

Enter password: *****
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 19
Server version: 8.0.43 MySQL Community Server - GPL

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create database klecommerce;
Query OK, 1 row affected (0.04 sec)

mysql> use klecommerce;
Database changed

mysql> CREATE TABLE customers (
-> customer_id INT PRIMARY KEY,
-> first_name VARCHAR(100),
-> last_name VARCHAR(100),
-> email VARCHAR(255),
-> signup_date DATE,
-> country VARCHAR(100)
->);
Query OK, 0 rows affected (0.07 sec)

mysql> desc customers;

Field	Type	Null	Key	Default	Extra
customer_id	int	NO	PRI	NULL	
first_name	varchar(100)	YES		NULL	
last_name	varchar(100)	YES		NULL	
email	varchar(255)	YES		NULL	
signup_date	date	YES		NULL	
country	varchar(100)	YES		NULL	

6 rows in set (0.01 sec)



```
mysql> CREATE TABLE products (  
-> product_id INT PRIMARY KEY,  
-> product_name VARCHAR(255),  
-> category_id INT,  
-> price DECIMAL(10,2),  
-> stock INT  
-> );
```

Query OK, 0 rows affected (0.06 sec)

```
mysql> desc products;
```

Field	Type	Null	Key	Default	Extra
product_id	int	NO	PRI	NULL	
product_name	varchar(255)	YES		NULL	
category_id	int	YES		NULL	
price	decimal(10,2)	YES		NULL	
stock	int	YES		NULL	

5 rows in set (0.00 sec)

```
mysql> CREATE TABLE categories (  
-> category_id INT PRIMARY KEY,  
-> category_name VARCHAR(100)  
-> );
```

Query OK, 0 rows affected (0.06 sec)

```
mysql> desc categories;
```

Field	Type	Null	Key	Default	Extra
category_id	int	NO	PRI	NULL	
category_name	varchar(100)	YES		NULL	

2 rows in set (0.00 sec)

```
mysql> CREATE TABLE orders (  
-> order_id INT PRIMARY KEY,  
-> customer_id INT,  
-> order_date DATE,
```

```
MySQL 8.0 Command Line Cl... + v
-> order_status VARCHAR(50),
-> total_amount DECIMAL(12,2),
-> shipping_fee DECIMAL(10,2)
-> );
```

Query OK, 0 rows affected (0.06 sec)

```
mysql> desc orders;
```

Field	Type	Null	Key	Default	Extra
order_id	int	NO	PRI	NULL	
customer_id	int	YES		NULL	
order_date	date	YES		NULL	
order_status	varchar(50)	YES		NULL	
total_amount	decimal(12,2)	YES		NULL	
shipping_fee	decimal(10,2)	YES		NULL	

6 rows in set (0.00 sec)

```
mysql> CREATE TABLE order_items (
-> order_item_id INT PRIMARY KEY,
-> order_id INT,
-> product_id INT,
-> quantity INT,
-> unit_price DECIMAL(10,2)
-> );
```

Query OK, 0 rows affected (0.04 sec)

```
mysql> desc order_items;
```

Field	Type	Null	Key	Default	Extra
order_item_id	int	NO	PRI	NULL	
order_id	int	YES		NULL	
product_id	int	YES		NULL	
quantity	int	YES		NULL	
unit_price	decimal(10,2)	YES		NULL	

5 rows in set (0.01 sec)

```
mysql> CREATE TABLE payments (
```

```
-> payment_id INT PRIMARY KEY,  
-> order_id INT,  
-> payment_date DATE,  
-> payment_method VARCHAR(50),  
-> amount DECIMAL(12,2)  
-> );
```

Query OK, 0 rows affected (0.04 sec)

mysql> desc payments;

Field	Type	Null	Key	Default	Extra
payment_id	int	NO	PRI	NULL	
order_id	int	YES		NULL	
payment_date	date	YES		NULL	
payment_method	varchar(50)	YES		NULL	
amount	decimal(12,2)	YES		NULL	

5 rows in set (0.00 sec)

mysql> CREATE TABLE reviews (

```
-> review_id INT PRIMARY KEY,  
-> product_id INT,  
-> customer_id INT,  
-> rating INT, -- 1-5  
-> review_text TEXT,  
-> review_date DATE  
-> );
```

Query OK, 0 rows affected (0.05 sec)

mysql> desc reviews;

