# Software Testing

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Batch No:  2022-7669

## Select:

mysql> select * from employee_data;

```
+---------+-------+---------+---------+-------+------------+
| empname | empid | city    | dept_id | salary | hire_date |
+---------+-------+---------+---------+-------+------------+
| John    |   101 | Pune    |      10 | 6000  | 1997-09-12 |
| Amit    |   102 | Mumbai  |      50 | 4000  | 1999-10-25 |
| Reena   |   103 | Chennai |      30 | 8000  | 2000-10-19 |
| Albert  |   104 | Mumbai  |      30 | 10000 | 2015-06-05 |
| Seeta   |   105 | Pune    |      40 | 15000 | 2015-06-05 |
+---------+-------+---------+---------+-------+------------+
```

5 rows in set (0.03 sec)

## Rename:

mysql> rename table employee_data to employee;

Query OK, 0 rows affected (0.99 sec)

mysql> select * from employee;

```
+---------+-------+---------+---------+-------+------------+
| empname | empid | city    | dept_id | salary | hire_date |
```

```
+--------+-------+---------+---------+-------+------------+
| John   | 101 | Pune    |     10 | 6000  | 1997-09-12 |
| Amit   | 102 | Mumbai  |     50 | 4000  | 1999-10-25 |
| Reena  | 103 | Chennai |     30 | 8000  | 2000-10-19 |
| Albert | 104 | Mumbai  |     30 | 10000 | 2015-06-05 |
| Seeta  | 105 | Pune    |     40 | 15000 | 2015-06-05 |
+--------+-------+---------+---------+-------+------------+
5 rows in set (0.01 sec)
```

# Distinct:

mysql> select distinct dept_id from employee;

```
+---------+
| dept_id |
+---------+
|      10 |
|      50 |
|      30 |
|      40 |
+---------+
```

4 rows in set (0.01 sec)

mysql> select distinct city from employee;

```
+---------+
| city    |
+---------+
| Pune    |
```

| Mumbai |

| Chennai |

+----------+

3 rows in set (0.00 sec)

# And , Or Operators

mysql> select * from employee where empname = "seeta" and dept_id = 40;

+---------+-------+------+---------+-------+------------+

| empname | empid | city | dept_id | salary | hire_date  |

+---------+-------+------+---------+-------+------------+

| Seeta   |   105 | Pune |      40 | 15000  | 2015-06-05 |

+---------+-------+------+---------+-------+------------+

1 row in set (0.07 sec)


mysql> select * from employee where empname = "seeta" and dept_id = 10;

Empty set (0.00 sec)


mysql> select * from employee where empname = "seeta" or dept_id = 40;

+---------+-------+------+---------+-------+------------+

| empname | empid | city | dept_id | salary | hire_date  |

+---------+-------+------+---------+-------+------------+

| Seeta   |   105 | Pune |      40 | 15000  | 2015-06-05 |

+---------+-------+------+---------+-------+------------+

1 row in set (0.00 sec)

mysql> select * from employee where empname = "seeta" or dept_id = 50;

```
+---------+-------+--------+---------+-------+------------+
| empname | empid | city   | dept_id | salary | hire_date |
+---------+-------+--------+---------+-------+------------+
| Amit    | 102   | Mumbai |     50 | 4000  | 1999-10-25 |
| Seeta   | 105   | Pune   |     40 | 15000 | 2015-06-05 |
+---------+-------+--------+---------+-------+------------+
```
2 rows in set (0.00 sec)


mysql> select * from employee where (empname = "albert" and  dept_id = 30) or salary <4000;

```
+---------+-------+--------+---------+-------+------------+
| empname | empid | city   | dept_id | salary | hire_date |
+---------+-------+--------+---------+-------+------------+
| Albert  | 104   | Mumbai |     30 | 10000 | 2015-06-05 |
+---------+-------+--------+---------+-------+------------+
```
1 row in set (0.07 sec)


mysql> select * from employee where (empname = "albert" and  dept_id = 30) or salary < 10000;

```
+---------+-------+---------+---------+-------+------------+
| empname | empid | city    | dept_id | salary | hire_date |
+---------+-------+---------+---------+-------+------------+
| John    | 101   | Pune    |     10 | 6000  | 1997-09-12 |
| Amit    | 102   | Mumbai  |     50 | 4000  | 1999-10-25 |
```

| Reena  |   103 | Chennai |     30 | 8000   | 2000-10-19 |

| Albert  |   104 | Mumbai  |     30 | 10000  | 2015-06-05 |

+---------+-------+---------+---------+--------+------------+

4 rows in set (0.00 sec)

## Like

mysql> select empname from employee where city like 'pu%';

+---------+

| empname |

+---------+

| John    |

| Seeta   |

+---------+

2 rows in set (0.05 sec)


mysql> select empname from employee where city like 'm%';

