SQL Assignment-4

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Subject: DBMS Lab

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ASSIGNMENT IV

Problem 1:

(a) Create EMP table with ECODE (Primary key), ENAME, DCODE, GRADE, BASIC & JN-DT as the columns. [Except BASIC & JN-DT, all columns are of char type and site of Grade is 1.]

(b) Insert number of rows.

- ## Solution:

SQL> CREATE TABLE EMP(

2   ECODE char(10) PRIMARY KEY,

3   ENAME char(30),

4   DCODE char(10),

5   GRADE char(1),

6   BASIC number,

7   JN_DT DATE);

Table created.

SQL> INSERT INTO EMP VALUES('E1', 'Priya', 'D2', 'B', 5000, '02-JAN2020');

1 row created.

SQL> INSERT INTO EMP VALUES('E2', 'Manish', 'D1', 'C', 5500, '02-JAN2020');

1 row created.

SQL> INSERT INTO EMP VALUES('E3', 'Akash', 'D2', 'B', 5500, '06-FEB2020');

1 row created.

SQL> INSERT INTO EMP VALUES('E4', 'Rachna', 'D4', 'A', 7000, '06-APR2019');

1 row created.

SQL> INSERT INTO EMP VALUES('E5', 'Rachna', 'D3', 'B', 7500, '10AUG-2019');

1 row created.

SQL> INSERT INTO EMP VALUES('E6', 'Ritu', 'D4', 'C', 6000, '12-SEP2019');

1 row created.

SQL> INSERT INTO EMP VALUES('E7', 'Aritra', 'D3', 'A',8000, '06-JAN2021');

1 row created.

SQL> INSERT INTO EMP VALUES('E8', 'Piyush', 'D2', 'C', 7500, '17-OCT2021');

1 row created.

SQL> INSERT INTO EMP VALUES('E9', 'Navin', 'D1', 'B', 6800, '13-MAR2020');

1 row created.

SQL> INSERT INTO EMP VALUES('E10', 'Pritha', 'D4', 'A', 8500, '12-JUN2019');

1 row created.

Problem 2:

Change the column heading as shown below, So that in subsequent SELECT statement newly set heading will be shown:

ECODE   EMPLOYEE CODE

ENAME   NAME

DCODE   DEPT.CODE   JN-DT

JONING DATE

- ## *Solution:*

```
SQL> COLUMN ECODE HEADING 'EMPLOYEE_CODE';
SQL> COLUMN ENAME HEADING 'NAME';
SQL> COLUMN DCODE HEADING 'DEPT_CODE';
SQL> COLUMN JN_DT HEADING 'JOINING DATE';
SQL> SELECT * FROM EMP;
```

EMPLOYEE_C	NAME	DEPT_CODE	G	BASIC	JOINING DATE
E1	Priya	D2	B	5000	02-JAN-20
E2	Manish	D1	C	5500	02-JAN-20
E3	Akash	D2	B	5500	06-FEB-20
E4	Rachna	D4	A	7000	06-APR-19
E5	Rachna	D3	B	7500	10-AUG-19
E6	Ritu	D4	C	6000	12-SEP-19
E7	Aritra	D3	A	8000	06-JAN-21
E8	Piyush	D2	C	7500	17-OCT-21
E9	Navin	D1	B	6800	13-MAR-20
E10	Pritha	D4	A	8500	12-JUN-19

10 rows selected.

- ## *Problem 3:*

  Set the format of columns as mentioned below, So that in subsequent SELECT statement, values appear in the specified format:

  *format of BASIC is such that a value of 7000 will be shown as 7,000

  *Format of GRADE will be such that full column name appears in the display.

  *For JN-DT format is such that 01-JAN-00 will be shown as JANURY 01, 2000.

- ## *Solution:*

  SQL> COLUMN BASIC FORMAT '99,999';
  SQL> COLUMN GRADE FORMAT A5;
  SQL> ALTER SESSION SET NLS_DATE_FORMAT = 'MONTH DD,YYYY';

  Session altered.

