DBMS LAB-05(16-01-2025)

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1. Find the average salary of each department.

```
SQL> SELECT dept, AVG(salary) AS avg_salary
  2  FROM employee
  3  GROUP BY dept;

DEPT                                               AVG_SALARY
-------------------------------------------------- ----------
R and D                                                 35000
ACCOUNTS                                                65000
PRODUCTION                                           68333.3333
MARKETING                                            38333.3333
SALES                                                   75000
R&D                                                     60000

6 rows selected.
```

2. Find the average salary for each jobtype according to each department.

```
SQL> SELECT dept, job_type, AVG(salary) AS avg_salary
  2  From employee
  3  Group By dept, job_type;

DEPT
--------------------------------------------------
JOB_TYPE                                           AVG_SALARY
-------------------------------------------------- ----------
SALES
MANAGER                                                 75000

ACCOUNTS
CLERK                                                   60000

R and D
ENGINEER                                                35000


DEPT
--------------------------------------------------
JOB_TYPE                                           AVG_SALARY
-------------------------------------------------- ----------
PRODUCTION
MANAGER                                                 90000

PRODUCTION
ENGINEER                                                57500

MARKETING
SALESMAN                                                17500


DEPT
--------------------------------------------------
JOB_TYPE                                           AVG_SALARY
-------------------------------------------------- ----------
R&D
ENGINEER                                                60000

MARKETING
MANAGER                                                 80000

ACCOUNTS
ACCOUNTANT                                              70000


9 rows selected.
```

3. Find the department names and their corresponding average salary where the average salary is greater than 40000.

```
SQL> SELECT dept, AVG(salary) AS avg_salary
  2  FROM employee
  3  GROUP BY dept
  4  HAVING AVG(salary) > 40000;

DEPT                                               AVG_SALARY
-------------------------------------------------- ----------
ACCOUNTS                                                65000
PRODUCTION                                           68333.3333
SALES                                                   75000
R&D                                                     60000
```

4. Select the departments where the maximum salary is more than 55000.

```
SQL> SELECT dept
  2  FROM employee
  3  GROUP BY dept
  4  HAVING MAX(salary) > 55000;

DEPT
--------------------------------------------------
ACCOUNTS
PRODUCTION
MARKETING
SALES
R&D
```

5. Find the department names and their average salary where the maximum salary of the department is higher than 55000.

```
SQL> SELECT dept, AVG(salary) AS avg_salary
  2  FROM employee
  3  GROUP BY dept
  4  HAVING MAX(salary) > 55000;

DEPT                                               AVG_SALARY
-------------------------------------------------- ----------
ACCOUNTS                                                65000
PRODUCTION                                           68333.3333
MARKETING                                            38333.3333
SALES                                                   75000
R&D                                                     60000
```

6. Display the job_types and the total monthly salary for each jobtypes as “PAYROLL”, where
the total payroll according to jobtypes exceeds 100000/month.

```
SQL> SELECT job_type, SUM(salary) AS PAYROLL
  2  FROM employee
  3  GROUP BY job_type
  4  HAVING SUM(salary) > 100000;

JOB_TYPE                                            PAYROLL
-------------------------------------------------- ----------
MANAGER                                             245000
ENGINEER                                            210000
```

7. Display the job_types and the total monthly salary for each jobtypes as “PAYROLL”, where
the total payroll according to jobtypes exceeds 100000/month and jobtype is not engineer.

```
SQL> SELECT job_type, SUM(salary) AS PAYROLL
  2  FROM employee
  3  WHERE job_type != 'Engineer'
  4  GROUP BY job_type
  5  HAVING SUM(salary) > 100000;

JOB_TYPE                                            PAYROLL
-------------------------------------------------- ----------
MANAGER                                             245000
ENGINEER                                            210000
```

8. Display the job_types and the total monthly salary for each jobtypes as “PAYROLL”, where
the total payroll according to jobtypes exceeds 60000/month and jobtype is not engineer
and sort the list in ascending order of sum of salary.

```
SQL> SELECT job_type, SUM(salary) AS PAYROLL
  2  FROM employee
  3  WHERE job_type != 'Engineer'
  4  GROUP BY job_type
  5  HAVING SUM(salary) > 60000
  6  ORDER BY PAYROLL ASC;

JOB_TYPE                                            PAYROLL
-------------------------------------------------- ----------
ACCOUNTANT                                           70000
ENGINEER                                            210000
MANAGER                                             245000
```

