Assignment 2 : DML Commands
(select,where,like,group by, order by,Date)

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```
mysql> use employee_database;
Database changed
mysql> show tables;
+-----------------------------+
| Tables_in_employee_database |
+-----------------------------+
| department                  |
| employee                    |
| income_tax                  |
| project                     |
+-----------------------------+
4 rows in set (0.76 sec)
```

1. Write a query in SQL to display all the information of the employees

```
mysql> select * from employee;
+------+--------+--------------+----------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post         | Address  | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+--------------+----------+------------+-----------------+---------------+--------+------+
|    1 | Vedika | analyst      | Delhi    | 8756998756 | 2010-07-09      |         50000 | F      |    1 |
|    2 | John   | analyst      | Pune     | 8234997656 | 2000-09-01      |         50000 | M      |    4 |
|    3 | Rajan  | Manager      | Mumbai   | 8009781256 | 2005-02-12      |         90000 | M      |    3 |
|    4 | Ritika | Finance head | Mumbai   | 7559081256 | 2020-02-12      |        100000 | F      |    1 |
|    5 | Neha   | clerk        | banglore | 8638739922 | 2020-04-04      |         20000 | F      |   13 |
|    6 | Sam    | clerk        | banglore | 8638712322 | 2020-09-08      |         20000 | M      |    1 |
|    7 | Anne   | clerk        | Hyderabad| 6738712300 | 2000-01-12      |         60000 | F      |    8 |
|    8 | Anita  | engineer     | Hyderabad| 9990012300 | 2007-01-12      |         90000 | F      |   10 |
|    9 | Asmita | clerk        | Pune     | 9988712300 | 2000-11-12      |         60000 | F      |    8 |
|   10 | Manish | Cashier      | Pune     | 9988714670 | 2019-01-19      |         60000 | M      |    9 |
|   11 | Rohit  | Tech Lead    | Pune     | 9983976670 | 2019-08-19      |         90000 | M      |   10 |
|   12 | Ritesh | Manager      | Pune     | 9983112270 | 2005-07-11      |         90000 | M      |   15 |
|   13 | Soha   | Manager      | Nashik   | 7783112270 | 2003-07-11      |        100000 | F      |    2 |
|   14 | Saniya | Manager      | Nashik   | 7783118760 | 2003-07-11      |         90000 | F      |    7 |
|   15 | anisha | Manager      | Nashik   | 9879875656 | 2008-07-12      |         90000 | F      |   11 |
+------+--------+--------------+----------+------------+-----------------+---------------+--------+------+
15 rows in set (0.99 sec)
```

2. Write a query in SQL to list the E_id,name and income of all the employees

```
mysql> select e_id,ename,annual_income from employee;
+------+--------+---------------+
| e_id | ename  | annual_income |
+------+--------+---------------+
|    1 | Vedika |         50000 |
|    2 | John   |         50000 |
|    3 | Rajan  |         90000 |
|    4 | Ritika |        100000 |
|    5 | Neha   |         20000 |
|    6 | Sam    |         20000 |
|    7 | Anne   |         60000 |
|    8 | Anita  |         90000 |
|    9 | Asmita |         60000 |
|   10 | Manish |         60000 |
|   11 | Rohit  |         90000 |
|   12 | Ritesh |         90000 |
|   13 | Soha   |        100000 |
|   14 | Saniya |         90000 |
|   15 | anisha |         90000 |
+------+--------+---------------+
15 rows in set (0.00 sec)
```

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3. Write a query in SQL to display the details of the employee John

```
mysql> select * from employee where ename="John";
+------+-------+---------+---------+------------+-----------------+---------------+--------+------+
| E_id | Ename | Post    | Address | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+-------+---------+---------+------------+-----------------+---------------+--------+------+
|    2 | John  | analyst | Pune    | 8234997656 | 2000-09-01      |         50000 | M      |    4 |
+------+-------+---------+---------+------------+-----------------+---------------+--------+------+
1 row in set (0.10 sec)
```

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4. Display name of all the female employees from the employee table.