  SQL> SELECT * FROM EMP;

```
EMPLOYEE_C NAME   DEPT_CODE  GRADE  BASIC JOINING DATE
-----------------------------------------------------------------------------------
E1      Priya         D2     B    5,000                         JANUARY 02, 2020

E2      Manish        D1     C    5,500                         JANUARY 02, 2020

E3      Akash         D2     B    5,500                         FEBRUARY 06, 2020

E4      Rachna        D4     A    7,000                         APRIL 06, 2019

E5      Rachna        D3     B    7,500                         AUGUST 10, 2019

E6      Ritu          D4     C    6,000                         SEPTEMBER 12, 2019

E7      Aritra        D3     A    8,000                         JANUARY 06, 2021

E8      Piyush        D2     C    7,500                         OCTOBER 17, 2021

E9      Navin         D1     B    6,800                         MARCH 13, 2020

E10     Pritha        D4     A    8,500                         JUNE 12, 2019
```

10 rows selected.

Problem 4:

(a) Show the display attributes of all the columns.

(b) Show the display attributes of particular column.

(c) Suppress the newly set attributes of JN-DT .Try a select statement. (d) Reset the newly set attributes of JN-DT (e) Reset the newly set attributes of all columns.

(f) Shown the display attributes of all columns.

◻ Solution:

(a) SQL> COLUMN;

COLUMN   GRADE ON

FORMAT   A5

COLUMN   BASIC ON

FORMAT   99,999

```
COLUMN   JN_DT ON
HEADING 'JOINING DATE'


COLUMN   DCODE ON
HEADING 'DEPT_CODE'


COLUMN   ENAME ON
HEADING 'NAME'


COLUMN   ECODE ON
HEADING 'EMPLOYEE_CODE'


COLUMN   result_plus_xquery ON
HEADING 'Result Sequence'

COLUMN   other_plus_exp ON
FORMAT   a44


COLUMN   other_tag_plus_exp ON
FORMAT   a29


COLUMN   object_node_plus_exp ON
FORMAT   a8


COLUMN   plan_plus_exp ON
FORMAT   a60


COLUMN   parent_id_plus_exp ON
HEADING 'p'
FORMAT   990
```

```
COLUMN   id_plus_exp ON

HEADING  'i'

FORMAT   990


COLUMN   droptime_plus_show_recyc ON

HEADING  'DROP TIME'

FORMAT   a19


COLUMN   objtype_plus_show_recyc ON

HEADING  'OBJECT TYPE'

FORMAT   a12


COLUMN   objectname_plus_show_recyc ON

HEADING  'RECYCLEBIN NAME'
```

```
FORMAT  a30

   COLUMN  origname_plus_show_recyc ON
   HEADING  'ORIGINAL NAME'
   FORMAT  a16


   COLUMN  value_col_plus_show_param ON
   HEADING  'VALUE'
   FORMAT  a30


   COLUMN  name_col_plus_show_param ON
   HEADING  'NAME'
   FORMAT  a36


   COLUMN  units_col_plus_show_sga ON
   FORMAT  a15


   COLUMN  name_col_plus_show_sga ON
   FORMAT  a24


   COLUMN  ERROR ON FORMAT
   A65 word_wrap


   COLUMN  LINE/COL ON
   FORMAT  A8


   COLUMN  ROWLABEL ON
   FORMAT  A15
```

(b)

```
SQL> COLUMN JN_DT;
COLUMN   JN_DT ON
```

HEADING 'JOINING DATE'

(c) SQL> COLUMN JN_DT OFF;

SQL> SELECT * FROM EMP;

EMPLOYEE_C	NAME	DEPT_CODE	GRADE	BASIC	JN_DT
E1	Priya	D2	B	5,000	JANUARY 02, 2020
E2	Manish	D1	C	5,500	JANUARY 02, 2020
E3	Akash	D2	B	5,500	FEBRUARY 06, 2020
E4	Rachna	D4	A	7,000	APRIL 06, 2019
E5	Rachna	D3	B	7,500	AUGUST 10, 2019
E6	Ritu	D4	C	6,000	SEPTEMBER 12, 2019
E7	Aritra	D3	A	8,000	JANUARY 06, 2021
E8	Piyush	D2	C	7,500	OCTOBER 17, 2021
E9	Navin	D1	B	6,800	MARCH 13, 2020
E10	Pritha	D4	A	8,500	JUNE 12, 2019

10 rows selected.

