Bahria University
Discovering Knowledge

# DBMS LAB
# LAB 4
# Malik Zohaib Mustafa
# 01-134192-030
# BSCS-4B

1. Write a query that displays enames in lower case, length of enames and duration of employment (calculated using system date n hiredate) for all employees WHOSE salary is more than 500.

## Query:

```
SELECT
LOWER(ENAME) AS NAME,
LENGTH(ENAME) AS LENGTH,
MONTHS_BETWEEN (sysdate, hiredate) as Employeement_Duration
FROM EMP
WHERE SAL>500;
```

## Output:

```
Oracle SQL*Plus
File  Edit  Search  Options  Help
With the Partitioning, OLAP and Data Mining options

SQL> SET LINESIZE 500
SQL> /*
SQL> Malik Zohaib Mustafa
SQL> 01-134192-030
SQL> BSCS-4B
SQL>
SQL> JOURNAL 4
SQL> 1. Write a query that displays enames in lower case, length of enames and duration of employmen
t (calculated using system date n hiredate) for all employees WHOSE salary is more than 500.
SQL>
SQL> */
SQL>
SQL> SELECT
  2  LOWER(ENAME) AS NAME,
  3  LENGTH(ENAME) AS LENGTH,
  4  MONTHS_BETWEEN(sysdate,hiredate) as Employeement_Duration
  5  FROM EMP
  6  WHERE SAL>500;

NAME           LENGTH EMPLOYEEMENT_DURATION
---------- ---------- --------------------
smith               5            483.547958
allen               5            481.451184
ward                4            481.386668
jones               5                   480
martin              6             474.19312
blake               5            479.064088
clark               5            477.806023
scott               5            407.483442
king                4            472.547958
turner              6            474.838281
adams               5             406.35441

NAME           LENGTH EMPLOYEEMENT_DURATION
---------- ---------- --------------------
james               5            471.999571
ford                4            471.999571
miller              6             470.35441

14 rows selected.
```

2. For each employee, display the enames, hiredate, salary and calculate the number of months between today and hiredate. Round the number of months up to the closest whole number.

# Query:

```
SELECT
ENAME,
HIREDATE,
SAL,
ROUND(MONTHS_BETWEEN(SYSDATE, HIREDATE))
AS
EMPLOYEEMENT_DURATION
FROM EMP;
```

# Output:

```
SQL> /*
SQL> Malik Zohaib Mustafa
SQL> 01-134192-030
SQL> BSCS-4B
SQL>
SQL> JOURNAL 4
SQL> 2. For each employee, display the enames, hiredate, salary and calculate the number of mon
etween today and hiredate. Round the number of months up to the closest whole number.
SQL> */
SQL> SELECT
  2  ENAME,
  3  HIREDATE,
  4  SAL,
  5  ROUND(MONTHS_BETWEEN(SYSDATE,HIREDATE))
  6  AS
  7  EMPLOYEEMENT_DURATION
  8  FROM EMP;

ENAME      HIREDATE         SAL EMPLOYEEMENT_DURATION
---------- --------- ---------- --------------------
SMITH      17-DEC-80        800                  484
ALLEN      20-FEB-81       1600                  481
WARD       22-FEB-81       1250                  481
JONES      02-APR-81       2975                  480
MARTIN     28-SEP-81       1250                  474
BLAKE      01-MAY-81       2850                  479
CLARK      09-JUN-81       2450                  478
SCOTT      19-APR-87       3000                  407
KING       17-NOV-81       5000                  473
TURNER     08-SEP-81       1500                  475
ADAMS      23-MAY-87       1100                  406

ENAME      HIREDATE         SAL EMPLOYEEMENT_DURATION
---------- --------- ---------- --------------------
JAMES      03-DEC-81        950                  472
FORD       03-DEC-81       3000                  472
MILLER     23-JAN-82       1300                  470

14 rows selected.
```

3. **Display the empno, ename and hiredate of all employees. The hiredate should be displayed in the given format. (i.e. 12 DEC 2014).**