```
mysql> select * from employee where gender="F";
+------+--------+--------------+----------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post         | Address  | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+--------------+----------+------------+-----------------+---------------+--------+------+
|    1 | Vedika | analyst      | Delhi    | 8756998756 | 2010-07-09      |         50000 | F      |    1 |
|    4 | Ritika | Finance head | Mumbai   | 7559081256 | 2020-02-12      |        100000 | F      |    1 |
|    5 | Neha   | clerk        | banglore | 8638739922 | 2020-04-04      |         20000 | F      |   13 |
|    7 | Anne   | clerk        | Hyderabad| 6738712300 | 2000-01-12      |         60000 | F      |    8 |
|    8 | Anita  | engineer     | Hyderabad| 9990012300 | 2007-01-12      |         90000 | F      |   10 |
|    9 | Asmita | clerk        | Pune     | 9988712300 | 2000-11-12      |         60000 | F      |    8 |
|   13 | Soha   | Manager      | Nashik   | 7783112270 | 2003-07-11      |        100000 | F      |    2 |
|   14 | Saniya | Manager      | Nashik   | 7783118760 | 2003-07-11      |         90000 | F      |    7 |
|   15 | anisha | Manager      | Nashik   | 9879875656 | 2008-07-12      |         90000 | F      |   11 |
+------+--------+--------------+----------+------------+-----------------+---------------+--------+------+
9 rows in set (0.00 sec)
```

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5. Write a command to remove record of employee “Rajan”

```
mysql> delete from employee where ename="Rajan";
Query OK, 1 row affected (0.62 sec)

mysql> select * from employee;
+------+--------+--------------+----------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post         | Address  | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+--------------+----------+------------+-----------------+---------------+--------+------+
|    1 | Vedika | analyst      | Delhi    | 8756998756 | 2010-07-09      |         50000 | F      |    1 |
|    2 | John   | analyst      | Pune     | 8234997656 | 2000-09-01      |         50000 | M      |    4 |
|    4 | Ritika | Finance head | Mumbai   | 7559081256 | 2020-02-12      |        100000 | F      |    1 |
|    5 | Neha   | clerk        | banglore | 8638739922 | 2020-04-04      |         20000 | F      |   13 |
|    6 | Sam    | clerk        | banglore | 8638712322 | 2020-09-08      |         20000 | M      |    1 |
|    7 | Anne   | clerk        | Hyderabad| 6738712300 | 2000-01-12      |         60000 | F      |    8 |
|    8 | Anita  | engineer     | Hyderabad| 9990012300 | 2007-01-12      |         90000 | F      |   10 |
|    9 | Asmita | clerk        | Pune     | 9988712300 | 2000-11-12      |         60000 | F      |    8 |
|   10 | Manish | Cashier      | Pune     | 9988714670 | 2019-01-19      |         60000 | M      |    9 |
|   11 | Rohit  | Tech Lead    | Pune     | 9983976670 | 2019-08-19      |         90000 | M      |   10 |
|   12 | Ritesh | Manager      | Pune     | 9983112270 | 2005-07-11      |         90000 | M      |   15 |
|   13 | Soha   | Manager      | Nashik   | 7783112270 | 2003-07-11      |        100000 | F      |    2 |
|   14 | Saniya | Manager      | Nashik   | 7783118760 | 2003-07-11      |         90000 | F      |    7 |
|   15 | anisha | Manager      | Nashik   | 9879875656 | 2008-07-12      |         90000 | F      |   11 |
+------+--------+--------------+----------+------------+-----------------+---------------+--------+------+
14 rows in set (0.00 sec)
```

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6. Change address of John to “Delhi”.

```
mysql> update employee
    -> set address="Delhi"
    -> where ename="John";
Query OK, 1 row affected (0.23 sec)
Rows matched: 1  Changed: 1  Warnings: 0


mysql> select * from employee;
+------+--------+--------------+----------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post         | Address  | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+--------------+----------+------------+-----------------+---------------+--------+------+
|    1 | Vedika | analyst      | Delhi    | 8756998756 | 2010-07-09      |         50000 | F      |    1 |
```

```
|    2 | John   | analyst      | Delhi     | 8234997656 | 2000-09-01      |         50000 | M      |    4 |
|    4 | Ritika | Finance head | Mumbai    | 7559081256 | 2020-02-12      |        100000 | F      |    1 |
|    5 | Neha   | clerk        | banglore  | 8638739922 | 2020-04-04      |         20000 | F      |   13 |
```

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7. Write a query in SQL to display the unique designations for the employees.