(d) SQL> COLUMN JN_DT CLEAR;

SQL> SELECT * FROM EMP;

EMPLOYEE_C	NAME	DEPT_CODE	GRADE	BASIC	JN_DT
E1	Priya	D2	B	5,000	JANUARY 02, 2020
E2	Manish	D1	C	5,500	JANUARY 02, 2020
E3	Akash	D2	B	5,500	FEBRUARY 06,2020
E4	Rachna	D4	A	7,000	APRIL 06, 2019
E5	Rachna	D3	B	7,500	AUGUST 10,2019
E6	Ritu	D4	C	6,000	SEPTEMBER 12,2019
E7	Aritra	D3	A	8,000	JANUARY 06,2021

E8	Piyush	D2	C	7,500	OCTOBER 17, 2021
E9	Navin	D1	B	6,800	MARCH 13, 2020
			A	8,500	JUNE 12,2019
E10	Pritha	D4			

10 rows selected.

(e) SQL> CLEAR COLUMN; columns cleared

SQL> SELECT * FROM EMP;

ECODE	ENAME	DCODE	G	BASIC	JN_DT
E1	Priya	D2	B	5000	JANUARY 02, 2020
E2	Manish	D1	C	5500	JANUARY 02, 2020
E3	Akash	D2	B	5500	FEBRUARY 06,2020
E4	Rachna	D4	A	7000	APRIL 06,2019
E5	Rachna	D3	B	7500	AUGUST 10,2019
E6	Ritu	D4	C	6000	SEPTEMBER 12,2019
E7	Aritra	D3	A	8000	JANUARY 06 ,2021
E8	Piyush	D2	C	7500	OCTOBER 17,2021
E9	Navin	D1	B	6800	MARCH 13,2020
E10	Pritha	D4	A	8500	JUNE 12,2019

10 rows selected.

(f) SQL> COLUMN;

SP2-0045: * no COLUMN defined

□ *Problem 5:*

. (a) Show the records from EMP table in the ascending order of DCODE.

DCODE value will be shown only for the first record of that department
(same of DCODE is not repeated)

(b) Further take measures so that, after displaying the records of a department it skips one line.

(c)Further take measures so that records one also ordered on the basis of GRADE with in a department & same GRADE value is not repeated.

(d) Take measure so that at the end of each GRADE in a department it will show average Basic for that grade in that department. At the end of each department, it will show the average & total Basic for the department. At the end of all departments it will show the overall total basic & average basic.

☐ *Solution:*

(a) SQL> BREAK ON DCODE;
SQL> SELECT * FROM EMP ORDER BY DCODE ASC;

```
ECODE     ENAME              DCODE    G    BASIC JN_DT
--------- ----------------------------- ---------- - ---------- ---------
E2        Manish                D1       C       5500 02-JAN-------------4
E9        Navin                          B       6800 13-MAR ---------- 11
E1        Priya                 D2       B      5000 02-JAN ------------ 12
E3        Akash                          B       5500 06-FEB ---------- 12
E8        Piyush                         C       7500 17-OCT ---------- 12
E5        Rachna                D3       B       7500 10-AUG-19 E7
Aritra                         A       8000 06-JAN --------------------- 12


E10      Pritha          D4     A    8500 12-JUN-19
E4       Rachna                 A    7000 06-APR-19
E6       Ritu            C    6000 12-SEP-19
10 rows selected.
```

(b) SQL> BREAK ON DCODE SKIP 1;
SQL> SELECT * FROM EMP ORDER BY DCODE ASC;

```
        ECODE     ENAME  DCODE    G    BASIC                  JN_DT
--------- ----------------------------- ---------- - ---------- ---------------
          E2     Manish             D1    C    5500                  02-JAN-20
 E9       Navin                            B     6800        13-MAR-20
```

E1	Priya	D2	B	5000	02-JAN-20
E3	Akash		B	5500	06-FEB-20
E8	Piyush		C	7500	17-OCT-21
E5	Rachna	D3	B	7500	10-AUG-19
E7	Aritra		A	8000	06-JAN-21
E10	Pritha	D4	A	8500	12-JUN-19
E4	Rachna		A	7000	06-APR-19
E6	Ritu		C	6000	12-SEP-19

10 rows selected.

(c)

SQL> BREAK ON DCODE SKIP 1 ON GRADE;

SQL> SELECT * FROM EMP ORDER BY DCODE ASC, GRADE ASC;

ECODE   ENAME   DCODE   G   BASIC JN_DT

---------- ------------------------------ ---------- - ---------- --------- E9   Navin

D1   B   6800 13-MAR-20

E2   Manish   C   5500 02-JAN-20

E1   Priya   D2   B   5000 02-JAN-20

E3   Akash   5500 06-FEB-20

E8   Piyush   C   7500 17-OCT-21

E7   Aritra   D3   A   8000 06-JAN-21

E5   Rachna   B   7500 10-AUG-19

E10   Pritha   D4   A   8500 12-JUN-19

  E4   Rachna   7000 06-APR-19

```
    E6    Ritu                  C    6000 12-SEP-19
```

10 rows selected.

