

```
mysql> show databases;
```

Database
college
db_name
employees
information_schema
mysql
new_schema
performance_schema
players
sys

```
9 rows in set (0.01 sec)
```

```
mysql> use college;
```

```
Database changed
```

```
mysql> CREATE TABLE customers (
```

```
->     id INT PRIMARY KEY,
```

```
->     name VARCHAR(100)
```

```
-> );
```

```
Query OK, 0 rows affected (0.08 sec)
```

```
mysql>
```

```
mysql> -- Orders Table
```

```
mysql> CREATE TABLE orders (
```

```
->     id INT PRIMARY KEY,
```

```
->     customer_id INT,
```

```
->     total_price DECIMAL(10,2),
```

```
->     FOREIGN KEY (customer_id) REFERENCES customers(id)
```

```
-> );
```

```
Query OK, 0 rows affected (0.06 sec)
```

```
mysql>
```

```
mysql> -- Sample Data
```

```
mysql> INSERT INTO customers VALUES (1, 'Alice'), (2, 'Bob'), (3, 'Charlie');
```

```
Query OK, 3 rows affected (0.01 sec)
```

```
Records: 3  Duplicates: 0  Warnings: 0
```

```
mysql> INSERT INTO orders VALUES
```

```
-> (101, 1, 200.50),
```

```
-> (102, 1, 350.00),
```

```
-> (103, 2, 150.75),
```

```
-> (104, 3, 50.00),
```

```
-> (105, 2, 175.00);
```

```
Query OK, 5 rows affected (0.01 sec)
```

```
Records: 5  Duplicates: 0  Warnings: 0
```

```
mysql> SELECT * FROM orders WHERE total_price > 100;
```

id	customer_id	total_price
101	1	200.50
102	1	350.00
103	2	150.75
105	2	175.00

```
4 rows in set (0.01 sec)
```

```
mysql>
```

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

customer_id	total_orders
1	2
2	2
3	1

```
3 rows in set (0.01 sec)
```

```
mysql> -- INNER JOIN
```

```
mysql> SELECT customers.name, orders.total_price  
-> FROM customers  
-> INNER JOIN orders ON customers.id = orders.customer_id;
```

name	total_price
Alice	200.50
Alice	350.00
Bob	150.75
Bob	175.00
Charlie	50.00

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

```
mysql>
```

```
mysql> -- LEFT JOIN
```

```
mysql> SELECT customers.name, orders.total_price  
-> FROM customers  
-> LEFT JOIN orders ON customers.id = orders.customer_id;
```

name	total_price
Alice	200.50
Alice	350.00
Bob	150.75
Bob	175.00
Charlie	50.00

5 rows in set (0.00 sec)

```
mysql> SELECT name FROM customers
      -> WHERE id IN (SELECT customer_id FROM orders WHERE total_price > 300);
```

name
Alice

1 row in set (0.01 sec)

```
mysql> SELECT name FROM customers
      -> WHERE id IN (SELECT customer_id FROM orders WHERE total_price > 300);
```

name
Alice

1 row in set (0.00 sec)

```
mysql> SELECT AVG(total_price) AS average_price FROM orders;
```

average_price
185.250000

1 row in set (0.01 sec)

```
mysql>
mysql> SELECT customer_id, SUM(total_price) AS total_spent
      -> FROM orders
      -> GROUP BY customer_id;
```

customer_id	total_spent
1	550.50
2	325.75
3	50.00

3 rows in set (0.00 sec)

```
mysql> CREATE VIEW customer_order_summary AS
      -> SELECT customer_id, COUNT(*) AS total_orders, SUM(total_price) AS total_spent
      -> FROM orders
      -> GROUP BY customer_id;
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> CREATE INDEX idx_customer_id ON orders(customer_id);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> |
```