+---------+

| empname |

+---------+

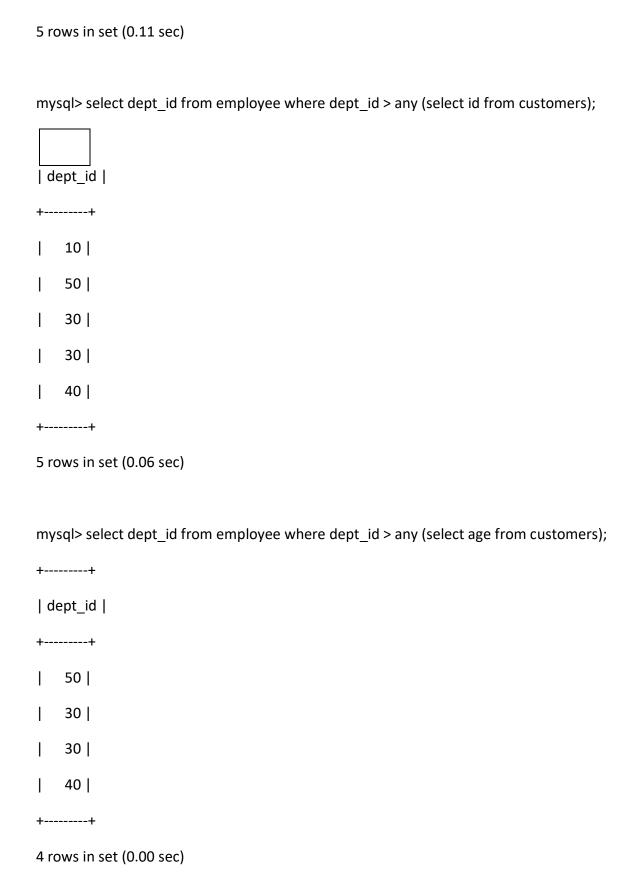| Amit    |

| Albert  |

+---------+

2 rows in set (0.00 sec)


mysql> select empname from employee where city like '%m';

Empty set (0.00 sec)


mysql> select empname from employee where city like '%i';

+---------+

| empname |

+---------+

| Amit    |

| Reena   |

| Albert  |

+---------+

3 rows in set (0.00 sec)


mysql> select empname,city from employee where city like '%i';

+---------+---------+

| empname | city    |

+---------+---------+

| Amit    | Mumbai  |

| Reena   | Chennai |

| Albert  | Mumbai  |

+---------+---------+

3 rows in set (0.00 sec)


mysql> select empname,city from employee where city not like '%i';

+---------+------+

```
| empname | city |

+---------+------+

| John    | Pune |

| Seeta   | Pune |

+---------+------+

2 rows in set (0.00 sec)
```

## IN

```
mysql> select * from employee where empname in('john','reena','albert');

+---------+-------+---------+---------+--------+------------+

| empname | empid | city    | dept_id | salary | hire_date  |

+---------+-------+---------+---------+--------+------------+

| John    |   101 | Pune    |      10 | 6000   | 1997-09-12 |

| Reena   |   103 | Chennai |      30 | 8000   | 2000-10-19 |

| Albert  |   104 | Mumbai  |      30 | 10000  | 2015-06-05 |

+---------+-------+---------+---------+--------+------------+

3 rows in set (0.00 sec)


mysql> select * from employee where empname in('john','reena','seeta');

+---------+-------+---------+---------+--------+------------+

| empname | empid | city    | dept_id | salary | hire_date  |

+---------+-------+---------+---------+--------+------------+

| John    |   101 | Pune    |      10 | 6000   | 1997-09-12 |

| Reena   |   103 | Chennai |      30 | 8000   | 2000-10-19 |

| Seeta   |   105 | Pune    |      40 | 15000  | 2015-06-05 |
```

```
+---------+-------+---------+---------+--------+------------+
```

3 rows in set (0.00 sec)


mysql> select * from employee where empname = "amit" or empname = "john" or empname = "reena";

```
+---------+-------+---------+---------+--------+------------+
| empname | empid | city    | dept_id | salary | hire_date  |
+---------+-------+---------+---------+--------+------------+
| John    |   101 | Pune    |      10 | 6000   | 1997-09-12 |
| Amit    |   102 | Mumbai  |      50 | 4000   | 1999-10-25 |
| Reena   |   103 | Chennai |      30 | 8000   | 2000-10-19 |
+---------+-------+---------+---------+--------+------------+
```

3 rows in set (0.00 sec)

## Any

mysql> select * from customers;

```
+------+--------+------+----------+
| id   | name   | age  | address  |
+------+--------+------+----------+
|    1 | nikita |   25 | pune     |
|    3 | Amit   |   28 | chennai  |
|    4 | John   |   30 | chennai  |
|    5 | Albert |   22 | banglore |
|    2 | diksha |   24 | mumbai   |
+------+--------+------+----------+
```

5 rows in set (0.11 sec)

mysql> select dept_id from employee where dept_id > any (select id from customers);

| dept_id |

+---------+

|    10 |

|    50 |

|    30 |

|    30 |

|    40 |

+---------+

5 rows in set (0.06 sec)

mysql> select dept_id from employee where dept_id > any (select age from customers);