```
mysql> SELECT DISTINCT post
    -> FROM employee;
+--------------+
| post         |
+--------------+
| analyst      |
| Finance head |
| clerk        |
| engineer     |
| Cashier      |
| Tech Lead    |
| Manager      |
+--------------+
7 rows in set (0.05 sec)
```

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8. Write a query in SQL to list all the employees whose designation is Manager.

```
mysql> select * from employee
    -> where post="Manager";
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post    | Address | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
|   12 | Ritesh | Manager | Pune    | 9983112270 | 2005-07-11      |         90000 | M      |   15 |
|   13 | Soha   | Manager | Nashik  | 7783112270 | 2003-07-11      |        100000 | F      |    2 |
|   14 | Saniya | Manager | Nashik  | 7783118760 | 2003-07-11      |         90000 | F      |    7 |
|   15 | anisha | Manager | Nashik  | 9879875656 | 2008-07-12      |         90000 | F      |   11 |
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
4 rows in set (0.00 sec)
```

9. Display only first five records of employee table

```
mysql> select * from employee limit 5;
+------+--------+--------------+---------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post         | Address | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+--------------+---------+------------+-----------------+---------------+--------+------+
|    1 | Vedika | analyst      | Delhi   | 8756998756 | 2010-07-09      |         50000 | F      |    1 |
|    2 | John   | analyst      | Delhi   | 8234997656 | 2000-09-01      |         50000 | M      |    4 |
|    4 | Ritika | Finance head | Mumbai  | 7559081256 | 2020-02-12      |        100000 | F      |    1 |
|    5 | Neha   | clerk        | banglore | 8638739922 | 2020-04-04      |         20000 | F      |   13 |
|    6 | Sam    | clerk        | banglore | 8638712322 | 2020-09-08      |         20000 | M      |    1 |
+------+--------+--------------+---------+------------+-----------------+---------------+--------+------+
5 rows in set (0.00 sec)
```

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10. Write a query in SQL to list the employees in the ascending order of their annual income.

```
mysql> select *
    -> from employee
    -> order by annual_income
    -> asc;
+------+--------+--------------+-----------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post         | Address   | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+--------------+-----------+------------+-----------------+---------------+--------+------+
|    5 | Neha   | clerk        | banglore  | 8638739922 | 2020-04-04      |         20000 | F      |   13 |
|    6 | Sam    | clerk        | banglore  | 8638712322 | 2020-09-08      |         20000 | M      |    1 |
|    1 | Vedika | analyst      | Delhi     | 8756998756 | 2010-07-09      |         50000 | F      |    1 |
|    2 | John   | analyst      | Delhi     | 8234997656 | 2000-09-01      |         50000 | M      |    4 |
|    7 | Anne   | clerk        | Hyderabad | 6738712300 | 2000-01-12      |         60000 | F      |    8 |
|    9 | Asmita | clerk        | Pune      | 9988712300 | 2000-11-12      |         60000 | F      |    8 |
|   10 | Manish | Cashier      | Pune      | 9988714670 | 2019-01-19      |         60000 | M      |    9 |
|    8 | Anita  | engineer     | Hyderabad | 9990012300 | 2007-01-12      |         90000 | F      |   10 |
```

```
|   11 | Rohit  | Tech Lead    | Pune      | 9983976670 | 2019-08-19      |         90000 | M      |   10 |
|   12 | Ritesh | Manager      | Pune      | 9983112270 | 2005-07-11      |         90000 | M      |   15 |
|   14 | Saniya | Manager      | Nashik    | 7783118760 | 2003-07-11      |         90000 | F      |    7 |
|   15 | anisha | Manager      | Nashik    | 9879875656 | 2008-07-12      |         90000 | F      |   11 |
|    4 | Ritika | Finance head | Mumbai    | 7559081256 | 2020-02-12      |        100000 | F      |    1 |
|   13 | Soha   | Manager      | Nashik    | 7783112270 | 2003-07-11      |        100000 | F      |    2 |
+------+--------+--------------+-----------+------------+-----------------+---------------+--------+------+
14 rows in set (0.11 sec)
```

10. Display the ename and post of employees whose annual income is more than 10,00000

```
mysql> select ename,post from employee where annual_income >1000000;
Empty set (0.04 sec)
```

12.Write a query in SQL to list the employees who joined before 2001.

