

```
mysql> CREATE DATABASE ecommerce_db;
Query OK, 1 row affected (0.11 sec)

mysql> USE ecommerce_db;
Database changed
mysql> CREATE TABLE customers(customer_id INT PRIMARY KEY AUTO_INCREMENT, customer_name VARCHAR(100), email VARCHAR(100));
Query OK, 0 rows affected (0.10 sec)

mysql> CREATE TABLE products(product_id INT PRIMARY KEY AUTO_INCREMENT, product_name VARCHAR(100), price DECIMAL(10,2));
Query OK, 0 rows affected (0.04 sec)
```

```
mysql> CREATE TABLE orders(order_id INT PRIMARY KEY AUTO_INCREMENT, customer_id INT, order_date DATE, total_amount DECIMAL(10,2), FOREIGN KEY (customer_id) REFERENCES customers(customer_id));
Query OK, 0 rows affected (0.05 sec)

mysql> CREATE TABLE order_items(order_item_id INT PRIMARY KEY AUTO_INCREMENT, order_id INT, product_id INT, quantity INT, FOREIGN KEY (order_id) REFERENCES orders(order_id));
Query OK, 0 rows affected (0.05 sec)
```

```
mysql> INSERT INTO customers(customer_name,email) VALUES('Alice','alice@example.com'),('Bob','bob@example.com'),('Charlie','charlie@example.com');
Query OK, 3 rows affected (0.02 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> INSERT INTO products(product_name,price)
-> VALUES('Laptop',50000.00),('SmartPhone',20000.00),('Headphones',3000.00),('Keyboard',1500.00);
Query OK, 4 rows affected (0.01 sec)
Records: 4 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO orders (customer_id, order_date, total_amount)
-> VALUES
-> (1, '2025-06-01', 53000.00),
-> (2, '2025-06-02', 20000.00),
-> (3, '2025-06-03', 4500.00);
Query OK, 3 rows affected (0.02 sec)
Records: 3 Duplicates: 0 Warnings: 0
```

```
mysql> INSERT INTO order_items (order_id, product_id, quantity) VALUES
-> (1, 1, 1),
-> (1, 3, 1),
-> (2, 2, 1),
-> (3, 3, 1),
-> (3, 4, 1);
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

```
mysql> SELECT * FROM customers ORDER BY customer_name;
+-----+-----+-----+
| customer_id | customer_name | email |
+-----+-----+-----+
| 1 | Alice | alice@example.com |
| 2 | Bob | bob@example.com |
| 3 | Charlie | charlie@example.com |
+-----+-----+-----+
3 rows in set (0.03 sec)
```

```
mysql> SELECT product_name, price FROM products WHERE price > 5000;
+-----+-----+
| product_name | price |
+-----+-----+
| Laptop | 50000.00 |
| SmartPhone | 20000.00 |
+-----+-----+
```

```
mysql> SELECT customer_id, COUNT(order_id) AS total_orders
-> FROM orders
-> GROUP BY customer_id
-> ORDER BY total_orders DESC;
```

customer_id	total_orders
1	1
2	1
3	1

3 rows in set (0.02 sec)

```
mysql> SELECT o.order_id, c.customer_name, o.total_amount
-> FROM orders o
-> INNER JOIN customers c ON o.customer_id = c.customer_id;
```

order_id	customer_name	total_amount
1	Alice	53000.00
2	Bob	20000.00
3	Charlie	4500.00

3 rows in set (0.01 sec)

```
mysql> SELECT c.customer_name, o.order_id
-> FROM customers c
-> LEFT JOIN orders o ON c.customer_id = o.customer_id;
```

customer_name	order_id
Alice	1
Bob	2

```
mysql> SELECT c.customer_name, o.order_id
-> FROM customers c
-> LEFT JOIN orders o ON c.customer_id = o.customer_id;
+-----+-----+
| customer_name | order_id |
+-----+-----+
| Alice         | 1        |
| Bob           | 2        |
| Charlie        | 3        |
+-----+-----+
3 rows in set (0.00 sec)

mysql> SELECT o.order_id, c.customer_name
-> FROM orders o
-> RIGHT JOIN customers c ON o.customer_id = c.customer_id;
+-----+-----+
| order_id | customer_name |
+-----+-----+
| 1        | Alice         |
| 2        | Bob           |
| 3        | Charlie        |
+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> SELECT product_name, price
-> FROM products
-> WHERE price > (SELECT AVG(price) FROM products);
```

product_name	price
Laptop	50000.00
SmartPhone	20000.00

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

```
mysql> SELECT SUM(total_amount) AS total_sales FROM orders;
```

total_sales
77500.00

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

```
mysql>
mysql> SELECT AVG(price) AS average_price FROM products;
```

average_price
18625.000000

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

```
mysql> CREATE VIEW customer_order_summary AS
-> SELECT c.customer_name, COUNT(o.order_id) AS total_orders, SUM(o.total_amount) AS total_spent
-> FROM customers c
-> LEFT JOIN orders o ON c.customer_id = o.customer_id
-> GROUP BY c.customer_name;
```

```
mysql> CREATE VIEW customer_order_summary AS
-> SELECT c.customer_name, COUNT(o.order_id) AS total_orders, SUM(o.total_amount) AS total_spent
-> FROM customers c
-> LEFT JOIN orders o ON c.customer_id = o.customer_id
-> GROUP BY c.customer_name;
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> SELECT * FROM customer_order_summary;
+-----+-----+-----+
| customer_name | total_orders | total_spent |
+-----+-----+-----+
| Alice         | 1           | 53000.00    |
| Bob           | 1           | 20000.00    |
| Charlie       | 1           | 4500.00     |
+-----+-----+-----+
3 rows in set (0.01 sec)
```

```
mysql> SELECT customer_name, COALESCE(email, 'No Email') AS email_info FROM customers;
```