ASSIGNMENT – 03

1. Count the total number of orders.

```
SQL> SELECT COUNT(*) AS total_orders FROM Sales_order;

TOTAL_ORDERS
------------
           6
```

1. Calculate the average sale price of all the products.

```
SQL> SELECT AVG(sell_price) AS average_sale_price FROM Product_master;

AVERAGE_SALE_PRICE
------------------
        3663.88889
```

2. Calculate the average sale price of all the products.

```
SQL> SELECT COUNT(*) AS no_of_products FROM Product_master WHERE Sell_price>=1500;

NO_OF_PRODUCTS
--------------
             4
```

3. Determine the maximum and minimum product prices. Rename the output as max_price and min_price respectively.

```
SQL> SELECT MAX(sell_price) AS max_price,MIN(sell_price) AS min_price FROM Product_master;

 MAX_PRICE  MIN_PRICE
---------- ----------
     12000        525
```

5. Create the following tables and insert the data as mentioned below:

a) Emp table –

```
SQL> CREATE TABLE EMP
(EMPNO NUMBER(4,0) NOT NULL,
 ENAME VARCHAR2(10),
 JOB VARCHAR2(9),
 MGR NUMBER(4,0),
 HIREDATE DATE,
 SAL NUMBER(7,2),
 COMM NUMBER(7,2),
 DEPTNO NUMBER(2,0) NOT NULL);
```

Table created.

SQL> DESC Emp;

```
Name                  Null?    Type
--------------------- -------- ---------------
EMPNO                 NOT NULL NUMBER(4)
ENAME                          VARCHAR2(10)
JOB                            VARCHAR2(9)
MGR                            NUMBER(4)
HIREDATE                       DATE
SAL                            NUMBER(7,2)
COMM                           NUMBER(7,2)
DEPTNO                NOT NULL NUMBER(2)
```

Data in Emp table [Value absent means NULL]-

```
SQL> INSERT ALL
 INTO Emp VALUES(7369,'SMITH','CLERK',7902,'17-DEC-80',800,NULL,20)
 INTO Emp VALUES(7499,'ALLEN','SALESMAN',7698,'20-FEB-81',1600,300,30)
 INTO Emp VALUES(7521,'WARD','SALESMAN',7698,'22-FEB-81',1250,500,30)
 INTO Emp VALUES(7566,'JONES','MANAGER',7839,'02-APR-81',2975,Null,20)
 INTO Emp VALUES(7654,'MARTIN','SALESMAN',7698,'28-SEP-81',1250,1400,30)
 INTO Emp VALUES(7698,'BLAKE','MANAGER',7839,'01-MAY-81',2850,Null,30)
 INTO Emp VALUES(7782,'CLARK','MANAGER',7839,'09-JUN-81',2450,Null,10)
 INTO Emp VALUES(7788,'SCOTT','ANALYST',7566,'19-APR-87',3000,Null,20)
 INTO Emp VALUES(7839,'KING','PRESIDENT',Null,'17-NOV-81',5000,Null,10)
 INTO Emp VALUES(7844,'TURNER','SALESMAN',7698,'08-SEP-81',1500,0,30)
 INTO Emp VALUES(7876,'ADAMS','CLERK',7788,'23-MAY-87',1100,Null,20)
 INTO Emp VALUES(7900,'JAMES','CLERK',7698,'03-DEC-81',950,Null,30)
 INTO Emp VALUES(7902,'FORD','ANALYST',7566,'03-DEC-81',3000,Null,20)
 INTO Emp VALUES(7934,'MILLER','CLERK',7782,'23-JAN-82',1300,Null,10)
SELECT * FROM dual;
```

14 rows created.

SQL> SELECT * FROM Emp;

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
7788	SCOTT	ANALYST	7566	19-APR-87	3000		20
7839	KING	PRESIDENT		17-NOV-81	5000		10
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7876	ADAMS	CLERK	7788	23-MAY-87	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

14 rows selected.

14 rows selected.

b) Dept table:

```
SQL> CREATE TABLE Dept
        (DEPTNO NUMBER(2,0) NOT NULL,
         DNAME VARCHAR2(14) NOT NULL,
         LOC VARCHAR2(13) NOT NULL);
```

Table created.