Field	Type	Null	Key	Default	Extra
review_id	int	NO	PRI	NULL	
product_id	int	YES		NULL	
customer_id	int	YES		NULL	
rating	int	YES		NULL	
review_text	text	YES		NULL	
review_date	date	YES		NULL	


```
mysql> INSERT INTO customers (customer_id, first_name, last_name, email, signup_date, country)
-> VALUES
-> (1, 'Kushi', 'Ramu', 'kushi.ramu@example.com', '2025-01-15', 'India'),
-> (2, 'Arjun', 'Mehta', 'arjun.mehta@example.com', '2025-02-01', 'India'),
-> (3, 'Priya', 'Sharma', 'priya.sharma@example.com', '2025-02-10', 'USA'),
-> (4, 'Ravi', 'Kumar', 'ravi.kumar@example.com', '2025-03-05', 'UK'),
-> (5, 'Sneha', 'Patel', 'sneha.patel@example.com', '2025-03-12', 'Canada');
Query OK, 5 rows affected (0.02 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

```
mysql> select*from customers
-> ;
```

customer_id	first_name	last_name	email	signup_date	country
1	Kushi	Ramu	kushi.ramu@example.com	2025-01-15	India
2	Arjun	Mehta	arjun.mehta@example.com	2025-02-01	India
3	Priya	Sharma	priya.sharma@example.com	2025-02-10	USA
4	Ravi	Kumar	ravi.kumar@example.com	2025-03-05	UK
5	Sneha	Patel	sneha.patel@example.com	2025-03-12	Canada

5 rows in set (0.00 sec)

```
mysql> INSERT INTO products (product_id, product_name, category_id, price, stock)
-> VALUES (1, 'Laptop Pro', 101, 1200.00, 50);
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO products (product_id, product_name, category_id, price, stock)
-> VALUES (2, 'Wireless Mouse', 101, 25.50, 250);
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO products (product_id, product_name, category_id, price, stock)
-> VALUES (3, 'Cotton T-Shirt', 202, 19.99, 500);
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO products (product_id, product_name, category_id, price, stock)
-> VALUES (4, 'Coffee Maker XL', 303, 75.90, 150);
```

```
mysql>
```

```
mysql> INSERT INTO products (product_id, product_name, category_id, price, stock)
-> VALUES (5, 'Hard Drive 2TB', 101, 65.00, 90);
```

```
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select*from products;
```

product_id	product_name	category_id	price	stock
1	Laptop Pro	101	1200.00	50
2	Wireless Mouse	101	25.50	250
3	Cotton T-Shirt	202	19.99	500
4	Coffee Maker XL	303	75.90	150
5	Hard Drive 2TB	101	65.00	90

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

```
mysql> INSERT INTO categories (category_id, category_name)
```

```
-> VALUES (101, 'Electronics');
```

```
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
```

```
mysql> INSERT INTO categories (category_id, category_name)
```

```
-> VALUES (202, 'Apparel');
```

```
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
```

```
mysql> INSERT INTO categories (category_id, category_name)
```

```
-> VALUES (303, 'Home Goods');
```

```
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
```

```
mysql> INSERT INTO categories (category_id, category_name)
```

```
-> VALUES (404, 'Books');
```

```
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
```

```
mysql> INSERT INTO categories (category_id, category_name)
```

```
-> VALUES (505, 'Groceries');
```

```
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select*from categories;
```

category_id	category_name
101	Electronics
202	Apparel
303	Home Goods
404	Books
505	Groceries

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

```
mysql> INSERT INTO orders (order_id, customer_id, order_date, order_status, total_amount, shipping_fee)
-> VALUES (1001, 501, '2024-09-20', 'Shipped', 1350.00, 15.00);
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO orders (order_id, customer_id, order_date, order_status, total_amount, shipping_fee)
-> VALUES (1002, 502, '2024-09-21', 'Delivered', 45.49, 5.50);
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO orders (order_id, customer_id, order_date, order_status, total_amount, shipping_fee)
-> VALUES (1003, 501, '2024-09-21', 'Processing', 89.95, 0.00); -- Free Shipping
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO orders (order_id, customer_id, order_date, order_status, total_amount, shipping_fee)
-> VALUES (1004, 503, '2024-09-22', 'Cancelled', 19.99, 5.00);
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO orders (order_id, customer_id, order_date, order_status, total_amount, shipping_fee)
-> VALUES (1005, 504, '2024-09-23', 'Shipped', 320.50, 12.00);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select*from orders;
```

order_id	customer_id	order_date	order_status	total_amount	shipping_fee
1001	501	2024-09-20	Shipped	1350.00	15.00

1002	502	2024-09-21	Delivered	45.49	5.50
1003	501	2024-09-21	Processing	89.95	0.00
1004	503	2024-09-22	Cancelled	19.99	5.00
1005	504	2024-09-23	Shipped	320.50	12.00

5 rows in set (0.00 sec)