+---------+

| dept_id |

+---------+

|    50 |

|    30 |

|    30 |

|    40 |

+---------+

4 rows in set (0.00 sec)

```
mysql> select * from customers;

+------+--------+------+----------+
| id   | name   | age  | address  |
+------+--------+------+----------+
|    1 | nikita |   25 | pune     |
|    3 | Amit   |   28 | chennai  |
|    4 | John   |   30 | chennai  |
|    5 | Albert |   22 | banglore |
|    2 | diksha |   24 | mumbai   |
+------+--------+------+----------+
5 rows in set (0.00 sec)


mysql> select * from orders;

+---------+------+------------+
| orderid | id   | orderdate  |
+---------+------+------------+
|     101 |    1 | 2022-06-12 |
|     103 |    6 | 2022-07-25 |
|     104 |    7 | 2022-08-05 |
|     105 |    8 | 2022-08-21 |
|     106 |    4 | 2022-09-19 |
|     102 |    2 | 2022-07-25 |
+---------+------+------------+
```

6 rows in set (0.14 sec)

## Exists

mysql> select name , address from customers where exists (select * from orders where customers.id = orders.id);

```
+--------+---------+
| name   | address |
+--------+---------+
| nikita | pune    |
| John   | chennai |
| diksha | mumbai  |
+--------+---------+
```

3 rows in set (0.04 sec)

## Not Exists

mysql> select name , address from customers where not exists (select * from orders where customers.id = orders.id);

```
+--------+----------+
| name   | address  |
+--------+----------+
| Amit   | chennai  |
| Albert | banglore |
+--------+----------+
```

2 rows in set (0.00 sec)

mysql> select exists(select * from customers where id = 5 ) AS RESULT;

```
+--------+
```

| RESULT |

+--------+

|    1 |

+--------+

1 row in set (0.00 sec)


mysql> select exists(select * from customers where id = 5 or id = 4 ) AS RESULT;

+--------+

| RESULT |

+--------+

|    1 |

+--------+

1 row in set (0.00 sec)


mysql> select exists(select * from customers where id = 5 AND id = 4 ) AS RESULT;

+--------+

| RESULT |

+--------+

|    0 |

+--------+

1 row in set (0.00 sec)


mysql> select exists(select * from customers where id = 5 or id = 1 ) AS RESULT;

+--------+

| RESULT |

+--------+

|      1 |

+--------+

1 row in set (0.00 sec)


mysql> select exists(select * from customers where id = 2) AS RESULT;

+--------+

| RESULT |

+--------+

|      1 |

+--------+

1 row in set (0.00 sec)

## Not Null

mysql> select * from customers where name is not null;

+------+--------+------+----------+

| id   | name   | age  | address  |

+------+--------+------+----------+

|    1 | nikita |   25 | pune     |

|    3 | Amit   |   28 | chennai  |

|    4 | John   |   30 | chennai  |

|    5 | Albert |   22 | banglore |

|    2 | diksha |   24 | mumbai   |

+------+--------+------+----------+

5 rows in set (0.00 sec)

## IS NULL

mysql> select * from customers where name is  null;

Empty set (0.00 sec)

mysql> insert into customers values (6,NULL,45,NULL);

Query OK, 1 row affected (0.09 sec)

mysql> select * from customers where name is  null;

+------+------+------+---------+

| id   | name | age  | address |

+------+------+------+---------+

|    6 | NULL |   45 | NULL    |

+------+------+------+---------+

1 row in set (0.02 sec)


mysql> select * from customers;

+------+--------+------+----------+

| id   | name   | age  | address  |

+------+--------+------+----------+

|    1 | nikita |   25 | pune     |

|    3 | Amit   |   28 | chennai  |

|    4 | John   |   30 | chennai  |

|    5 | Albert |   22 | banglore |

|    2 | diksha |   24 | mumbai   |

|    6 | NULL   |   45 | NULL     |

```
+------+--------+------+----------+
```

6 rows in set (0.00 sec)

## Not Like

mysql> select * from customers where name not like 'A%';

```
+------+--------+------+---------+
| id   | name   | age  | address |
+------+--------+------+---------+
|    1 | nikita |   25 | pune    |
|    4 | John   |   30 | chennai |
|    2 | diksha |   24 | mumbai  |
+------+--------+------+---------+
```

3 rows in set (0.00 sec)

## Not Between

mysql> select * from customers where id not between 3 and 5;

```
+------+--------+------+---------+
| id   | name   | age  | address |
+------+--------+------+---------+
|    1 | nikita |   25 | pune    |
|    2 | diksha |   24 | mumbai  |
|    6 | NULL   |   45 | NULL    |
+------+--------+------+---------+
```

3 rows in set (0.02 sec)

mysql> select * from customers where id not between 1 and 6;

Empty set (0.00 sec)

mysql> select * from customers where id not between 1 and 4;

```
+------+--------+------+----------+
| id   | name   | age  | address  |
+------+--------+------+----------+
|    5 | Albert |   22 | banglore |
|    6 | NULL   |   45 | NULL     |
+------+--------+------+----------+
```

2 rows in set (0.00 sec)

## Between

mysql> select * from customers where id between 1 and 4;

```
+------+--------+------+---------+
| id   | name   | age  | address |
+------+--------+------+---------+
|    1 | nikita |   25 | pune    |
|    3 | Amit   |   28 | chennai |
|    4 | John   |   30 | chennai |
|    2 | diksha |   24 | mumbai  |
+------+--------+------+---------+
```

4 rows in set (0.00 sec)

## Case Condition

mysql> select empname ,empid ,case dept_id

-> when 10 then "IT"

-> when 50 then "Sales"

-> else "development"

