

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;
+-----+
| MIN(age) |
+-----+
|        25 |
+-----+
1 row in set (0.02 sec)

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