Date and Time functions

1. Write a query to display the first day of the month (in datetime format) three

months before the current month.

Sample current date : 2014-09-03

Expected result : 2014-06-01

```
SQL> select round(last_Day(add_months(sysdate,-4)),'month') from dummy;

ROUND(LAS
---------
01-JUN-23

SQL>
```

Another method

```
SQL> select trunc(add_months(sysdate,-3),'month') from dual;

TRUNC(ADD
---------
01-JUN-23
```

Another

```
SQL> select trunc(add_months(to_date('03/09/2014','dd-mm-yyyy'),-3),'month') from dual;

TRUNC(ADD
---------
01-JUN-14

SQL>
```

2. Write a query to display the last day of the month (in datetime format) three

months before the current month.

```
SQL> select last_day(add_months(sysdate,-3)) from dummy;

LAST_DAY(
---------
30-JUN-23

SQL>
```

3. Write a query to get the distinct Mondays from hiredate in emp tables.

```
SQL> select * from emp where (next_Day(hiredate-1,'monday'))=hiredate;

     EMPNO ENAME      JOB           MGR HIREDATE        SAL      COMM    DEPTNO
---------- ---------- --------- ---------- --------- ---------- ---------- ----------
      7654 MARTIN     SALESMAN     7698 28-SEP-81      1250      1400        30

SQL>
```

Another method

```
SQL> select * from emp where trim(to_char(hiredate,'day'))='monday';

    EMPNO ENAME     JOB          MGR HIREDATE       SAL     COMM    DEPTNO
--------- --------- -------- ---------- --------- --------- --------- ----------
     7654 MARTIN    SALESMAN    7698 28-SEP-81     1250     1400       30
SQL>
```

4. Write a query to get the first day of the current year.

```
SQL> select trunc(sysdate,'year') from dual;

TRUNC(SYS
---------
01-JAN-23

SQL>
```

Another method

```
SQL> select round(add_months(sysdate,-12),'year') from dummy;

ROUND(ADD
---------
01-JAN-23

SQL>
```

5. Write a query to get the last day of the current year.

```
SQL> select last_day(add_months(round(sysdate,'year'),-1)) from dummy;

LAST_DAY(
---------
31-DEC-23

SQL>
```

6. Write a query to calculate your age in year.

```
SQL> select floor(months_between(sysdate,'01-jan-2000')/12) age from dual;

       AGE
----------
        23

SQL>
```

7. Write a query to get the current date in the following format.

Sample date : 04-sep-2014

Output : September 4, 2014

```
SQL> select to_char(sysdate,'month dd,yyyy') from dual;

TO_CHAR(SYSDATE,'
----------------
september 29,2023

SQL>
```

8. Write a query to get the current date in Thursday September 2014 format.

Thursday September 2014

```
SQL> select to_char(sysdate,'day month yyyy') today_Date from dual;

TODAY_DATE
-----------------------
friday    september 2023

SQL>
```

9. Write a query to extract the year from the current date.

```
SQL> select extract(year from sysdate) from dual;

EXTRACT(YEARFROMSYSDATE)
-----------------------
                    2023

SQL>
```

10. Write a query to get the first name and hire date from employees table

where hire date between 1-Jun-87' and '30-jul-87'

```
SQL> select ename,hiredate from emp where hiredate between '01-jun-87' and '30-jul-87';

no rows selected

SQL>
```

If we change the range of the date

```
SQL> select ename,hiredate from emp where hiredate between '01-jun-81' and '30-jul-87';

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

9 rows selected.
```

11. Write a query to display the current date in the following format.

Sample output: Thursday 4th September 2014 00:00:00

```
SQL> select to_char(sysdate, 'day ddth month yyyy hh:mm:ss') from dual;

TO_CHAR(SYSDATE,'DAYDDTHMONTHYYYYHH:MM
--------------------------------------
saturday  30th september 2023 10:09:08

SQL>
```

12. Write a query to display the current date in the following format.

Sample output: 05/09/2014

```
SQL> select to_char(sysdate,'dd/mm/yyyy') today_date from dual;

TODAY_DATE
----------
30/09/2023

SQL>
```

```
SQL> select to_char(sysdate, 'dd/mm/yyyy') from dual;

TO_CHAR(SY
----------
30/09/2023

SQL>
```

13. Write a query to display the current date in the following format.

Sample output: 12:00 AM Sep 5, 2014

```
SQL> select to_char(sysdate,'hh:mm PM mon dd, yyyy') from dual;

TO_CHAR(SYSDATE,'HH:M
---------------------
10:09 AM sep 30, 2023

SQL>
```