```
mysql> INSERT INTO order_items (order_item_id, order_id, product_id, quantity, unit_price)
-> VALUES (1, 1001, 1, 1, 1200.00); -- 1 x Laptop Pro in Order 1001
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO order_items (order_item_id, order_id, product_id, quantity, unit_price)
-> VALUES (2, 1001, 2, 6, 25.00); -- 6 x Wireless Mouse in Order 1001
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO order_items (order_item_id, order_id, product_id, quantity, unit_price)
-> VALUES (3, 1002, 3, 2, 19.99); -- 2 x Cotton T-Shirt in Order 1002
Query OK, 1 row affected (0.00 sec)
```

```
mysql>
mysql> INSERT INTO order_items (order_item_id, order_id, product_id, quantity, unit_price)
-> VALUES (4, 1003, 4, 1, 75.90); -- 1 x Coffee Maker XL in Order 1003
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO order_items (order_item_id, order_id, product_id, quantity, unit_price)
-> VALUES (5, 1003, 5, 2, 65.00); -- 2 x Hard Drive 2TB in Order 1003
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select*from order_items;
```

order_item_id	order_id	product_id	quantity	unit_price
1	1001	1	1	1200.00
2	1001	2	6	25.00
3	1002	3	2	19.99
4	1003	4	1	75.90
5	1003	5	2	65.00


```
mysql> INSERT INTO payments (payment_id, order_id, payment_date, payment_method, amount)
-> VALUES (2001, 1001, '2024-09-20', 'Credit Card', 1365.00);
Query OK, 1 row affected (0.01 sec)

mysql>
mysql> INSERT INTO payments (payment_id, order_id, payment_date, payment_method, amount)
-> VALUES (2002, 1002, '2024-09-21', 'PayPal', 50.99);
Query OK, 1 row affected (0.01 sec)

mysql>
mysql> INSERT INTO payments (payment_id, order_id, payment_date, payment_method, amount)
-> VALUES (2003, 1003, '2024-09-21', 'Debit Card', 89.95);
Query OK, 1 row affected (0.01 sec)

mysql>
mysql> INSERT INTO payments (payment_id, order_id, payment_date, payment_method, amount)
-> VALUES (2004, 1005, '2024-09-23', 'Credit Card', 332.50);
Query OK, 1 row affected (0.00 sec)

mysql>
mysql> INSERT INTO payments (payment_id, order_id, payment_date, payment_method, amount)
-> VALUES (2005, 1006, '2024-09-23', 'Gift Card', 25.00); -- Payment for a new sample Order ID 1006
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select*from payments;
```

payment_id	order_id	payment_date	payment_method	amount
2001	1001	2024-09-20	Credit Card	1365.00
2002	1002	2024-09-21	PayPal	50.99
2003	1003	2024-09-21	Debit Card	89.95
2004	1005	2024-09-23	Credit Card	332.50
2005	1006	2024-09-23	Gift Card	25.00

5 rows in set (0.00 sec)

```
mysql> INSERT INTO reviews (review_id, product_id, customer_id, rating, review_text, review_date)
-> VALUES (3001, 1, 501, 5, 'Absolutely love this laptop! Very fast and excellent display quality.', '2024-09-22');
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO reviews (review_id, product_id, customer_id, rating, review_text, review_date)
-> VALUES (3002, 2, 502, 4, 'Great mouse for the price. The connection is stable, but a little small for my hand.', '2024-09-23');
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO reviews (review_id, product_id, customer_id, rating, review_text, review_date)
-> VALUES (3003, 3, 501, 3, 'Decent T-shirt. The cotton is soft, but it shrank a little after the first wash.', '2024-09-24');
Query OK, 1 row affected (0.00 sec)
```

```
mysql>
mysql> INSERT INTO reviews (review_id, product_id, customer_id, rating, review_text, review_date)
-> VALUES (3004, 4, 503, 5, 'Best coffee maker I've ever owned. Brews quickly and the timer feature is perfect.', '2024-09-25');
Query OK, 1 row affected (0.01 sec)
```

```
mysql>
mysql> INSERT INTO reviews (review_id, product_id, customer_id, rating, review_text, review_date)
-> VALUES (3005, 5, 502, 2, 'The hard drive failed after just two weeks. Waiting on a replacement.', '2024-09-26');
Query OK, 1 row affected (0.00 sec)
```

```
mysql> select*from reviews;
```

review_id	product_id	customer_id	rating	review_text	review_date
3001	1	501	5	Absolutely love this laptop! Very fast and excellent display quality.	2024-09-22
3002	2	502	4	Great mouse for the price. The connection is stable, but a little small for my hand.	2024-09-23
3003	3	501	3	Decent T-shirt. The cotton is soft, but it shrank a little after the first wash.	2024-09-24
3004	4	503	5	Best coffee maker I've ever owned. Brews quickly and the timer feature is perfect.	2024-09-25
3005	5	502	2	The hard drive failed after just two weeks. Waiting on a replacement.	2024-09-26

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