-> end  AS Departments from employee;

```
+---------+-------+-------------+
| empname | empid | Departments |
+---------+-------+-------------+
| John    |   101 | IT          |
| Amit    |   102 | Sales       |
| Reena   |   103 | development |
| Albert  |   104 | development |
| Seeta   |   105 | development |
+---------+-------+-------------+
```

5 rows in set (0.04 sec)

mysql> select empname ,empid ,case dept_id

-> when 10 then "IT"

-> when 50 then "Sales"

-> when 40 then "Testing"

-> else "Developer"

-> end as DEPARTMENTS from employee;

```
+---------+-------+-------------+
| empname | empid | DEPARTMENTS |
+---------+-------+-------------+
| John    |   101 | IT          |
```

| Amit   |  102 | Sales      |

| Reena  |   103 | Developer   |

| Albert  |   104 | Developer   |

| Seeta  |  105 | Testing    |

+---------+-------+-------------+

5 rows in set (0.00 sec)


mysql> select * from employee;

+---------+-------+---------+---------+--------+------------+

| empname | empid | city    | dept_id | salary | hire_date  |

+---------+-------+---------+---------+--------+------------+

| John    |  101 | Pune    |      10 | 6000   | 1997-09-12 |

| Amit    |  102 | Mumbai  |      50 | 4000   | 1999-10-25 |

| Reena   |   103 | Chennai |      30 | 8000   | 2000-10-19 |

| Albert  |  104 | Mumbai  |      30 | 10000  | 2015-06-05 |

| Seeta   |  105 | Pune    |      40 | 15000  | 2015-06-05 |

+---------+-------+---------+---------+--------+------------+

5 rows in set (0.00 sec)

# Count()

mysql> select count(empname) from employee;

+----------------+

| count(empname) |

+----------------+

|            5 |

```
+----------------+
```

1 row in set (0.05 sec)

## Concat()

mysql> select empname ,empid,dept_id, group_concat(city) as Location from employee group by dept_id;

```
+---------+-------+---------+----------------+
| empname | empid | dept_id | Location       |
+---------+-------+---------+----------------+
| John    |  101  |      10 | Pune           |
| Reena   |  103  |      30 | Chennai,Mumbai |
| Seeta   |  105  |      40 | Pune           |
| Amit    |  102  |      50 | Mumbai         |
+---------+-------+---------+----------------+
```

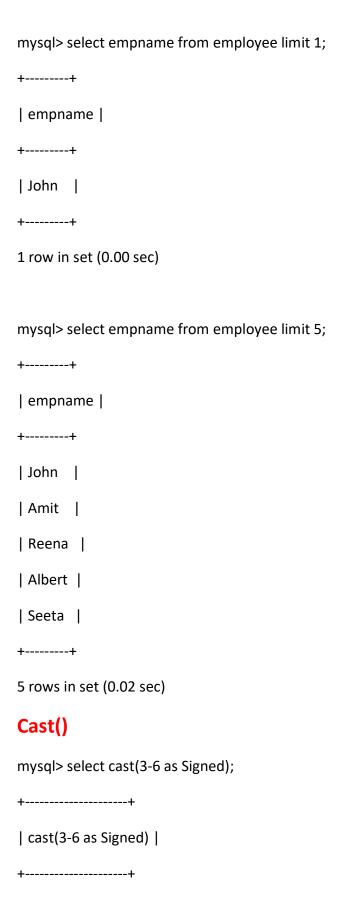4 rows in set (0.00 sec)

## Limit

mysql> select empname from employee limit 2;

```
+---------+
| empname |
+---------+
| John    |
| Amit    |
+---------+
```

2 rows in set (0.00 sec)

mysql> select empname from employee limit 1;

```
+---------+
| empname |
+---------+
| John    |
+---------+
```

1 row in set (0.00 sec)


mysql> select empname from employee limit 5;

```
+---------+
| empname |
+---------+
| John    |
| Amit    |
| Reena   |
| Albert  |
| Seeta   |
+---------+
```

5 rows in set (0.02 sec)

# Cast()

mysql> select cast(3-6 as Signed);

```
+--------------------+
| cast(3-6 as Signed) |
+--------------------+
```

```
|              -3 |
+-------------------+
```

1 row in set (0.05 sec)

```
mysql> select cast(3-6 as unsigned);
+----------------------+
| cast(3-6 as unsigned) |
+----------------------+
|  18446744073709551613 |
+----------------------+
```

1 row in set (0.00 sec)

# Convert()

```
mysql> select convert("2018-11-30" , Datetime);
+-------------------------------+
| convert("2018-11-30" , Datetime) |
+-------------------------------+
| 2018-11-30 00:00:00           |
+-------------------------------+
```

1 row in set (0.00 sec)

```
mysql> select * from employee;
+---------+-------+---------+---------+--------+-----------+
| empname | empid | city    | dept_id | salary | hire_date |
+---------+-------+---------+---------+--------+-----------+
```

| John    |  101 | Pune    |    10 | 6000   | 1997-09-12 |

| Amit    |  102 | Mumbai  |    50 | 4000   | 1999-10-25 |

| Reena   |  103 | Chennai |    30 | 8000   | 2000-10-19 |

| Albert  |  104 | Mumbai  |    30 | 10000  | 2015-06-05 |

| Seeta   |  105 | Pune    |    40 | 15000  | 2015-06-05 |

+---------+-------+---------+---------+--------+------------+

5 rows in set (0.00 sec)