# Query:

```
SELECT
EMPNO,
ENAME,
TO_CHAR (HIREDATE,'DD MON YYYY' ) AS HIRING_DATE
FROM
EMP;
```

# Output:

```
SQL> /*
SQL> Malik Zohaib Mustafa
SQL> 01-134192-030
SQL> BSCS-4B
SQL>
SQL> JOURNAL 4
SQL> Display the empno, ename and hiredate of all employees. The hiredate should be displayed in the
 given
SQL> format. (i.e. 12 DEC 2014).
SQL>
SQL> */
SQL> SELECT
  2  EMPNO,
  3  ENAME,
  4  TO_CHAR(HIREDATE,'DD MON YYYY' ) AS HIRING_DATE
  5  FROM
  6  EMP;

     EMPNO ENAME      HIRING_DATE
---------- ---------- -----------
      7369 SMITH      17 DEC 1980
      7499 ALLEN      20 FEB 1981
      7521 WARD       22 FEB 1981
      7566 JONES      02 APR 1981
      7654 MARTIN     28 SEP 1981
      7698 BLAKE      01 MAY 1981
      7782 CLARK      09 JUN 1981
      7788 SCOTT      19 APR 1987
      7839 KING       17 NOV 1981
      7844 TURNER     08 SEP 1981
      7876 ADAMS      23 MAY 1987

     EMPNO ENAME      HIRING_DATE
---------- ---------- -----------
      7900 JAMES      03 DEC 1981
      7902 FORD       03 DEC 1981
      7934 MILLER     23 JAN 1982

14 rows selected.
```

4. **Extend the previous question to display the hiredate as 12*Dec%2014.**

# Query:

```
SELECT
 EMPNO,
 ENAME,
TO_CHAR(HIREDATE,'DD*MON%YYYY') AS HIRING_DATE
 FROM
 EMP;
```

# Output:

```
SQL>  /*
SQL>  Malik Zohaib Mustafa
SQL>  01-134192-030
SQL>  BSCS-4B
SQL>  JOURNAL 4
SQL>
SQL>  4. Extend the previous question (Task 3) to display the hiredate as 12*Dec%2014
SQL>  */
SQL>  SELECT
  2   EMPNO,
  3   ENAME,
  4  TO_CHAR(HIREDATE,'DD*MON%YYYY') AS HIRING_DATE
  5   FROM
  6   EMP;

     EMPNO ENAME      HIRING_DATE
---------- ---------- -----------
      7369 SMITH      17*DEC%1980
      7499 ALLEN      20*FEB%1981
      7521 WARD       22*FEB%1981
      7566 JONES      02*APR%1981
      7654 MARTIN     28*SEP%1981
      7698 BLAKE      01*MAY%1981
      7782 CLARK      09*JUN%1981
      7788 SCOTT      19*APR%1987
      7839 KING       17*NOV%1981
      7844 TURNER     08*SEP%1981
      7876 ADAMS      23*MAY%1987

     EMPNO ENAME      HIRING_DATE
---------- ---------- -----------
      7900 JAMES      03*DEC%1981
      7902 FORD       03*DEC%1981
      7934 MILLER     23*JAN%1982

14 rows selected.
```

5. Now display the employee's first three characters of name and hiredate as **12 December 2014**.

# Query:

```
SELECT
SUBSTR (ENAME , '1' , '3' )
AS
NAME_OF_EMPLOYEE,
TO_CHAR(HIREDATE,'`DDMONTH","YYYY')
AS
HIRING_DATE
FROM EMP;
```

# Output:

```
SQL> /*
SQL> Malik Zohaib Mustafa
SQL> 01-134192-030
SQL> BSCS-4B
SQL> JOURNAL 4
SQL> 5. Now display the employee's first three characters of name and hiredate as 12 December 2
SQL>
SQL> */
SQL> SELECT
  2  SUBSTR (ENAME , '1' , '3' )
  3  AS
  4  NAME_OF_EMPLOYEE,
  5  TO_CHAR(HIREDATE,'DDMONTH","YYYY')
  6  AS
  7  HIRING_DATE
  8  FROM EMP;

NAM HIRING_DATE
--- -----------------
SMI 17DECEMBER ,1980
ALL 20FEBRUARY ,1981
WAR 22FEBRUARY ,1981
JON 02APRIL    ,1981
MAR 28SEPTEMBER,1981
BLA 01MAY      ,1981
CLA 09JUNE     ,1981
SCO 19APRIL    ,1987
KIN 17NOVEMBER ,1981
TUR 08SEPTEMBER,1981
ADA 23MAY      ,1987

NAM HIRING_DATE
--- -----------------
JAM 03DECEMBER ,1981
FOR 03DECEMBER ,1981
MIL 23JANUARY  ,1982

14 rows selected.
```

6. Show all fields in EMP table of those employees whose length of ename is less than 5. The hiredate should be displayed as **12th December 2014**.