9. Display the job_types and the total monthly salary for each jobtypes as “PAYROLL”, where
the total payroll according to jobtypes exceeds 50000/month and jobtype is not engineer
and sort the list in descending order of sum of salary.

```
SQL> SELECT job_type, SUM(salary) AS PAYROLL
  2  FROM employee
  3  WHERE job_type != 'Engineer'
  4  GROUP BY job_type
  5  HAVING SUM(salary) > 50000
  6  ORDER BY PAYROLL DESC;

JOB_TYPE                                            PAYROLL
-------------------------------------------------- ----------
MANAGER                                             245000
ENGINEER                                            210000
ACCOUNTANT                                           70000
CLERK                                                60000
```

10. Find the maximum average salary according to departments.

```
SQL> SELECT MAX(avg_salary) AS max_avg_salary
  2  FROM (
  3      SELECT dept, AVG(salary) AS avg_salary
  4      FROM employee
  5      GROUP BY dept
  6  ) subquery;

MAX_AVG_SALARY
--------------
         75000
```

11. Find the minimum average salary according to jobtypes.

```
SQL> SELECT MIN(avg_salary) AS min_avg_salary
  2  FROM (
  3      SELECT job_type, AVG(salary) AS avg_salary
  4      FROM employee
  5      GROUP BY job_type
  6  ) subquery;

MIN_AVG_SALARY
--------------
         17500
```

12. Find the employee name and date of joining who are working in delhi.

```
SQL> SELECT e.f_name, e.doj
  2  FROM employee e
  3  JOIN department d ON e.dept = d.d_name
  4  WHERE d.d_loc = 'Delhi';

no rows selected
```

13. Create the table 'Emp_Address' for storing the permanent address of the employees and
insert the values.

EMP_ID	CITY	DISTRICT	STATE
1	Suri	Birbhum	WB
3	Kolkata	Kolkata	WB
4	Bhubaneswar	Khurda	Odisha
5	Noida	GB Nagar	UP
6	Secunderabad	Hyderabad	Telangana
7	Derhadun	Derhadun	Uttarakhand
8	Asansol	Burdwan	WB
9	Siliguri	Darjeeling	WB
10	Kolkata	Kolkata	WB
11	New delhi	New delhi	Delhi

```
SQL> CREATE TABLE Emp_Address (
  2      emp_id INT PRIMARY KEY,
  3      city VARCHAR(50),
  4      district VARCHAR(50),
  5      state VARCHAR(50)
  6  );

Table created.

SQL> INSERT INTO Emp_Address (emp_id, city, district, state) VALUES (1, 'Suri', 'Birbhum', 'WB');

1 row created.

SQL> INSERT INTO Emp_Address (emp_id, city, district, state) VALUES (3, 'Kolkata', 'Kolkata', 'WB');

1 row created.

SQL> INSERT INTO Emp_Address (emp_id, city, district, state) VALUES (4, 'Bhubaneswar', 'Khurda', 'Odisha');

1 row created.

SQL> INSERT INTO Emp_Address (emp_id, city, district, state) VALUES (5, 'Noida', 'GB Nagar', 'UP');

1 row created.

SQL> INSERT INTO Emp_Address (emp_id, city, district, state) VALUES (6, 'Secunderabad', 'Hyderabad', 'Telangana');

1 row created.

SQL> INSERT INTO Emp_Address (emp_id, city, district, state) VALUES (7, 'Dehradun', 'Dehradun', 'Uttarakhand');

1 row created.

SQL> INSERT INTO Emp_Address (emp_id, city, district, state) VALUES (8, 'Asansol', 'Burdwan', 'WB');

1 row created.

SQL> INSERT INTO Emp_Address (emp_id, city, district, state) VALUES (9, 'Siliguri', 'Darjeeling', 'WB');

1 row created.

SQL> INSERT INTO Emp_Address (emp_id, city, district, state) VALUES (10, 'Kolkata', 'Kolkata', 'WB');

1 row created.

SQL> INSERT INTO Emp_Address (emp_id, city, district, state) VALUES (11, 'New delhi', 'New delhi', 'Delhi');

1 row created.
```