14. Write a query to get the employees who joined in the month of June.

```
SQL> select * from emp where extract(month from hiredate)=6;

    EMPNO ENAME      JOB             MGR HIREDATE       SAL       COMM     DEPTNO
--------- ---------- --------- --------- --------- --------- --------- ----------
     7782 CLARK      MANAGER        7839 09-JUN-81      2450                    10

SQL>
```

Another

```
SQL> select * from emp where trim(to_char(hiredate,'month'))='june';

    EMPNO ENAME      JOB             MGR HIREDATE       SAL       COMM     DEPTNO
--------- ---------- --------- --------- --------- --------- --------- ----------
     7782 CLARK      MANAGER        7839 09-JUN-81      2450                    10

SQL>
```

15. Write a query to get the years in which more than 10 employees joined.

```
SQL> select extract(year from hiredate), count(*) from emp group by extract(year from hiredate) having count(*)>10;
no rows selected
SQL>
```

If more than 1 employees

```
SQL> select extract(year from hiredate), count(*) from emp group by extract(year from hiredate) having count(*)>1;

EXTRACT(YEARFROMHIREDATE)   COUNT(*)
-------------------------  ---------
                     1982          2
                     1981         10
```

16. Write a query to get first name of employees who joined in 1987.

```
SQL> select ename from emp where extract(year from hiredate)=1987;

no rows selected
```

If year changed to 1982

```
SQL> select ename,hiredate from emp where extract(year from hiredate)=1982;

ENAME      HIREDATE
---------- ---------
SCOTT      09-DEC-82
MILLER     23-JAN-82

SQL>
```

17. Write a query to get employees whose experience is more than 5 years.

```
SQL> select * from emp where floor(months_between(sysdate,hiredate)/12)>5;

    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 09-DEC-82      3000                    20
     7839 KING       PRESIDENT          17-NOV-81      5000                    10
     7844 TURNER     SALESMAN      7698 08-SEP-81      1500          0         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

14 rows selected.

SQL>
```

18. Write a query to get employee ID, name, and date, salary of the

employees, display salary with $ symbol and thousand separator.

```
SQL> select empno,ename,hiredate,sal, to_char(sal,'$99,99,999.99') salary from emp;

    EMPNO ENAME       HIREDATE         SAL SALARY
---------- ---------- --------- ---------- --------------
     7369 SMITH       17-DEC-80        800        $800.00
     7499 ALLEN       20-FEB-81       1600      $1,600.00
     7521 WARD        22-FEB-81       1250      $1,250.00
     7566 JONES       02-APR-81       2975      $2,975.00
     7654 MARTIN      28-SEP-81       1250      $1,250.00
     7698 BLAKE       01-MAY-81       2850      $2,850.00
     7782 CLARK       09-JUN-81       2450      $2,450.00
     7788 SCOTT       09-DEC-82       3000      $3,000.00
     7839 KING        17-NOV-81       5000      $5,000.00
     7844 TURNER      08-SEP-81       1500      $1,500.00
     7876 ADAMS       12-JAN-83       1100      $1,100.00
     7900 JAMES       03-DEC-81        950        $950.00
     7902 FORD        03-DEC-81       3000      $3,000.00
     7934 MILLER      23-JAN-82       1300      $1,300.00

14 rows selected.

SQL>
```

19. Write a query to get name, hire date and experience of the employees.

```
SQL> select ename,hiredate,floor(months_between(sysdate,hiredate)/12) experience from emp;

ENAME      HIREDATE  EXPERIENCE
---------- --------- ----------
SMITH      17-DEC-80         42
ALLEN      20-FEB-81         42
WARD       22-FEB-81         42
JONES      02-APR-81         42
MARTIN     28-SEP-81         42
BLAKE      01-MAY-81         42
CLARK      09-JUN-81         42
SCOTT      09-DEC-82         40
KING       17-NOV-81         41
TURNER     08-SEP-81         42
ADAMS      12-JAN-83         40
JAMES      03-DEC-81         41
FORD       03-DEC-81         41
MILLER     23-JAN-82         41

14 rows selected.

SQL>
```

20. Write a query to get the department no, year, and number of employees

joined.

```
  1  select deptno,extract(year from hiredate) year,count(extract(year from hiredate)) no_of_employees
  2  from emp
  3* group by deptno,extract(year from hiredate)
SQL> /

    DEPTNO      YEAR NO_OF_EMPLOYEES
---------- ---------- ---------------
        20      1981               2
        10      1982               1
        20      1983               1
        20      1982               1
        20      1980               1
        30      1981               6
        10      1981               2

7 rows selected.

SQL>
```