# Query:

```
SELECT
EMPNO,
DEPTNO,
ENAME,
JOB,
SAL,
MGR,
TO_CHAR(HIREDATE,'DD"th" MONTH YYYY') AS HIRING_DATE
FROM
EMP
WHERE
LENGTH(ENAME)<5;
```

# Output:

```
SQL> SET LINESIZE 500
SQL> /*
SQL> Malik Zohaib Mustafa
SQL> 01-134192-030
SQL> BSCS-4B
SQL> JOURNAL 4
SQL> 6. Show all fields in EMP table of those employees whose length of ename is less than 5. The hi

SQL> e should be displayed as 12th December 2014.
SQL>
SQL> */
SQL>
SQL> SELECT
  2  EMPNO,
  3  DEPTNO,
  4  ENAME,
  5  JOB,
  6  SAL,
  7  MGR,
  8  TO_CHAR(HIREDATE,'DD"th" MONTH YYYY') AS HIRING_DATE
  9  FROM
 10  EMP
 11  WHERE
 12  LENGTH(ENAME)<5;

     EMPNO     DEPTNO ENAME      JOB              SAL        MGR HIRING_DATE
---------- ---------- ---------- --------- ---------- ---------- --------------------
      7521         30 WARD       SALESMAN        1250       7698 22th FEBRUARY  1981
      7839         10 KING       PRESIDENT       5000            17th NOVEMBER  1981
      7902         20 FORD       ANALYST         3000       7566 03th DECEMBER  1981
```

7. Display the empno, ename of all employees along with the hiredate but hiredate should be displayed in three different columns i.e. day, month and year in three different columns.

# Query:

```
SELECT
EMPNO,
ENAME,
TO_CHAR(HIREDATE,'DD') AS DAY,
TO_CHAR(HIREDATE,'MONTH') AS MONTH,
TO_CHAR(HIREDATE,'YYYY') AS YEAR
FROM
EMP;
```

# Output:

```
SQL>
SQL> /*
SQL> Malik Zohaib Mustafa
SQL> 01-134192-030
SQL> BSCS-4B
SQL> JOURNAL 4
SQL> 7. Display the empno, ename of all employees alongwith the hiredate but hiredate should b

SQL>  in three different columns i.e. day, month and year in three different columns.
SQL> */
SQL> SELECT
  2  EMPNO,
  3  ENAME,
  4  TO_CHAR(HIREDATE,'DD') AS DAY,
  5  TO_CHAR(HIREDATE,'MONTH') AS MONTH,
  6  TO_CHAR(HIREDATE,'YYYY') AS YEAR
  7  FROM
  8  EMP;

     EMPNO ENAME      DA MONTH     YEAR
---------- ---------- -- --------- ----
      7369 SMITH      17 DECEMBER  1980
      7499 ALLEN      20 FEBRUARY  1981
      7521 WARD       22 FEBRUARY  1981
      7566 JONES      02 APRIL     1981
      7654 MARTIN     28 SEPTEMBER 1981
      7698 BLAKE      01 MAY       1981
      7782 CLARK      09 JUNE      1981
      7788 SCOTT      19 APRIL     1987
      7839 KING       17 NOVEMBER  1981
      7844 TURNER     08 SEPTEMBER 1981
      7876 ADAMS      23 MAY       1987

     EMPNO ENAME      DA MONTH     YEAR
---------- ---------- -- --------- ----
      7900 JAMES      03 DECEMBER  1981
      7902 FORD       03 DECEMBER  1981
      7934 MILLER     23 JANUARY   1982

14 rows selected.
```