14. Display the employee name with their home city and the city they work in.

```
SQL> SELECT
  2       e.f_name AS employee_name,
  3       a.city AS home_city,
  4       d.d_loc AS work_city
  5  FROM
  6       employee e
  7  JOIN
  8       Emp_Address a ON e.emp_id = a.emp_id
  9  JOIN
 10       department d ON e.dept = d.d_name;

EMPLOYEE_NAME
--------------------------------------------------
HOME_CITY
--------------------------------------------------
WORK_CITY
--------------------------------------------------
ARUN
Suri
KOL

CHITRA
Kolkata
KOL

EMPLOYEE_NAME
--------------------------------------------------
HOME_CITY
--------------------------------------------------
WORK_CITY
--------------------------------------------------

EMMA
Noida
KOL

FLOKI
Secunderabad
EMPLOYEE_NAME
--------------------------------------------------
HOME_CITY
--------------------------------------------------
WORK_CITY
--------------------------------------------------
DELHI

DHEERAJ
Dehradun
DELHI

SUNNY

EMPLOYEE_NAME
--------------------------------------------------
HOME_CITY
--------------------------------------------------
WORK_CITY
--------------------------------------------------
Kolkata
KOL


6 rows selected.
```

15. Create the following Job_Grades table.

Grade	Lowest_Sal	Highest_Sal
A	10000	24999
B	25000	49999
C	50000	100000

```
SQL> CREATE TABLE Job_Grades (
  2      Grade CHAR(1) PRIMARY KEY,
  3      Lowest_Sal NUMBER(10, 2),
  4      Highest_Sal NUMBER(10, 2)
  5  );

Table created.

SQL>
SQL> INSERT INTO Job_Grades (Grade, Lowest_Sal, Highest_Sal) VALUES ('A', 10
000, 24999);

1 row created.

SQL> INSERT INTO Job_Grades (Grade, Lowest_Sal, Highest_Sal) VALUES ('B', 25
000, 49999);

1 row created.

SQL> INSERT INTO Job_Grades (Grade, Lowest_Sal, Highest_Sal) VALUES ('C', 50
000, 100000);

1 row created.
```

16. Display the employee names along with their salary and job_grade.

```
SQL> SELECT e.f_name, e.salary, g.Grade
  2  FROM employee e
  3  JOIN Job_Grades g
  4  ON e.salary BETWEEN g.Lowest_Sal AND g.Highest_Sal;

F_NAME                                              SALARY G
-------------------------------------------------- ---------- -
SUNNY                                                20000 A
AMIR                                                 15000 A
BOBBY                                                35000 B
ARUN                                                 90000 C
BARUN                                                80000 C
CHITRA                                               60000 C
DHEERAJ                                              75000 C
EMMA                                                 55000 C
FLOKI                                                70000 C
DHEERAJ                                              60000 C
SAUL                                                 60000 C

11 rows selected.
```

17. Display the employees name along with their manager's name. (use SELF JOIN)

```
SQL> SELECT e1.f_name AS employee_name, e2.f_name AS manager_name
  2  FROM employee e1
  3  LEFT JOIN employee e2
  4    ON e1.manager_id = e2.emp_id;

EMPLOYEE_NAME
--------------------------------------------------
MANAGER_NAME
--------------------------------------------------
AMIR
ARUN

SUNNY
ARUN

EMMA
ARUN


EMPLOYEE_NAME
--------------------------------------------------
MANAGER_NAME
--------------------------------------------------
DHEERAJ
ARUN

CHITRA
ARUN

DHEERAJ
FLOKI

EMPLOYEE_NAME
--------------------------------------------------
MANAGER_NAME
--------------------------------------------------
BOBBY
SAUL

SAUL


FLOKI



EMPLOYEE_NAME
--------------------------------------------------
MANAGER_NAME
--------------------------------------------------
BARUN


ARUN



11 rows selected.
```

