DBMS LAB-04(09-01-2025)

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Q1: Display the current date.

```
SQL> Select Current_Date From Dual;

CURRENT_D
---------
09-JAN-25
```

Q2: Display employees' names, DOJ, and their permanent date.

```
SQL> SELECT F_NAME, DOJ, ADD_MONTHS(DOJ, 6) AS PERMANENT_DATE
  2  FROM EMPLOYEE;

F_NAME                                             DOJ       PERMANENT
-------------------------------------------------- --------- ---------
ARUN                                               04-JAN-98 04-JUL-98
BARUN                                              09-FEB-98 09-AUG-98
CHITRA                                             08-JAN-98 08-JUL-98
DHEERAJ                                            27-DEC-01 27-JUN-02
EMMA                                               20-MAR-02 20-SEP-02
FLOKI                                              20-MAR-00 20-SEP-00
DHEERAJ                                            01-JUL-16 01-JAN-17
SAUL                                               06-SEP-14 06-MAR-15
SUNNY                                              31-MAR-01 30-SEP-01
BOBBY                                              17-OCT-17 17-APR-18
AMIR                                               11-JAN-13 11-JUL-13

11 rows selected.
```

Q3: Display the last date of this current month.

```
SQL> SELECT LAST_DAY(SYSDATE) AS LAST_DAY_OF_MONTH
  2  FROM DUAL;

LAST_DAY_
---------
31-JAN-25
```

Q4: Display emp_id, f_name, and total experience in months.

```
SQL> SELECT EMP_ID, F_NAME, MONTHS_BETWEEN(SYSDATE, DOJ) AS TOTA
L_EXPERIENCE_IN_MONTHS
  2  FROM EMPLOYEE;

    EMP_ID F_NAME
---------- --------------------------------------------------
TOTAL_EXPERIENCE_IN_MONTHS
--------------------------
         1 ARUN
                324.183492

         2 BARUN
                       323

         3 CHITRA
                 324.05446


    EMP_ID F_NAME
---------- --------------------------------------------------
TOTAL_EXPERIENCE_IN_MONTHS
--------------------------
         4 DHEERAJ
                276.441557

         5 EMMA
                273.667363

         6 FLOKI
                297.667363


    EMP_ID F_NAME
---------- --------------------------------------------------
TOTAL_EXPERIENCE_IN_MONTHS
--------------------------
         7 DHEERAJ
                102.280267

         8 SAUL
                124.118976

        10 SUNNY
                285.312525


    EMP_ID F_NAME
---------- --------------------------------------------------
TOTAL_EXPERIENCE_IN_MONTHS
--------------------------
        11 BOBBY
                86.7641375

        12 AMIR
                143.957686


11 rows selected.
```

5. WAQ to display the date of next TUESDAY.

```
SQL> SELECT NEXT_DAY(SYSDATE, 'TUESDAY') AS NEXT_TUESDAY FROM DUAL;

NEXT_TUES
---------
14-JAN-25
```

6. WAQ to extract the current month.

```
SQL> SELECT EXTRACT(MONTH FROM SYSDATE) AS CURRENT_MONTH FROM DUAL;

CURRENT_MONTH
-------------
            1
```

7. WAQ to extract the current year.

```
SQL> SELECT EXTRACT(YEAR FROM SYSDATE) AS CURRENT_YEAR FROM DUAL;

CURRENT_YEAR
------------
        2025
```

8. WAQ to display the absolute value of -505.

```
SQL> SELECT ABS(-505) AS ABSOLUTE_VALUE FROM DUAL;

ABSOLUTE_VALUE
--------------
            505
```

9. WAQ to display the ceiling of 10.44, 10.50, and 10.65.

```
SQL> SELECT CEIL(10.44) AS CEIL_10_44,
  2         CEIL(10.50) AS CEIL_10_50,
  3         CEIL(10.65) AS CEIL_10_65 FROM DUAL;

CEIL_10_44 CEIL_10_50 CEIL_10_65
---------- ---------- ----------
        11         11         11
```

10. WAQ to display the floor value of 10.44, 10.50, and 10.65.

```
SQL> SELECT FLOOR(10.44) AS FLOOR_10_44,
  2         FLOOR(10.50) AS FLOOR_10_50,
  3         FLOOR(10.65) AS FLOOR_10_65 FROM DUAL;

FLOOR_10_44 FLOOR_10_50 FLOOR_10_65
----------- ----------- -----------
         10          10          10
```