```
mysql> select * from employee
    -> where date_of_joining<('2001-01-01');
+------+--------+---------+-----------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post    | Address   | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+---------+-----------+------------+-----------------+---------------+--------+------+
|    2 | John   | analyst | Delhi     | 8234997656 | 2000-09-01      |         50000 | M      |    4 |
|    7 | Anne   | clerk   | Hyderabad | 6738712300 | 2000-01-12      |         60000 | F      |    8 |
|    9 | Asmita | clerk   | Pune      | 9988712300 | 2000-11-12      |         60000 | F      |    8 |
+------+--------+---------+-----------+------------+-----------------+---------------+--------+------+
3 rows in set (0.05 sec)
```

13.Write a query in SQL to list the employees who joined in October 2005.

```
mysql> select * from employee
    -> where date_of_joining between date '2005-10-01' and date '2005-10-31';
Empty set (0.11 sec)
```

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14. Write a query in SQL to list the employees whose income is less than 500000.

```
mysql> select * from employee
    -> where annual_income <500000;
+------+--------+--------------+-----------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post         | Address   | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+--------------+-----------+------------+-----------------+---------------+--------+------+
|    1 | Vedika | analyst      | Delhi     | 8756998756 | 2010-07-09      |         50000 | F      |    1 |
|    2 | John   | analyst      | Delhi     | 8234997656 | 2000-09-01      |         50000 | M      |    4 |
|    4 | Ritika | Finance head | Mumbai    | 7559081256 | 2020-02-12      |        100000 | F      |    1 |
|    5 | Neha   | clerk        | banglore  | 8638739922 | 2020-04-04      |         20000 | F      |   13 |
|    6 | Sam    | clerk        | banglore  | 8638712322 | 2020-09-08      |         20000 | M      |    1 |
|    7 | Anne   | clerk        | Hyderabad | 6738712300 | 2000-01-12      |         60000 | F      |    8 |
|    8 | Anita  | engineer     | Hyderabad | 9990012300 | 2007-01-12      |         90000 | F      |   10 |
|    9 | Asmita | clerk        | Pune      | 9988712300 | 2000-11-12      |         60000 | F      |    8 |
|   10 | Manish | Cashier      | Pune      | 9988714670 | 2019-01-19      |         60000 | M      |    9 |
|   11 | Rohit  | Tech Lead    | Pune      | 9983976670 | 2019-08-19      |         90000 | M      |   10 |
|   12 | Ritesh | Manager      | Pune      | 9983112270 | 2005-07-11      |         90000 | M      |   15 |
|   13 | Soha   | Manager      | Nashik    | 7783112270 | 2003-07-11      |        100000 | F      |    2 |
|   14 | Saniya | Manager      | Nashik    | 7783118760 | 2003-07-11      |         90000 | F      |    7 |
|   15 | anisha | Manager      | Nashik    | 9879875656 | 2008-07-12      |         90000 | F      |   11 |
+------+--------+--------------+-----------+------------+-----------------+---------------+--------+------+
14 rows in set (0.00 sec)
```

15.Write a query in SQL to list the employees whose salary is within the range 24000 and 50000.

```
mysql> select * from employee
    -> where annual_income between 24000 and 50000;
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post    | Address | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
```

```
|    1 | Vedika | analyst | Delhi    | 8756998756 | 2010-07-09      |         50000 | F      |    1 |
|    2 | John   | analyst | Delhi    | 8234997656 | 2000-09-01      |         50000 | M      |    4 |
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
2 rows in set (0.00 sec)
```

---

16. Write a query in SQL to list the names of those employees starting with 'A' .