## AS Alias

mysql> select hire_date as JOINING_DATE from employee;

+--------------+

| JOINING_DATE |

+--------------+

| 1997-09-12   |

| 1999-10-25   |

| 2000-10-19   |

| 2015-06-05   |

| 2015-06-05   |

+--------------+

5 rows in set (0.00 sec)


mysql> select empname as NAME , city as LOCATION , hire_date as JOINING_DATE from employee;

+--------+----------+--------------+

| NAME   | LOCATION | JOINING_DATE |

```
+--------+----------+--------------+
| John   | Pune     | 1997-09-12   |
| Amit   | Mumbai   | 1999-10-25   |
| Reena  | Chennai  | 2000-10-19   |
| Albert | Mumbai   | 2015-06-05   |
| Seeta  | Pune     | 2015-06-05   |
+--------+----------+--------------+
5 rows in set (0.00 sec)
```

mysql> select empname as NAME , city as LOCATION , hire_date as JOINING_DATE from employee as EMPLOYEE_DETAILS;

```
+--------+----------+--------------+
| NAME   | LOCATION | JOINING_DATE |
+--------+----------+--------------+
| John   | Pune     | 1997-09-12   |
| Amit   | Mumbai   | 1999-10-25   |
| Reena  | Chennai  | 2000-10-19   |
| Albert | Mumbai   | 2015-06-05   |
| Seeta  | Pune     | 2015-06-05   |
+--------+----------+--------------+
5 rows in set (0.00 sec)
```

# Count(*)

mysql> select count(*) as ROW_COUNT from employee;

```
+-----------+
```

```
| ROW_COUNT |

+-----------+

|         5 |

+-----------+

1 row in set (0.90 sec)


mysql> select * from employee;

+---------+-------+---------+---------+--------+------------+

| empname | empid | city    | dept_id | salary | hire_date  |

+---------+-------+---------+---------+--------+------------+

| John    |   101 | Pune    |      10 | 6000   | 1997-09-12 |

| Amit    |   102 | Mumbai  |      50 | 4000   | 1999-10-25 |

| Reena   |   103 | Chennai |      30 | 8000   | 2000-10-19 |

| Albert  |   104 | Mumbai  |      30 | 10000  | 2015-06-05 |

| Seeta   |   105 | Pune    |      40 | 15000  | 2015-06-05 |

+---------+-------+---------+---------+--------+------------+

5 rows in set (0.00 sec)
```

## Round()

```
mysql> select salary , round(salary*1.10) as "NEW SALARY" from employee;

+--------+------------+

| salary | NEW SALARY |

+--------+------------+

| 6000   |       6600 |

| 4000   |       4400 |
```

```
| 8000  |    8800 |

| 10000 |   11000 |

| 15000 |   16500 |

+--------+------------+
```

5 rows in set (0.00 sec)

## Concat()

mysql> select concat(empname , empid) "EMPLOYEE ID" from employee;

```
+-------------+

| EMPLOYEE ID |

+-------------+

| John101     |

| Amit102     |

| Reena103    |

| Albert104   |

| Seeta105    |

+-------------+
```

5 rows in set (0.06 sec)


mysql> select concat(empname,' , ', empid) "EMPLOYEE ID" from employee;

```
+--------------+

| EMPLOYEE ID  |

+--------------+

| John , 101   |

| Amit , 102   |
```

| Reena , 103  |

| Albert , 104 |

| Seeta , 105  |

+--------------+

5 rows in set (0.00 sec)


mysql> select concat(empid,'/',empname,'/',salary,'/',address,'/',city,'/',hire_date) from employee;

ERROR 1054 (42S22): Unknown column 'address' in 'field list'

mysql> select concat(empid,'/',empname,'/',salary,'/',dept_id,'/',city,'/',hire_date) from employee;

+----------------------------------------------------------------------+

| concat(empid,'/',empname,'/',salary,'/',dept_id,'/',city,'/',hire_date) |

+----------------------------------------------------------------------+

| 101/John/6000/10/Pune/1997-09-12                        |

| 102/Amit/4000/50/Mumbai/1999-10-25                       |

| 103/Reena/8000/30/Chennai/2000-10-19                      |

| 104/Albert/10000/30/Mumbai/2015-06-05                      |

| 105/Seeta/15000/40/Pune/2015-06-05                       |

+----------------------------------------------------------------------+

5 rows in set (0.00 sec)


mysql> select concat(empid,'/',empname,'/',salary,'/',dept_id,'/',city,'/',hire_date) as "EMPLOYEE DETAILS" from employee;