11. Find the logarithmic value of 10 base 2.

```
SQL> SELECT LOG(2, 10) AS LOG_BASE_2_OF_10 FROM DUAL;

LOG_BASE_2_OF_10
----------------
      3.32192809
```

12. Display the remainder in 594/7.

```
SQL> SELECT MOD(594, 7) AS REMAINDER FROM DUAL;

 REMAINDER
----------
         6
```

13. WAQ to display the value of 8 to the power 3.

```
SQL> SELECT POWER(8, 3) AS EIGHT_POWER_3 FROM DUAL;

EIGHT_POWER_3
-------------
          512
```

14. WAQ to display the square root of 3481.

```
SQL> SELECT SQRT(3481) AS SQUARE_ROOT FROM DUAL;

SQUARE_ROOT
-----------
         59
```

15. Display the following rounding operations.

```
SQL> SELECT ROUND(45.923, 2) AS ROUND_2,
  2         ROUND(45.923, 0) AS ROUND_0,
  3         ROUND(45.923, -1) AS ROUND_MINUS_1,
  4         ROUND(45.923, -2) AS ROUND_MINUS_2 FROM DUAL;

   ROUND_2    ROUND_0 ROUND_MINUS_1 ROUND_MINUS_2
---------- ---------- ------------- -------------
     45.92         46            50             0
```

16. Display the following truncation operations.

```
SQL> SELECT TRUNC(45.888, 2) AS TRUNC_2,
  2         TRUNC(56.758, 0) AS TRUNC_0,
  3         TRUNC(49.245, -2) AS TRUNC_MINUS_2,
  4         ROUND(45.888, 2) AS ROUND_2 FROM DUAL;

   TRUNC_2    TRUNC_0 TRUNC_MINUS_2    ROUND_2
---------- ---------- ------------- ----------
     45.88         56             0      45.89
```

17. WAQ to return the sign of 20, -67.60, and 0.

```
SQL> SELECT SIGN(20) AS SIGN_POSITIVE,
  2         SIGN(-67.60) AS SIGN_NEGATIVE,
  3         SIGN(0) AS SIGN_ZERO FROM DUAL;

SIGN_POSITIVE SIGN_NEGATIVE  SIGN_ZERO
------------- ------------- ----------
            1            -1          0
```

18. Display the value of cos(45), sin(45), and tan(45).

```
SQL> SELECT COS(45 * (ACOS(-1) / 180)) AS COS_45,
  2         SIN(45 * (ACOS(-1) / 180)) AS SIN_45,
  3         TAN(45 * (ACOS(-1) / 180)) AS TAN_45
  4  FROM DUAL;

    COS_45     SIN_45     TAN_45
---------- ---------- ----------
.707106781 .707106781          1
```

19. Display the ASCII character corresponding to the integer 79.

```
SQL> SELECT CHR(79) AS ASCII_CHARACTER FROM DUAL;

A
-
O
```

20. Display the f_name and l_name together using the concat() function.

```
SQL> SELECT CONCAT(f_name, CONCAT(' ', l_name)) AS full_name
  2  FROM employee;

FULL_NAME
--------------------------------------------------------------------
-----------
ARUN KHAN
BARUN KUMAR
CHITRA KAPOOR
DHEERAJ MISHRA
EMMA DUTT
FLOKI DUTT
DHEERAJ KUMAR
SAUL GOOD
SUNNY DEOL
BOBBY DEOL
AMIR KHAN

11 rows selected.
```

21. Display all the f_names in capital letters.

```
SQL> SELECT UPPER(F_NAME) AS CAPITALIZED_NAME FROM EMPLOYEE;

CAPITALIZED_NAME
--------------------------------------------------
ARUN
BARUN
CHITRA
DHEERAJ
EMMA
FLOKI
DHEERAJ
SAUL
SUNNY
BOBBY
AMIR

11 rows selected.
```

22. Find the length of the first name and last name of all employees who work in the sales department.

```
SQL> SELECT f_name, l_name, LENGTH(f_name) AS f_name_length, LENGTH(l
_name) AS l_name_length
  2  FROM employee
  3  WHERE dept = 'Sales';

no rows selected
```