(d) SQL> COLUMN GRADE FORMAT A20;

SQL> BREAK ON DCODE SKIP 1 ON GRADE SKIP 1;

SQL> COMPUTE AVG LABEL 'AVG BASIC ON GRADE' OF BASIC ON GRADE;

SQL> SELECT * FROM EMP ORDER BY DCODE ASC, GRADE ASC;

```
        ECODE   ENAME   DCODE   GRADE   BASIC            JN_DT
---------- --------------------------------------------------------------
        E9    Navin      D1    B              6800        13-MAR-20

                    *******************     ----------
                      AVG BASIC ON GRADE   6800


        E2    Manish     D1    C              5500 02-JAN-20
                    *******************     ----------
                      AVG BASIC ON GRADE   5500
        E1    Priya      D2    B            5000        02-JAN-20
     E3    Akash                            5500        06-FEB-20
                    *******************     ----------
              AVG BASIC ON GRADE    5250
        E8    Piyush     D2    C            7500        17-OCT-21

              *******************    ----------
              AVG BASIC ON GRADE   7500


        E7    Aritra       D3    A            8000        06-JAN-21
```

```
                    *******************         ---------
          AVG BASIC ON GRADE 8000


      E5      Rachna          D3      B         7500          10-AUG-19
                    *******************         ---------
          AVG BASIC ON GRADE   7500


      E10     Pritha          D4      A         8500          12-JUN-19
  E4      Rachna                                7000          06-APR-19
                    *******************         ---------
          AVG BASIC ON GRADE   7750


      E6      Ritu            D4      C         6000          12-SEP-19
                    *******************         ---------
          AVG BASIC ON GRADE 6000
```

10 rows selected.

Overall Average and Overall total BASIC at the end of the table EMP:

SQL> BREAK ON REPORT SKIP 3 ON DCODE SKIP 3 ON GRADE SKIP 1;

SQL> COMPUTE AVG LABEL 'AVG BASIC ON GRADE' OF BASIC ON GRADE;

SQL> COMPUTE AVG LABEL "AVG BASIC ON DEPT" SUM LABEL "TOTAL BASIC ON DEPT" OF BASIC ON DCODE;

SQL> COMPUTE AVG LABEL "AVG BASIC" SUM LABEL "TOTAL BASIC" OF BASIC ON REPORT;

SQL> SELECT * FROM EMP ORDER BY DCODE ASC, GRADE ASC;

```
      ECODE   ENAME    DCODE   GRADE BASIC              JN_DT
--------- ----------------------------------------------------------------
      E9      Navin           D1      B         6800          13-MAR-20
                    ******************* ---------
```

AVG BASIC ON GRADE   6800

E2   Manish   D1   C   5500   02-JAN-20
                        ******************* ---------

AVG BASIC ON GRADE   5500
                    **********   ---------

                    AVG BASIC   6150

                    TOTAL BASIC   12300

E1   Priya   D2   B   5000   02-JAN-20
E3   Akash   5500   06-FEB-20
                    ******************   ---------

                    AVG BASIC ON GRADE 5250

E8   Piyush   D2   C   7500   17-OCT-
******************* ---------- AVG BASIC ON GRADE   7500

                    **********   ---------

                    AVG BASIC   6000

                    TOTAL BASIC   18000

E7   Aritra   D3   A   8000   06-JAN-21
                    *****************   ---------

AVG BASIC ON GRADE   8000

E5   Rachna   B   7500   10-AUG-19
                    ****

AVG BASIC ON GRADE 7500

                    ********   ---------

                    AVG BASIC   7750

                    TOTAL BASI   15500

E10   Pritha   D4   A   8500   12-JUN-19

```
    E4     Rachna                                    7000           06-APR-19
                        *****************        ----------
                        AVG BASIC ON GRADE            7750
    E6     Ritu        D4     C               6000           12-SEP-19
                        ******************       ----------
                        AVG BASIC ON GRADE      6000


                        *********                ----------
                        AVG BASIC                7166.66667
                        TOTAL BASIC              21500
```

10 rows selected.