+-------------------------------------+

```
| EMPLOYEE DETAILS              |

+-------------------------------------+

| 101/John/6000/10/Pune/1997-09-12     |

| 102/Amit/4000/50/Mumbai/1999-10-25   |

| 103/Reena/8000/30/Chennai/2000-10-19 |

| 104/Albert/10000/30/Mumbai/2015-06-05 |

| 105/Seeta/15000/40/Pune/2015-06-05   |

+-------------------------------------+

5 rows in set (0.00 sec)
```

mysql> select empname , empid , salary , salary+(salary*15.5/100) "NEW Salary" from employee

```
-> ;

+---------+-------+--------+------------+

| empname | empid | salary | NEW Salary |

+---------+-------+--------+------------+

| John    |   101 | 6000   |       6930 |

| Amit    |   102 | 4000   |       4620 |

| Reena   |   103 | 8000   |       9240 |

| Albert  |   104 | 10000  |      11550 |

| Seeta   |   105 | 15000  |      17325 |

+---------+-------+--------+------------+

5 rows in set (0.00 sec)
```

## Upper()

mysql> select upper(empname) from employee;

```
+----------------+
| upper(empname) |
+----------------+
| JOHN           |
| AMIT           |
| REENA          |
| ALBERT         |
| SEETA          |
+----------------+
```

5 rows in set (0.09 sec)

## Lower()

mysql> select lower(empname) from employee;

```
+----------------+
| lower(empname) |
+----------------+
| john           |
| amit           |
| reena          |
| albert         |
| seeta          |
+----------------+
```

5 rows in set (0.00 sec)

mysql> select lower(empname),upper(city) from employee;

```
+---------------+-------------+
| lower(empname) | upper(city) |
+---------------+-------------+
| john          | PUNE        |
| amit          | MUMBAI      |
| reena         | CHENNAI     |
| albert        | MUMBAI      |
| seeta         | PUNE        |
+---------------+-------------+
```

5 rows in set (0.00 sec)

# Length()

mysql> select upper(empname) , length(empname) from employee;

```
+---------------+-----------------+
| upper(empname) | length(empname) |
+---------------+-----------------+
| JOHN          |               4 |
| AMIT          |               4 |
| REENA         |               5 |
| ALBERT        |               6 |
| SEETA         |               5 |
+---------------+-----------------+
```

5 rows in set (0.00 sec)

# Floor()

```
mysql> select floor(salary/1000) from employee;

+--------------------+
| floor(salary/1000) |
+--------------------+
|                  6 |
|                  4 |
|                  8 |
|                 10 |
|                 15 |
+--------------------+
5 rows in set (0.05 sec)


mysql> select floor(4.9);

+------------+
| floor(4.9) |
+------------+
|          4 |
+------------+
1 row in set (0.00 sec)
```

## Ceil()

```
mysql> select ceil(4.9);

+-----------+
| ceil(4.9) |
+-----------+
```

```
|        5 |
+-----------+
```

1 row in set (0.00 sec)

## Current Time

```
mysql> select current_timestamp;

+---------------------+
| current_timestamp   |
+---------------------+
| 2022-10-12 12:19:21 |
+---------------------+
```

1 row in set (0.00 sec)

## Current date

```
mysql> select current_date;

+--------------+
| current_date |
+--------------+
| 2022-10-12   |
+--------------+
```

1 row in set (0.00 sec)


```
mysql> select hire_date , (current_date - hire_date) from employee;

+------------+---------------------------+
| hire_date  | (current_date - hire_date) |
+------------+---------------------------+
```

| 1997-09-12 |              250100 |

| 1999-10-25 |              229987 |

| 2000-10-19 |              219993 |

| 2015-06-05 |               70407 |

| 2015-06-05 |               70407 |

+------------+--------------------------+

5 rows in set (0.00 sec)

mysql> select * from employee;

+---------+-------+---------+---------+--------+------------+

| empname | empid | city    | dept_id | salary | hire_date  |

+---------+-------+---------+---------+--------+------------+

| John    |   101 | Pune    |      10 | 6000   | 1997-09-12 |

| Amit    |   102 | Mumbai  |      50 | 4000   | 1999-10-25 |

| Reena   |   103 | Chennai |      30 | 8000   | 2000-10-19 |

| Albert  |   104 | Mumbai  |      30 | 10000  | 2015-06-05 |

| Seeta   |   105 | Pune    |      40 | 15000  | 2015-06-05 |

+---------+-------+---------+---------+--------+------------+

5 rows in set (0.00 sec)

# Create View

mysql> create view empvu30 as select empid , empname ,city , salary , dept_id,hire_date from employee where dept_id =30;

Query OK, 0 rows affected (0.61 sec)


mysql> desc empvu30;

```
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| empid     | int         | YES  |     | NULL    |       |
| empname   | varchar(20) | YES  |     | NULL    |       |
| city      | varchar(20) | YES  |     | NULL    |       |
| salary    | varchar(10) | YES  |     | NULL    |       |
| dept_id   | int         | NO   |     | NULL    |       |
| hire_date | date        | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
```
6 rows in set (0.04 sec)


mysql> select * from empvu30;

```
+-------+---------+---------+--------+---------+------------+
| empid | empname | city    | salary | dept_id | hire_date  |
+-------+---------+---------+--------+---------+------------+
|   103 | Reena   | Chennai | 8000   |      30 | 2000-10-19 |
|   104 | Albert  | Mumbai  | 10000  |      30 | 2015-06-05 |
```

```
+-------+---------+---------+--------+--------+-----------+
```