23. Determine the tax-rate for each employee based on their monthly salary.

```
SQL> SELECT EMP_ID, F_NAME, SALARY,
  2  CASE
  3  WHEN SALARY < 20000 THEN 5
  4  WHEN SALARY BETWEEN 20000 AND 39999 THEN 10
  5  WHEN SALARY BETWEEN 40000 AND 59999 THEN 20
  6  WHEN SALARY > 60000 THEN 30
  7  END AS TAX_RATE
  8  FROM EMPLOYEE;

    EMP_ID F_NAME                                              SAL
ARY
---------- -------------------------------------------------- -------
---
  TAX_RATE
----------
         1 ARUN                                                90
000
        30

         2 BARUN                                               80
000
        30

         3 CHITRA                                              60
000


    EMP_ID F_NAME                                              SAL
ARY
---------- -------------------------------------------------- -------
---
  TAX_RATE
----------
         4 DHEERAJ                                             75
000
        30

         5 EMMA                                                55
000
        20

         6 FLOKI                                               70
000
        30

    EMP_ID F_NAME                                              SAL
ARY
---------- -------------------------------------------------- -------
---
  TAX_RATE
----------
         7 DHEERAJ                                             60
000

         8 SAUL                                                60
000

        10 SUNNY                                               20
000
        10

    EMP_ID F_NAME                                              SAL
ARY
---------- -------------------------------------------------- -------
---
  TAX_RATE
----------
        11 BOBBY                                               35
000
        10

        12 AMIR                                                15
000
         5

11 rows selected.
```

24. Find the average salary, maximum salary, minimum salary, and the sum of salaries from the employee table.

```
SQL> SELECT AVG(SALARY) AS AVG_SALARY,
  2         MAX(SALARY) AS MAX_SALARY,
  3         MIN(SALARY) AS MIN_SALARY,
  4         SUM(SALARY) AS TOTAL_SALARY
  5  FROM EMPLOYEE;

AVG_SALARY MAX_SALARY MIN_SALARY TOTAL_SALARY
---------- ---------- ---------- ------------
56363.6364      90000      15000       620000
```

25. Find the average salary, maximum salary, minimum salary, and the sum of salaries of employees who work for the sales department.

```
SQL> SELECT AVG(SALARY) AS AVG_SALARY,
  2         MAX(SALARY) AS MAX_SALARY,
  3         MIN(SALARY) AS MIN_SALARY,
  4         SUM(SALARY) AS TOTAL_SALARY
  5  FROM EMPLOYEE
  6  WHERE DEPT = 'SALES';

AVG_SALARY MAX_SALARY MIN_SALARY TOTAL_SALARY
---------- ---------- ---------- ------------
     75000      75000      75000        75000
```

26. Find the newest and oldest employee.

```
SQL> SELECT F_NAME, DOJ
  2  FROM EMPLOYEE
  3  WHERE DOJ = (SELECT MIN(DOJ) FROM EMPLOYEE)
  4     OR DOJ = (SELECT MAX(DOJ) FROM EMPLOYEE);

F_NAME                                             DOJ
-------------------------------------------------- ---------
ARUN                                               04-JAN-98
BOBBY                                              17-OCT-17
```

27. Find those two employees whose l_name comes first and last in alphabetical order.

```
SQL> SELECT F_NAME, L_NAME
  2  FROM EMPLOYEE
  3  WHERE L_NAME = (SELECT MIN(L_NAME) FROM EMPLOYEE)
  4     OR L_NAME = (SELECT MAX(L_NAME) FROM EMPLOYEE);

F_NAME
--------------------------------------------------
L_NAME
--------------------------------------------------
DHEERAJ
MISHRA

SUNNY
DEOL

BOBBY
DEOL
```

28. Find the number of engineers.

```
SQL> SELECT COUNT(*) AS ENGINEER_COUNT
  2  FROM EMPLOYEE
  3  WHERE JOB_TYPE = 'ENGINEER';

ENGINEER_COUNT
--------------
             4
```

29. Find the number of departments from the employee table.

```
SQL> SELECT COUNT(DISTINCT DEPT) AS DEPARTMENT_COUNT FROM EMPLOYEE;

DEPARTMENT_COUNT
----------------
               6
```

30. Find the average commission from the employee table.

```
SQL> SELECT AVG(COMMISION) AS AVERAGE_COMMISSION FROM EMPLOYEE;

AVERAGE_COMMISSION
------------------
              7500
```