18. Display emp_id, f_name, d_loc, and hod_id (using natural join).

```
SQL> SELECT EMPLOYEE.EMP_ID, EMPLOYEE.F_NAME, DEPARTMENT.D_LOC, DEPARTMENT.HOD_ID
  2  FROM EMPLOYEE
  3  NATURAL JOIN DEPARTMENT;

    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         1 ARUN
KOL                                                         4

         2 BARUN
KOL                                                         4

         3 CHITRA
KOL                                                         4


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         4 DHEERAJ
KOL                                                         4

         5 EMMA
KOL                                                         4

         6 FLOKI
KOL                                                         4


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         7 DHEERAJ
KOL                                                         4

         8 SAUL
KOL                                                         4

        10 SUNNY
KOL                                                         4

    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
        11 BOBBY
KOL                                                         4

        12 AMIR
KOL                                                         4

         1 ARUN
DELHI                                                       6


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         2 BARUN
DELHI                                                       6

         3 CHITRA
DELHI                                                       6

         4 DHEERAJ
DELHI                                                       6


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         5 EMMA
DELHI                                                       6

         6 FLOKI
DELHI                                                       6

         7 DHEERAJ
DELHI                                                       6
```

```
    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         8 SAUL
DELHI                                                       6

        10 SUNNY
DELHI                                                       6

        11 BOBBY
DELHI                                                       6

    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
        12 AMIR
DELHI                                                       6

         1 ARUN
KOL                                                         1

         2 BARUN
KOL                                                         1

    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         3 CHITRA
KOL                                                         1

         4 DHEERAJ
KOL                                                         1

         5 EMMA
KOL                                                         1
```

```
    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         6 FLOKI
KOL                                                         1

         7 DHEERAJ
KOL                                                         1

         8 SAUL
KOL                                                         1

    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
        10 SUNNY
KOL                                                         1

        11 BOBBY
KOL                                                         1

        12 AMIR
KOL                                                         1

    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         1 ARUN
KOL                                                         2

         2 BARUN
KOL                                                         2

         3 CHITRA
KOL                                                         2
```

```
    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                                HOD_ID
-------------------------------------------------- ----------
         4 DHEERAJ
KOL                                                         2

         5 EMMA
KOL                                                         2

         6 FLOKI
KOL                                                         2


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                                HOD_ID
-------------------------------------------------- ----------
         7 DHEERAJ
KOL                                                         2

         8 SAUL
KOL                                                         2

        10 SUNNY
KOL                                                         2


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                                HOD_ID
-------------------------------------------------- ----------
        11 BOBBY
KOL                                                         2

        12 AMIR
KOL                                                         2

         1 ARUN
DELHI                                                       8

    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                                HOD_ID
-------------------------------------------------- ----------
         2 BARUN
DELHI                                                       8

         3 CHITRA
DELHI                                                       8

         4 DHEERAJ
DELHI                                                       8


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                                HOD_ID
-------------------------------------------------- ----------
         5 EMMA
DELHI                                                       8

         6 FLOKI
DELHI                                                       8

         7 DHEERAJ
DELHI                                                       8


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                                HOD_ID
-------------------------------------------------- ----------
         8 SAUL
DELHI                                                       8

        10 SUNNY
DELHI                                                       8

        11 BOBBY
DELHI                                                       8
```

```
    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                                HOD_ID
-------------------------------------------------- ----------
        12 AMIR
DELHI                                                     8

         1 ARUN
Mumbai                                                    5

         2 BARUN
Mumbai                                                    5


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                                HOD_ID
-------------------------------------------------- ----------
         3 CHITRA
Mumbai                                                    5

         4 DHEERAJ
Mumbai                                                    5

         5 EMMA
Mumbai                                                    5


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                                HOD_ID
-------------------------------------------------- ----------
         6 FLOKI
Mumbai                                                    5

         7 DHEERAJ
Mumbai                                                    5

         8 SAUL
Mumbai                                                    5
```

```
    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                               HOD_ID
-------------------------------------------------- ----------
        10 SUNNY
Mumbai                                                   5

        11 BOBBY
Mumbai                                                   5

        12 AMIR
Mumbai                                                   5


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                               HOD_ID
-------------------------------------------------- ----------
         1 ARUN
Mumbai                                                   3

         2 BARUN
Mumbai                                                   3

         3 CHITRA
Mumbai                                                   3


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                               HOD_ID
-------------------------------------------------- ----------
         4 DHEERAJ
Mumbai                                                   3

         5 EMMA
Mumbai                                                   3

         6 FLOKI
Mumbai                                                   3

    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                               HOD_ID
-------------------------------------------------- ----------
         7 DHEERAJ
Mumbai                                                   3

         8 SAUL
Mumbai                                                   3

        10 SUNNY
Mumbai                                                   3


    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                               HOD_ID
-------------------------------------------------- ----------
        11 BOBBY
Mumbai                                                   3

        12 AMIR
Mumbai                                                   3


77 rows selected.
```