SQL> DESC Dept;

Name	Null?	Type
DEPTNO	NOT NULL	NUMBER(2)
DNAME	NOT NULL	VARCHAR2(14)
LOC	NOT NULL	VARCHAR2(13)

Data in Dept table :

```
SQL> INSERT ALL
        INTO Dept VALUES(10,'ACCOUNTING','NEW YORK')
        INTO Dept VALUES(20,'RESEARCH','DALLAS')
        INTO Dept VALUES(30,'SALES','CHICAGO')
        INTO Dept VALUES(40,'OPERATIONS','BOSTON')
SELECT * FROM dual;
```

4 rows created.

SQL> SELECT * FROM Dept;

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

c) Salgrade table

```
SQL> CREATE TABLE Salgrade
        (GRADE NUMBER,
         LOSAL NUMBER,
         HISAL NUMBER);
```

Table created.

SQL> DESC Salgrade;

Name	Null?	Type
GRADE		NUMBER
LOSAL		NUMBER
HISAL		NUMBER

Data in Salgrade table:

```
SQL> INSERT ALL
INTO Salgrade VALUES(1, 700, 1200)
INTO Salgrade VALUES(2, 1201, 1400)
INTO Salgrade VALUES(3, 1401, 2000)
INTO Salgrade VALUES(4, 2001, 3000)
INTO Salgrade VALUES(5, 3001, 9999)
SELECT * FROM dual;
```

5 rows created.

SQL> SELECT * FROM Salgrade;

GRADE	LOSAL	HISAL
1	700	1200
2	1201	1400
3	1401	2000
4	2001	3000
5	3001	9999

6. Solve the following SQL (DML) query use Emp and Dept table created above

a) List all department no, employee no, manager no. from emp table.

```
SQL> SELECT DEPTNO,ENAME,MGR FROM Emp;

    DEPTNO ENAME             MGR
---------- ---------- ----------
        20 SMITH            7902
        30 ALLEN            7698
        30 WARD             7698
        20 JONES            7839
        30 MARTIN           7698
        30 BLAKE            7839
        10 CLARK            7839
        20 SCOTT            7566
        10 KING
        30 TURNER           7698
        20 ADAMS            7788
        30 JAMES            7698
        20 FORD             7566
        10 MILLER           7782

14 rows selected.
```

b) List all department name and location from dept table.

```
SQL> SELECT DNAME, LOC FROM DEPT;

DNAME          LOC
-------------- -------------
ACCOUNTING     NEW YORK
RESEARCH       DALLAS
SALES          CHICAGO
OPERATIONS     BOSTON
```

c) List the employees belong to the department 20

```
SQL> SELECT ENAME FROM Emp WHERE DEPTNO=20;

ENAME
----------
SMITH
JONES
SCOTT
ADAMS
FORD
```

d) List the name and salary of the employee whose salary is more than 2500.

```
SQL> SELECT ENAME,SAL FROM Emp WHERE SAL>2500;

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

e) List the details of the employee who have joined before end of July 81.

```
SQL> SELECT * FROM Emp WHERE HIREDATE<'31-JULY-81';

     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
      7698 BLAKE      MANAGER         7839 01-MAY-81       2850                    30
      7782 CLARK      MANAGER         7839 09-JUN-81       2450                    10

6 rows selected.
```

f) List the name of the employees who are not manager.

```
SQL> SELECT ENAME FROM Emp WHERE JOB!='MANAGER';

ENAME
----------
SMITH
ALLEN
WARD
MARTIN
SCOTT
KING
TURNER
ADAMS
JAMES
FORD
MILLER

11 rows selected.
```

g) List the name of employees whose name end with ‘S’.

```
SQL> SELECT ENAME FROM Emp WHERE ENAME LIKE '%S';

ENAME
----------
JONES
ADAMS
JAMES
```

h) List the name of employees whose name has exactly 5 characters long.

```
SQL> SELECT ENAME FROM Emp WHERE LENGTH(ENAME)=5;

ENAME
----------
SMITH
ALLEN
JONES
BLAKE
CLARK
SCOTT
ADAMS
JAMES

8 rows selected.
```

i) List the name of employees whose name having ‘R’ as the third character.

```
SQL> SELECT ENAME FROM Emp WHERE ENAME LIKE '__R%';

ENAME
----------
WARD
MARTIN
TURNER
FORD
```

j) List all employee names and their salaries, whose salary lies between 1500/- and 3500/- both inclusive.

```
SQL> SELECT ENAME,SAL FROM Emp WHERE SAL BETWEEN 1500 AND 3500;

ENAME             SAL
---------- ----------
ALLEN            1600
JONES            2975
BLAKE            2850
CLARK            2450
SCOTT            3000
TURNER           1500
FORD             3000

7 rows selected.
```

k) List all employee names and their manager whose manager is 7902 or 7566 0r 7789.

