

FULL STACK

AGGRGEGATE FUNCTIONS:

```
mysql> SELECT SUM(age) FROM users;
+-----+
| SUM(age) |
+-----+
|      83 |
+-----+
1 row in set (0.01 sec)

mysql> SELECT MIN(age) FROM users;
+-----+
| MIN(age) |
+-----+
|      25 |
+-----+
1 row in set (0.02 sec)

mysql> SELECT UPPER(name) FROM users;
+-----+
| UPPER(name) |
+-----+
| ALICE JOHNSON |
| BOB SMITH     |
| DAVID LEE     |
+-----+
```

```
mysql> SELECT * FROM users;
```

id	name	age	email	number
1	Alice Johnson	25	alice@gmail.com	9876543210
2	Bob Smith	30	bob@gmail.com	9123456780
3	Charlie Brown	22	charlie@gmail.com	9012345678

```
3 rows in set (0.00 sec)
```

```
mysql> SELECT COUNT(*) AS total_users  
-> FROM users;
```

total_users
3

```
1 row in set (0.01 sec)
```

```
mysql> SELECT AVG(age) AS average_age  
-> FROM users;
```

average_age
25.6667

```
1 row in set (0.01 sec)
```

```
mysql> SELECT SUM(age) AS total_age  
-> FROM users;
```

total_age
77

```
1 row in set (0.00 sec)
```

```
mysql> SELECT MIN(age) AS minimum_age  
-> FROM users;
```

minimum_age
22

```
1 row in set (0.00 sec)
```

```
mysql> SELECT MAX(age) AS maximum_age  
-> FROM users;
```

maximum_age
30

```
1 row in set (0.00 sec)
```

VIEW:

```
mysql> CREATE VIEW user_basic_info AS
-> SELECT name, age, email
-> FROM users;
Query OK, 0 rows affected (0.03 sec)

mysql> SELECT * FROM user_basic_info;
+-----+-----+-----+
| name          | age  | email          |
+-----+-----+-----+
| Alice Johnson | 25   | alice@gmail.com |
| Bob Smith    | 30   | bob@gmail.com   |
| Charlie Brown | 22   | charlie@gmail.com |
+-----+-----+-----+
3 rows in set (0.01 sec)

mysql>
```

JOINS:

```
mysql> CREATE VIEW user_basic_info AS
-> SELECT name, age, email
-> FROM users;
Query OK, 0 rows affected (0.03 sec)

mysql> SELECT * FROM user_basic_info;
+-----+-----+-----+
| name          | age  | email          |
+-----+-----+-----+
| Alice Johnson | 25   | alice@gmail.com |
| Bob Smith    | 30   | bob@gmail.com   |
| Charlie Brown | 22   | charlie@gmail.com |
+-----+-----+-----+
3 rows in set (0.01 sec)

mysql>
```

INNER JOIN:

```
mysql> CREATE VIEW user_basic_info AS
-> SELECT name, age, email
-> FROM users;
```

Query OK, 0 rows affected (0.03 sec)

```
mysql> SELECT * FROM user_basic_info;
```

name	age	email
Alice Johnson	25	alice@gmail.com
Bob Smith	30	bob@gmail.com
Charlie Brown	22	charlie@gmail.com

3 rows in set (0.01 sec)

```
mysql>
```

```
mysql> SELECT users.id, users.name, orders.product, orders.amount
-> FROM users
-> INNER JOIN orders
-> ON users.id = orders.user_id;
```

id	name	product	amount
1	Alice Johnson	Laptop	50000.00
1	Alice Johnson	Mouse	500.00
2	Bob Smith	Phone	20000.00
4	David Lee	Tablet	15000.00

4 rows in set (0.00 sec)

LEFT JOINS:

```
mysql> SELECT users.id, users.name, orders.product, orders.amount
-> FROM users
-> LEFT JOIN orders
-> ON users.id = orders.user_id;
```

id	name	product	amount
1	Alice Johnson	Laptop	50000.00
1	Alice Johnson	Mouse	500.00
2	Bob Smith	Phone	20000.00
3	Charlie Brown	NULL	NULL
4	David Lee	Tablet	15000.00

5 rows in set (0.00 sec)

RIGHT JOIN:

```
mysql> SELECT users.id, users.name, orders.product, orders.amount
-> FROM users
-> RIGHT JOIN orders
-> ON users.id = orders.user_id;
```

id	name	product	amount
1	Alice Johnson	Laptop	50000.00
1	Alice Johnson	Mouse	500.00
2	Bob Smith	Phone	20000.00
4	David Lee	Tablet	15000.00

```
4 rows in set (0.00 sec)
```

DDL:

```
mysql> CREATE TABLE users (
-> id INT AUTO_INCREMENT PRIMARY KEY,
-> name VARCHAR(100) NOT NULL,
-> age INT,
-> email VARCHAR(150) UNIQUE,
-> number VARCHAR(15)
-> );
Query OK, 0 rows affected (0.11 sec)
```

DML:

```
mysql> SELECT * FROM orders;
```

order_id	user_id	product	amount
5	1	Laptop	50000.00
6	1	Mouse	500.00
7	2	Phone	20000.00
8	4	Tablet	15000.00

```
4 rows in set (0.02 sec)
```

```
mysql> SELECT * FROM users;
```

id	name	age	email	number
1	Alice Johnson	25	alice@gmail.com	9876543210
2	Bob Smith	30	bob@gmail.com	9123456780
3	Charlie Brown	22	charlie@gmail.com	9012345678

```
3 rows in set (0.00 sec)
```

```
mysql> INSERT INTO orders (user_id, product, amount) VALUES
-> (1, 'Laptop', 50000),
-> (1, 'Mouse', 500),
-> (2, 'Phone', 20000),
-> (4, 'Tablet', 15000);
ERROR 1452 (23000): Cannot add or update a child row: a foreign key constraint fails ('userdb`.`orders', CONSTRAINT 'orders_ibfk_1' FOREIGN KEY ('user_id') REFERENCES 'users' ('id'))
mysql>
```

```
mysql> DELETE FROM users
      -> WHERE id=3;
Query OK, 1 row affected (0.02 sec)

mysql>
```

BUILT IN FUNCTIONS:

```
mysql> SELECT LENGTH(name) FROM users;
+-----+
| LENGTH(name) |
+-----+
|          13 |
|           9 |
|           9 |
+-----+
3 rows in set (0.02 sec)
```

```
mysql> SELECT CEILING(4.2);
+-----+
| CEILING(4.2) |
+-----+
|            5 |
+-----+
1 row in set (0.01 sec)
```

```
mysql> SELECT FLOOR(4.8);
+-----+
| FLOOR(4.8) |
+-----+
|           4 |
+-----+
1 row in set (0.00 sec)

mysql>
```

```
mysql> SELECT SUM(age) FROM users;
+-----+
| SUM(age) |
+-----+
|        83 |
+-----+
1 row in set (0.01 sec)
```

```
mysql> SELECT MIN(age) FROM users;
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```
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| UPPER(name) |
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```