19. Display the employees f_name, city and state in which they live (using natural join).

```
SQL> SELECT e.f_name, a.city, a.state
  2  FROM employee e
  3  NATURAL JOIN emp_address a;

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
ARUN
Suri
WB

CHITRA
Kolkata
WB

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------

DHEERAJ
Bhubaneswar
Odisha

EMMA
Noida

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
UP

FLOKI
Secunderabad
Telangana

DHEERAJ
F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
Dehradun
Uttarakhand

SAUL
Asansol
WB


F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
SUNNY
Kolkata
WB

BOBBY
New delhi
Delhi

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------


9 rows selected.
```

20. Display the employees emp_id, f_name, d_loc, hod_id using inner join.

```
SQL> SELECT e.emp_id, e.f_name, d.d_loc, d.hod_id
  2  FROM employee e
  3  INNER JOIN department d
  4  ON e.emp_id = d.hod_id;

    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         1 ARUN
KOL                                                         1

         2 BARUN
KOL                                                         2

         3 CHITRA
Mumbai                                                      3

    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         4 DHEERAJ
KOL                                                         4

         5 EMMA
Mumbai                                                      5

         6 FLOKI
DELHI                                                       6

    EMP_ID F_NAME
---------- --------------------------------------------------
D_LOC                                              HOD_ID
-------------------------------------------------- ----------
         8 SAUL
DELHI                                                       8

7 rows selected.
```

21. Display the employees f_name, city and state in which they live (using inner join).

```
SQL> SELECT e.f_name, a.city, a.state
  2  FROM employee e
  3  INNER JOIN emp_address a
  4  ON e.emp_id = a.emp_id;

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
ARUN
Suri
WB

CHITRA
Kolkata
WB

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------

DHEERAJ
Bhubaneswar
Odisha

EMMA
Noida

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
UP

FLOKI
Secunderabad
Telangana

DHEERAJ
```

```
F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
Dehradun
Uttarakhand

SAUL
Asansol
WB


F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
SUNNY
Kolkata
WB

BOBBY
New delhi
Delhi

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------


9 rows selected.
```

22. Display the employees f_name, city and state in which they live (using join keyword).

```
SQL> SELECT e.f_name, a.city, a.state
  2  FROM employee e
  3  JOIN emp_address a
  4  ON e.emp_id = a.emp_id;

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
ARUN
Suri
WB

CHITRA
Kolkata
WB

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------

DHEERAJ
Bhubaneswar
Odisha

EMMA
Noida

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
UP

FLOKI
Secunderabad
Telangana

DHEERAJ
```

```
F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
Dehradun
Uttarakhand

SAUL
Asansol
WB


F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
SUNNY
Kolkata
WB

BOBBY
New delhi
Delhi

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------


9 rows selected.
```

23. Insert the following two rows in the employee table without inserting any value in the department field.

EMP_ID	F_NAME	L_NAME	JOB_TYPE	SALARY	COMMISION	D_NAME	MANAGER_ID	DOJ
20	alex		engineer	28000	2000		1	31-JAN-17
21	priya	patel	clerk	12000	500		1	01-APR-17

```
SQL> INSERT INTO employee (emp_id, f_name, l_name, job_type, salary, commision, man
ager_id, doj)
  2  VALUES (20, 'Alex', 'Engineer', 'Engineer', 28000, 2000, 1, TO_DATE('31-JAN-20
17', 'DD-MON-YYYY'));

1 row created.

SQL>
SQL> INSERT INTO employee (emp_id, f_name, l_name, job_type, salary, commision, man
ager_id, doj)
  2  VALUES (21, 'Priya', 'Patel', 'Clerk', 12000, 500, 1, TO_DATE('01-APR-2017', '
DD-MON-YYYY'));

1 row created.
```