8. List the records of those employees whose hiring month has 31 days.

# Query:

```
SELECT
ENAME,
JOB,
SAL,
HIREDATE
FROM EMP
WHERE TO_CHAR(LAST_DAY(HIREDATE),'DD')=31;
```

## Output:

```
SQL>  /*
SQL>  Malik Zohaib Mustafa
SQL>  01-134192-030
SQL>  BSCS-4B
SQL>  JOURNAL 4
SQL> 8. List the records of those employees whose hiring month has 31 day
SQL>
SQL> */
SQL> SELECT
  2  ENAME,
  3  JOB,
  4  SAL,
  5  HIREDATE
  6  FROM EMP
  7  WHERE TO_CHAR(LAST_DAY(HIREDATE),'DD')=31;

ENAME      JOB              SAL HIREDATE
---------- --------- ---------- ---------
SMITH      CLERK            800 17-DEC-80
BLAKE      MANAGER         2850 01-MAY-81
ADAMS      CLERK           1100 23-MAY-87
JAMES      CLERK            950 03-DEC-81
FORD       ANALYST         3000 03-DEC-81
MILLER     CLERK           1300 23-JAN-82

6 rows selected.
```

9. Display the ename, salary, hiredate and the date when “Friday” comes after the hiredate for all employees.

## Query:

```
SELECT
ENAME,
SAL,
HIREDATE,
NEXT_DAY(HIREDATE,'FRIDAY')
FROM EMP;
```

# Output:

```
SQL>  /*
SQL>  Malik Zohaib Mustafa
SQL>  01-134192-030
SQL>  BSCS-4B
SQL>  JOURNAL 4
SQL> 9. Display the ename, salary, hiredate and the date when Friday comes after the hi
all employees.
SQL>
SQL> */
SQL>
SQL> SELECT
  2  ENAME,
  3  SAL,
  4  HIREDATE,
  5  NEXT_DAY(HIREDATE,'FRIDAY')
  6  FROM EMP;

ENAME              SAL HIREDATE  NEXT_DAY(
---------- ---------- --------- ---------
SMITH              800 17-DEC-80 19-DEC-80
ALLEN             1600 20-FEB-81 27-FEB-81
WARD              1250 22-FEB-81 27-FEB-81
JONES             2975 02-APR-81 03-APR-81
MARTIN            1250 28-SEP-81 02-OCT-81
BLAKE             2850 01-MAY-81 08-MAY-81
CLARK             2450 09-JUN-81 12-JUN-81
SCOTT             3000 19-APR-87 24-APR-87
KING              5000 17-NOV-81 20-NOV-81
TURNER            1500 08-SEP-81 11-SEP-81
ADAMS             1100 23-MAY-87 29-MAY-87

ENAME              SAL HIREDATE  NEXT_DAY(
---------- ---------- --------- ---------
JAMES              950 03-DEC-81 04-DEC-81
FORD              3000 03-DEC-81 04-DEC-81
MILLER            1300 23-JAN-82 29-JAN-82

14 rows selected.
```

10. Display the week difference in first column and hours difference in second column between any two dates.

# Query:

```
SELECT
 MONTHS_BETWEEN(SYSDATE,HIREDATE)*4
 AS WEEKS,
 ((MONTHS_BETWEEN(SYSDATE,HIREDATE)*4 )*7)*24 AS HOURS
 FROM EMP;
```

# Output:

```
SQL>  /*
SQL>  Malik Zohaib Mustafa
SQL>  01-134192-030
SQL>  BSCS-4B
SQL>  JOURNAL 4
SQL> 10. Display the week difference in first column and hours difference in second column
ny two dates.
SQL> */
SQL>
SQL> SELECT
  2  MONTHS_BETWEEN(SYSDATE,HIREDATE)*4
  3  AS WEEKS,
  4  ((MONTHS_BETWEEN(SYSDATE,HIREDATE)*4 )*7)*24 AS HOURS
  5  FROM EMP;

     WEEKS      HOURS
---------- ----------
1934.19524   324944.8
1925.80814 323535.768
1925.55008 323492.413
1920.13072 322581.961
1896.77588 318658.349
1916.25976 321931.639
 1911.2275 321086.219
1629.93717 273829.445
1890.19524   317552.8
1899.35653 319091.897
1625.42105 273070.736

     WEEKS      HOURS
---------- ----------
      1888     317184
      1888     317184
1881.42105 316078.736

14 rows selected.
```