```
mysql> SELECT product_name, COUNT(*) as order_count
-> FROM orders
-> WHERE order_date >= '2024-09-20'
-> GROUP BY product_name
-> ORDER BY order_count DESC;
```

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

```
mysql> SELECT *
-> FROM customers
```



```
-> WHERE country = 'India';
```

customer_id	first_name	last_name	email	signup_date	country
1	Kushi	Ramu	kushi.ramu@example.com	2025-01-15	India
2	Arjun	Mehta	arjun.mehta@example.com	2025-02-01	India

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

```
mysql> SELECT product_name, price
```

```
-> FROM products
```

```
-> WHERE price > 100
```

```
-> ORDER BY price DESC;
```

product_name	price
Laptop Pro	1200.00

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

```
mysql> SELECT order_status, COUNT(*) AS total_orders
```

```
-> FROM orders
```

```
-> GROUP BY order_status;
```

order_status	total_orders
Shipped	2
Delivered	1
Processing	1
Cancelled	1

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

```
mysql> SELECT o.order_id, c.first_name, c.last_name, o.total_amount, o.order_status
```

```
-> FROM orders o
```

```
-> INNER JOIN customers c ON o.customer_id = c.customer_id;
```

```
Empty set (0.00 sec)
```

```
mysql> SELECT p.product_name, c.category_name
```

```
-> FROM products p
```

```
-> LEFT JOIN categories c ON p.category_id = c.category_id;
```

product_name	category_name
Laptop Pro	Electronics
Wireless Mouse	Electronics
Cotton T-Shirt	Apparel
Coffee Maker XL	Home Goods
Hard Drive 2TB	Electronics

5 rows in set (0.00 sec)

```
mysql> SELECT o.order_id, o.order_date, c.first_name, c.country
-> FROM customers c
-> RIGHT JOIN orders o ON c.customer_id = o.customer_id;
```

order_id	order_date	first_name	country
1001	2024-09-20	NULL	NULL
1002	2024-09-21	NULL	NULL
1003	2024-09-21	NULL	NULL
1004	2024-09-22	NULL	NULL
1005	2024-09-23	NULL	NULL

5 rows in set (0.00 sec)

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

product_name	price
Laptop Pro	1200.00

1 row in set (0.00 sec)

```
mysql> SELECT first_name, last_name
-> FROM customers
-> WHERE customer_id IN (SELECT customer_id FROM orders);
```

Empty set (0.00 sec)

```
mysql> SELECT SUM(total_amount) AS total_revenue
```



```
-> FROM orders;
```

total_revenue
1825.93

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

```
mysql> SELECT p.product_name, AVG(r.rating) AS avg_rating
-> FROM reviews r
-> JOIN products p ON r.product_id = p.product_id
-> GROUP BY p.product_name;
```

product_name	avg_rating
Laptop Pro	5.0000
Wireless Mouse	4.0000
Cotton T-Shirt	3.0000
Coffee Maker XL	5.0000
Hard Drive 2TB	2.0000

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

```
mysql> CREATE VIEW customer_order_summary AS
-> SELECT c.customer_id, c.first_name, c.last_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_id, c.first_name, c.last_name;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> SELECT * FROM customer_order_summary;
```

customer_id	first_name	last_name	total_orders	total_spent
1	Kushi	Ramu	0	NULL
2	Arjun	Mehta	0	NULL
3	Priya	Sharma	0	NULL
4	Ravi	Kumar	0	NULL
5	Sneha	Patel	0	NULL

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

Laptop Pro	5.0000
Wireless Mouse	4.0000
Cotton T-Shirt	3.0000
Coffee Maker XL	5.0000
Hard Drive 2TB	2.0000

5 rows in set (0.00 sec)

```
mysql> CREATE VIEW customer_order_summary AS
-> SELECT c.customer_id, c.first_name, c.last_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_id, c.first_name, c.last_name;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> SELECT * FROM customer_order_summary;
```

customer_id	first_name	last_name	total_orders	total_spent
1	Kushi	Ramu	0	NULL
2	Arjun	Mehta	0	NULL
3	Priya	Sharma	0	NULL
4	Ravi	Kumar	0	NULL
5	Sneha	Patel	0	NULL

5 rows in set (0.00 sec)

```
mysql> CREATE INDEX idx_orders_customer ON orders(customer_id);
```

Query OK, 0 rows affected (0.04 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> CREATE INDEX idx_products_category ON products(category_id);
```

Query OK, 0 rows affected (0.05 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> CREATE INDEX idx_reviews_product ON reviews(product_id);
```

Query OK, 0 rows affected (0.05 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> |
```