24. Insert the following two rows into the department table.

D_NAME	D_LOC	HOD_ID
Training	Mumbai	1
Placement	Mumbai	1

```
SQL> INSERT INTO department (d_name, d_loc, hod_id)
  2  VALUES ('Training', 'Mumbai', 1);

1 row created.

SQL>
SQL> INSERT INTO department (d_name, d_loc, hod_id)
  2  VALUES ('Placement', 'Mumbai', 1);

1 row created.
```

25. Display the employees f_name, city and state in which they live after joining employee
and employee_address table using left outer join.

```
SQL> SELECT e.f_name, ea.city, ea.state
  2  FROM employee e
  3  LEFT OUTER JOIN emp_address ea
  4  ON e.emp_id = ea.emp_id;

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
ARUN
Suri
WB

BARUN


F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------

CHITRA
Kolkata
WB

DHEERAJ
Bhubaneswar

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
Odisha

EMMA
Noida
UP

FLOKI
```

```
F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
Secunderabad
Telangana

DHEERAJ
Dehradun
Uttarakhand


F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
SAUL
Asansol
WB

Priya



F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------

SUNNY
Kolkata
WB

BOBBY
New delhi
F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------
Delhi

AMIR



Alex

F_NAME
--------------------------------------------------
CITY
--------------------------------------------------
STATE
--------------------------------------------------




13 rows selected.
```

26. Display the employees f_name and their work location after joining employee and
department table using left join.

```
SQL> SELECT e.f_name, d.d_loc AS work_location
  2  FROM employee e
  3  LEFT JOIN department d
  4  ON e.dept = d.d_name;

F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
DHEERAJ
DELHI

FLOKI
DELHI

EMMA
KOL


F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
CHITRA
KOL

ARUN
KOL

AMIR
KOL


F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
SUNNY
KOL

BARUN
KOL

Alex
F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
Priya


DHEERAJ


BOBBY



F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
SAUL



13 rows selected.
```

27. Display the employees f_name and their work location after joining employee and
department table using right join.

```
SQL>
SQL> SELECT e.f_name, d.d_loc AS work_location
  2  FROM employee e
  3  RIGHT JOIN department d
  4  ON e.dept = d.d_name;

F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
ARUN
KOL

BARUN
KOL

CHITRA
KOL


F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
EMMA
KOL

FLOKI
DELHI

DHEERAJ
DELHI


F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
SUNNY
KOL

AMIR
KOL


KOL

F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------

Mumbai


Mumbai


Mumbai


F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------

Mumbai


DELHI


14 rows selected.
```

28. Display the employees f_name and their work location after joining employee and
department table using full join/full outer join.

```
SQL> SELECT e.f_name, d.d_loc AS work_location
  2  FROM employee e
  3  FULL OUTER JOIN department d
  4  ON e.dept = d.d_name;

F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
ARUN
KOL

BARUN
KOL

CHITRA
KOL


F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
DHEERAJ


EMMA
KOL

FLOKI
DELHI


F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
DHEERAJ
DELHI

SAUL


Priya
```

```
F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
SUNNY
KOL

BOBBY


AMIR
KOL


F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------
Alex



KOL


Mumbai


F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------

Mumbai


Mumbai


Mumbai


F_NAME
--------------------------------------------------
WORK_LOCATION
--------------------------------------------------

DELHI


19 rows selected.
```

29. Find the employees who are working in their home city.

```
SQL> SELECT e.f_name, ea.city
  2  FROM employee e
  3  INNER JOIN emp_address ea
  4  ON e.emp_id = ea.emp_id
  5  WHERE e.dept IN (
  6       SELECT d_name
  7       FROM department
  8       WHERE d_loc = ea.city
  9  );

no rows selected
```

30. Find the job type having the minimum average salary according to jobtypes.

```
SQL> SELECT job_type
  2  FROM employee
  3  GROUP BY job_type
  4  HAVING AVG(salary) = (
  5      SELECT MIN(AVG(salary))
  6      FROM employee
  7      GROUP BY job_type
  8  );

JOB_TYPE
--------------------------------------------------
Clerk
```