2 rows in set (0.05 sec)

mysql> select * from employee_data;

```
+---------+-------+----------+--------+
| empname | empid | location | salary |
+---------+-------+----------+--------+
| John    |   101 | Pune     | 6000   |
| Amit    |   102 | Mumbai   | 4000   |
| Reena   |   103 | Chennai  | 8000   |
| Albert  |   104 | Mumbai   | 10000  |
| Seeta   |   105 | Pune     | 15000  |
+---------+-------+----------+--------+
```

5 rows in set (0.00 sec)

# Sum(), using group by , having  clause

mysql> select sum(salary),empname from employee_data group by location;

```
+-------------+---------+
| sum(salary) | empname |
+-------------+---------+
|       21000 | John    |
|       14000 | Amit    |
|        8000 | Reena   |
```

```
+------------+---------+
```

3 rows in set (0.09 sec)


mysql> select sum(salary),empname from employee_data group by location having sum(salary)>5000;

```
+------------+---------+
| sum(salary) | empname |
+------------+---------+
|      21000 | John    |
|      14000 | Amit    |
|       8000 | Reena   |
+------------+---------+
```

3 rows in set (0.00 sec)


mysql> select sum(salary),empname from employee_data group by location having sum(salary)>10000;

```
+------------+---------+
| sum(salary) | empname |
+------------+---------+
|      21000 | John    |
|      14000 | Amit    |
+------------+---------+
```

2 rows in set (0.00 sec)

mysql> select count(salary),empname,location from employee_data group by location having count(salary)<3;

```
+--------------+---------+----------+
| count(salary) | empname | location |
+--------------+---------+----------+
|            2 | John    | Pune     |
|            2 | Amit    | Mumbai   |
|            1 | Reena   | Chennai  |
+--------------+---------+----------+
```

3 rows in set (0.00 sec)

mysql> select avg(salary),empname,location from employee_data ==group by location having avg(salary)>5000;==

```
+-------------+---------+----------+
| avg(salary) | empname | location |
+-------------+---------+----------+
|       10500 | John    | Pune     |
|        7000 | Amit    | Mumbai   |
|        8000 | Reena   | Chennai  |
+-------------+---------+----------+
```

3 rows in set (0.00 sec)

# Commit , Savepoint , Rollback

mysql> create table stud(stud_name varchar

-> (10) , roll_no int , percentage int);

Query OK, 0 rows affected (1.95 sec)


mysql> start transaction;

Query OK, 0 rows affected (0.00 sec)

mysql> insert into stud values("nikita" , 01 ,78);

Query OK, 1 row affected (0.10 sec)

mysql> savepoint insertion1;

Query OK, 0 rows affected (0.00 sec)

mysql> select * from stud;

```
+-----------+---------+------------+
| stud_name | roll_no | percentage |
+-----------+---------+------------+
| nikita    |       1 |         78 |
+-----------+---------+------------+
```

1 row in set (0.00 sec)

mysql> insert into stud values("Reena" , 02 ,89);

Query OK, 1 row affected (0.00 sec)

mysql> savepoint insertion2;

Query OK, 0 rows affected (0.00 sec)

mysql> select * from stud;

```
+-----------+---------+------------+
```

```
| stud_name | roll_no | percentage |

+-----------+---------+------------+

| nikita    |    1 |       78 |

| Reena     |    2 |       89 |

+-----------+---------+------------+

2 rows in set (0.00 sec)


mysql> update stud set stud_name = "Reshma" where roll_no =2;

Query OK, 1 row affected (0.04 sec)

Rows matched: 1  Changed: 1  Warnings: 0


mysql> savepoint updation1;

Query OK, 0 rows affected (0.00 sec)


mysql> select * from stud;

+-----------+---------+------------+

| stud_name | roll_no | percentage |

+-----------+---------+------------+

| nikita    |    1 |       78 |

| Reshma    |    2 |       89 |

+-----------+---------+------------+

2 rows in set (0.00 sec)


mysql> rollback to insertion1;
```

Query OK, 0 rows affected (0.05 sec)


mysql> select * from stud;

```
+-----------+---------+------------+
| stud_name | roll_no | percentage |
+-----------+---------+------------+
| nikita    |       1 |         78 |
+-----------+---------+------------+
```

1 row in set (0.08 sec)


# Sql Joins

mysql> select * from customers;

```
+------+--------+------+----------+
| id   | name   | age  | address  |
+------+--------+------+----------+
|    1 | nikita |   25 | pune     |
|    3 | Amit   |   28 | chennai  |
|    4 | John   |   30 | chennai  |
|    5 | Albert |   22 | banglore |
|    2 | diksha |   24 | mumbai   |
+------+--------+------+----------+
```

5 rows in set (0.19 sec)


mysql> select * from orders;

```
+---------+------+------------+
| orderid | id   | orderdate  |
+---------+------+------------+
|     101 |    1 | 2022-06-12 |
|     103 |    6 | 2022-07-25 |
|     104 |    7 | 2022-08-05 |
|     105 |    8 | 2022-08-21 |
|     106 |    4 | 2022-09-19 |
|     102 |    2 | 2022-07-25 |
+---------+------+------------+
6 rows in set (0.15 sec)
```