```
SQL> SELECT ENAME,MGR FROM Emp WHERE MGR=7902 OR MGR=7566 OR MGR=7789;

ENAME              MGR
---------- ----------
SMITH             7902
SCOTT             7566
FORD              7566
```

l) List all employees which start with either J or T.

```
SQL> SELECT ENAME FROM Emp WHERE ENAME LIKE 'J%' OR ENAME LIKE 'T%';

ENAME
----------
JONES
TURNER
JAMES
```

m) List all employee names and jobs, whose job title includes M or P.

```
SQL> SELECT ENAME,JOB FROM Emp WHERE JOB LIKE '%M%' OR JOB LIKE '%P%';

ENAME      JOB
---------- ---------
ALLEN      SALESMAN
WARD       SALESMAN
JONES      MANAGER
MARTIN     SALESMAN
BLAKE      MANAGER
CLARK      MANAGER
KING       PRESIDENT
TURNER     SALESMAN

8 rows selected.
```

n) List all jobs available in employee table.

```
SQL> SELECT DISTINCT JOB FROM Emp;

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

o) List all employees who belong to the department 10 or 20.

```
SQL> SELECT ENAME FROM Emp WHERE DEPTNO=10 OR DEPTNO=20;

ENAME
----------
SMITH
JONES
CLARK
SCOTT
KING
ADAMS
FORD
MILLER

8 rows selected.
```

p) List all employee names, salary and 15% raise in salary.

```
SQL> SELECT ENAME,SAL ,1.15*SAL RAISED_SAL FROM Emp;

ENAME             SAL RAISED_SAL
---------- ---------- ----------
SMITH             800        920
ALLEN            1600       1840
WARD             1250     1437.5
JONES            2975    3421.25
MARTIN           1250     1437.5
BLAKE            2850     3277.5
CLARK            2450     2817.5
SCOTT            3000       3450
KING             5000       5750
TURNER           1500       1725
ADAMS            1100       1265
JAMES             950     1092.5
FORD             3000       3450
MILLER           1300       1495

14 rows selected.
```

q) List minimum, maximum, average salaries of employee.

```
SQL> SELECT MIN(SAL) MINIMUM_SAL,MAX(SAL) MAXMIMUM_SAL,AVG(SAL) FROM Emp;

MINIMUM_SAL MAXMIMUM_SAL   AVG(SAL)
----------- ------------ ----------
        800         5000 2073.21429
```

r) Find how many job titles are available in employee table.

```
SQL> SELECT COUNT(DISTINCT JOB) FROM Emp;

COUNT(DISTINCTJOB)
------------------
                 5
```

s) What is the difference between maximum and minimum salaries of employees in the organization?

```
SQL> SELECT MAX(SAL)-MIN(SAL) AS SALARY_DIFFERENCE FROM Emp;

SALARY_DIFFERENCE
-----------------
             4200
```

t) Find how much amount the company is spending towards salaries.

```
SQL> SELECT SUM(SAL) AS AMOUNT_SPENT FROM Emp;

AMOUNT_SPENT
------------
       29025
```

u) Display name of employees with deptno. 20.

```
SQL> SELECT ENAME  FROM Emp WHERE DEPTNO=20;

ENAME
----------
SMITH
JONES
SCOTT
ADAMS
FORD
```

v) List ename who are not eligible for commission.

```
SQL> SELECT ENAME FROM Emp WHERE COMM IS NULL;

ENAME
---------
SMITH
JONES
BLAKE
CLARK
SCOTT
KING
ADAMS
JAMES
FORD
MILLER

10 rows selected.
```

w) Find no.of dept in employee table.

```
SQL> SELECT COUNT(DISTINCT DEPTNO) FROM Emp;

COUNT(DISTINCTDEPTNO)
--------------------
                   3
```

x) List ename and designation of the employee who does not report to anybody.

```
SQL> SELECT ENAME,JOB FROM Emp WHERE MGR IS Null;

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

y) List the name of the employees who are less than 38 years old in the organization with respect to today's date.

```
SQL> SELECT ENAME,HIREDATE FROM Emp WHERE (SYSDATE-HIREDATE)/365<38;

ENAME      HIREDATE
---------- ---------
SCOTT      19-APR-87
ADAMS      23-MAY-87
```