AVG(SAL)

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CLERK 1300 800 4150 1037.5

SALESMAN 1600 1250 5600 1400

PRESIDENT 5000 5000 5000 5000

MANAGER 2975 2450 8275 2758.33333

ANALYST 3000 3000 6000 3000

8. SQL> select count(distinct mgr) noofmanager from emp;

NOOFMANAGER

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6

9. SQL> select ename,hiredate,sal from emp

2 where (sal,nvl(comm,0)) in (select e.sal,nvl(e.comm,0) from emp e, dept d where d.deptno=e.deptno and d.loc='DALLAS');

ENAME HIREDATE SAL

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JONES 02-APR-81 2975

FORD 03-DEC-81 3000

SCOTT 19-APR-87 3000

ADAMS 23-MAY-87 1100

SMITH 17-DEC-80 800

10. SQL> select ename,hiredate,sal from emp

2 where (sal,nvl(comm,0)) in (select sal,nvl(comm,0) from emp where ename='SCOTT') and ename<>'SCOTT';

ENAME HIREDATE SAL

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FORD 03-DEC-81 3000