## Inner join

```
mysql> select * from customers inner join orders on customers.id=orders.id;
+------+--------+------+---------+---------+------+------------+
| id   | name   | age  | address | orderid | id   | orderdate  |
+------+--------+------+---------+---------+------+------------+
|    1 | nikita |   25 | pune    |     101 |    1 | 2022-06-12 |
|    4 | John   |   30 | chennai |     106 |    4 | 2022-09-19 |
|    2 | diksha |   24 | mumbai  |     102 |    2 | 2022-07-25 |
+------+--------+------+---------+---------+------+------------+
3 rows in set (0.00 sec)
```

mysql> select customers.name , customers.address , orders.orderdate from customers inner join orders on customers.id=orders.id;

```
+--------+---------+------------+
```

```
| name   | address | orderdate  |

+--------+---------+------------+

| nikita | pune    | 2022-06-12 |

| John   | chennai | 2022-09-19 |

| diksha | mumbai  | 2022-07-25 |

+--------+---------+------------+
```

3 rows in set (0.00 sec)

## Union all / Full join

mysql> select * from customers inner join orders on customers.id=orders.id union all select * from customers right join orders on customers.id=orders.id;

```
+------+--------+------+---------+---------+------+------------+

| id   | name   | age  | address | orderid | id   | orderdate  |

+------+--------+------+---------+---------+------+------------+

|   1 | nikita |   25 | pune    |    101 |    1 | 2022-06-12 |

|   4 | John   |   30 | chennai |    106 |    4 | 2022-09-19 |

|   2 | diksha |   24 | mumbai  |    102 |    2 | 2022-07-25 |

|   1 | nikita |   25 | pune    |    101 |    1 | 2022-06-12 |

| NULL | NULL   | NULL | NULL    |    103 |    6 | 2022-07-25 |

| NULL | NULL   | NULL | NULL    |    104 |    7 | 2022-08-05 |

| NULL | NULL   | NULL | NULL    |    105 |    8 | 2022-08-21 |

|   4 | John   |   30 | chennai |    106 |    4 | 2022-09-19 |

|   2 | diksha |   24 | mumbai  |    102 |    2 | 2022-07-25 |

+------+--------+------+---------+---------+------+------------+
```

9 rows in set (0.04 sec)

# Left join

mysql> select * from customers left join orders on customers.id=orders.id;

```
+------+--------+------+----------+---------+------+------------+
| id   | name   | age  | address  | orderid | id   | orderdate  |
+------+--------+------+----------+---------+------+------------+
|    1 | nikita |   25 | pune     |     101 |    1 | 2022-06-12 |
|    3 | Amit   |   28 | chennai  |    NULL | NULL | NULL       |
|    4 | John   |   30 | chennai  |     106 |    4 | 2022-09-19 |
|    5 | Albert |   22 | banglore |    NULL | NULL | NULL       |
|    2 | diksha |   24 | mumbai   |     102 |    2 | 2022-07-25 |
+------+--------+------+----------+---------+------+------------+
```

5 rows in set (0.00 sec)

mysql> select customers.name , customers.address , orders.orderdate from customers left join orders on customers.id=orders.id;

```
+--------+----------+------------+
| name   | address  | orderdate  |
+--------+----------+------------+
| nikita | pune     | 2022-06-12 |
| Amit   | chennai  | NULL       |
| John   | chennai  | 2022-09-19 |
| Albert | banglore | NULL       |
| diksha | mumbai   | 2022-07-25 |
+--------+----------+------------+
```

5 rows in set (0.00 sec)

# Right join

mysql> select * from customers right join orders on customers.id=orders.id;

```
+------+--------+------+---------+---------+------+------------+
| id   | name   | age  | address | orderid | id   | orderdate  |
+------+--------+------+---------+---------+------+------------+
|    1 | nikita |   25 | pune    |     101 |    1 | 2022-06-12 |
| NULL | NULL   | NULL | NULL    |     103 |    6 | 2022-07-25 |
| NULL | NULL   | NULL | NULL    |     104 |    7 | 2022-08-05 |
| NULL | NULL   | NULL | NULL    |     105 |    8 | 2022-08-21 |
|    4 | John   |   30 | chennai |     106 |    4 | 2022-09-19 |
|    2 | diksha |   24 | mumbai  |     102 |    2 | 2022-07-25 |
+------+--------+------+---------+---------+------+------------+
```

6 rows in set (0.00 sec)


mysql> select customers.name , customers.address , orders.orderdate from customers right join orders on customers.id=orders.id;

```
+--------+---------+------------+
| name   | address | orderdate  |
+--------+---------+------------+
| nikita | pune    | 2022-06-12 |
| NULL   | NULL    | 2022-07-25 |
| NULL   | NULL    | 2022-08-05 |
| NULL   | NULL    | 2022-08-21 |
| John   | chennai | 2022-09-19 |
```

| diksha | mumbai  | 2022-07-25 |

+--------+---------+------------+

6 rows in set (0.00 sec)


mysql> select customers.name , customers.address , orders.orderdate from customers left join orders on customers.id=orders.id;

+--------+----------+------------+

| name   | address  | orderdate  |

+--------+----------+------------+

| nikita | pune     | 2022-06-12 |

| Amit   | chennai  | NULL       |

| John   | chennai  | 2022-09-19 |

| Albert | banglore | NULL       |

| diksha | mumbai   | 2022-07-25 |

+--------+----------+------------+

5 rows in set (0.00 sec)