```
mysql> select *
    -> from employee
    -> where ename like 'A%';
+------+--------+----------+-----------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post     | Address   | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+----------+-----------+------------+-----------------+---------------+--------+------+
|    7 | Anne   | clerk    | Hyderabad | 6738712300 | 2000-01-12      |         60000 | F      |    8 |
|    8 | Anita  | engineer | Hyderabad | 9990012300 | 2007-01-12      |         90000 | F      |   10 |
|    9 | Asmita | clerk    | Pune      | 9988712300 | 2000-11-12      |         60000 | F      |    8 |
|   15 | anisha | Manager  | Nashik    | 9879875656 | 2008-07-12      |         90000 | F      |   11 |
+------+--------+----------+-----------+------------+-----------------+---------------+--------+------+
4 rows in set (0.10 sec)
```

17.Write a query in SQL to list the employees whose name is six characters in length and the third character must be 'R'.

```
mysql> insert into employee values(18,"Girija","Manager","Mumbai",8239780056,"2000-02-12",200000,"F",6);
Query OK, 1 row affected (0.14 sec)
mysql> select * from employee
    -> where length(ename)=6
    -> and
    -> ename like "__R%";
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post    | Address | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
|   18 | Girija | Manager | Mumbai  | 8239780056 | 2000-02-12      |        200000 | F      |    6 |
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
1 row in set (0.00 sec)
```

---

18. Write a query in SQL to list the employees whose name is ending with s

```
mysql> insert into employee values(3,"Rajas","Manager","Mumbai",8009781256,"2005-02-12",90000,"M",3);
Query OK, 1 row affected (0.36 sec)

mysql> select * from employee
    -> where ename like '%s';
+------+-------+---------+---------+------------+-----------------+---------------+--------+------+
| E_id | Ename | Post    | Address | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+-------+---------+---------+------------+-----------------+---------------+--------+------+
|    3 | Rajas | Manager | Mumbai  | 8009781256 | 2005-02-12      |         90000 | M      |    3 |
+------+-------+---------+---------+------------+-----------------+---------------+--------+------+
1 row in set (0.12 sec)
```

---

19. Write a query in SQL to find the highest annual from all the employees.

```
mysql> select * from employee
    -> where annual_income =
    -> (select max(annual_income) from employee);
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
| E_id | Ename  | Post    | Address | Phno       | Date_of_Joining | Annual_income | Gender | Did  |
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
|   18 | Girija | Manager | Mumbai  | 8239780056 | 2000-02-12      |        200000 | F      |    6 |
+------+--------+---------+---------+------------+-----------------+---------------+--------+------+
1 row in set (0.14 sec)
```

20.Write a query in SQL to display the average salaries of all the employees who work as ANALYST.

```
mysql> select avg(annual_income)
    -> from employee
    -> where post="analyst";
+--------------------+
| avg(annual_income) |
+--------------------+
|              50000 |
+--------------------+
1 row in set (0.00 sec)
```

---

21. Write a query in SQL to find the average salary a for each type of post.

```
mysql> select post,avg(annual_income)
    -> from employee
    -> group by post;
+--------------+--------------------+
| post         | avg(annual_income) |
+--------------+--------------------+
| analyst      |              50000 |
| Manager      |             110000 |
| Finance head |             100000 |
| clerk        |              40000 |
| engineer     |              90000 |
| Cashier      |              60000 |
| Tech Lead    |              90000 |
+--------------+--------------------+
7 rows in set (0.00 sec)
```

---

22. Write a query in SQL to display the number of employee for each post.

```
mysql> select post, count(*)
    -> from employee
    -> group by post;
+--------------+----------+
| post         | count(*) |
+--------------+----------+
| analyst      |        2 |
| Manager      |        6 |
| Finance head |        1 |
| clerk        |        4 |
| engineer     |        1 |
| Cashier      |        1 |
| Tech Lead    |        1 |
+--------------+----------+
7 rows in set (0.00 sec)
```

23.Display citiwise count of the employees.

```
mysql> select address, count(*)
    -> from employee
    -> group by address;
+-----------+----------+
| address   | count(*) |
+-----------+----------+
| Delhi     |        2 |
| Mumbai    |        3 |
| banglore  |        2 |
| Hyderabad |        2 |
| Pune      |        4 |
| Nashik    |        3 |
+-----------+----------+
6 rows in set (0.00 sec)
```