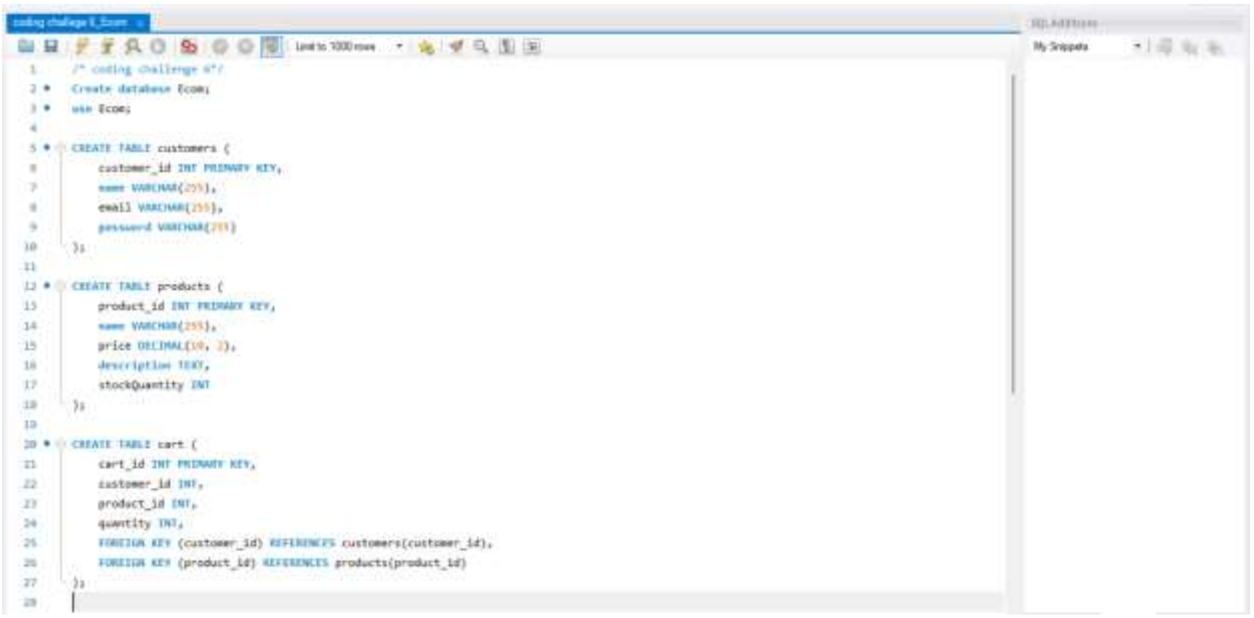
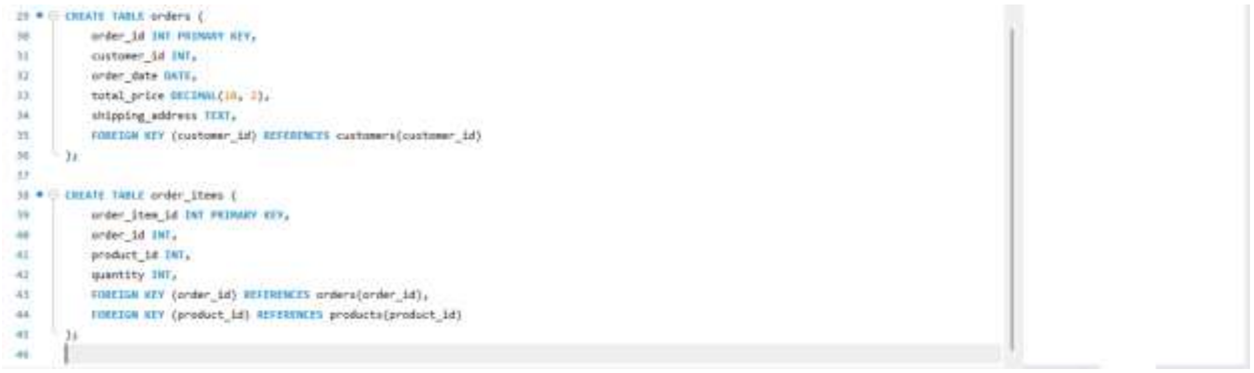
Coding Challenge 6

Ecommerce

Table Creation:

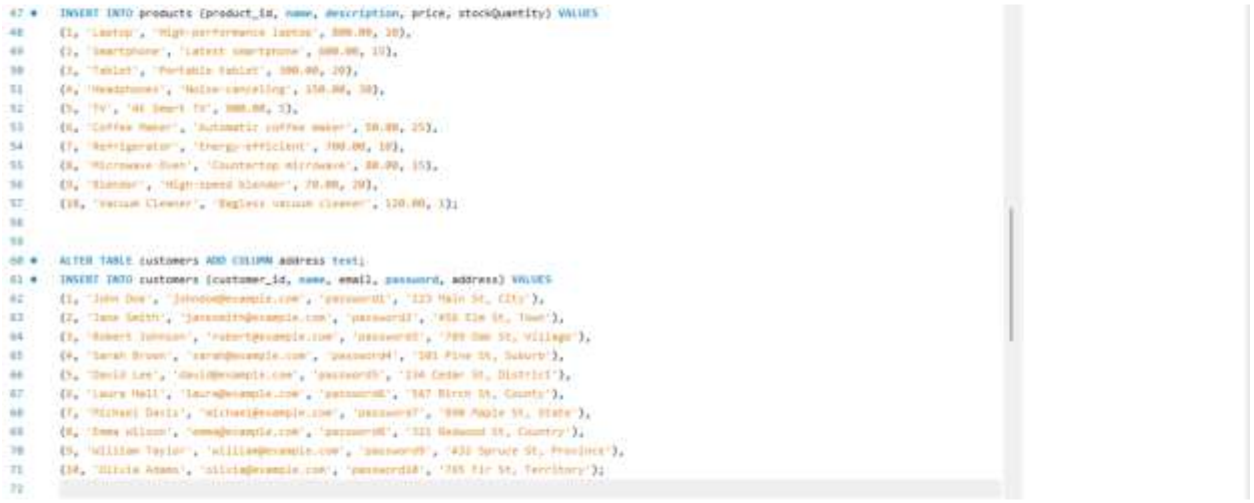


```
/* coding challenge 6*/
Create database Ecom;
use Ecom;

CREATE TABLE customers (
    customer_id INT PRIMARY KEY,
    name VARCHAR(255),
    email VARCHAR(255),
    password VARCHAR(255)
);

CREATE TABLE products (
    product_id INT PRIMARY KEY,
    name VARCHAR(255),
    price DECIMAL(10, 2),
    description TEXT,
    stockQuantity INT
);

CREATE TABLE cart (
    cart_id INT PRIMARY KEY,
    customer_id INT,
    product_id INT,
    quantity INT,
    FOREIGN KEY (customer_id) REFERENCES customers(customer_id),
    FOREIGN KEY (product_id) REFERENCES products(product_id)
);
```

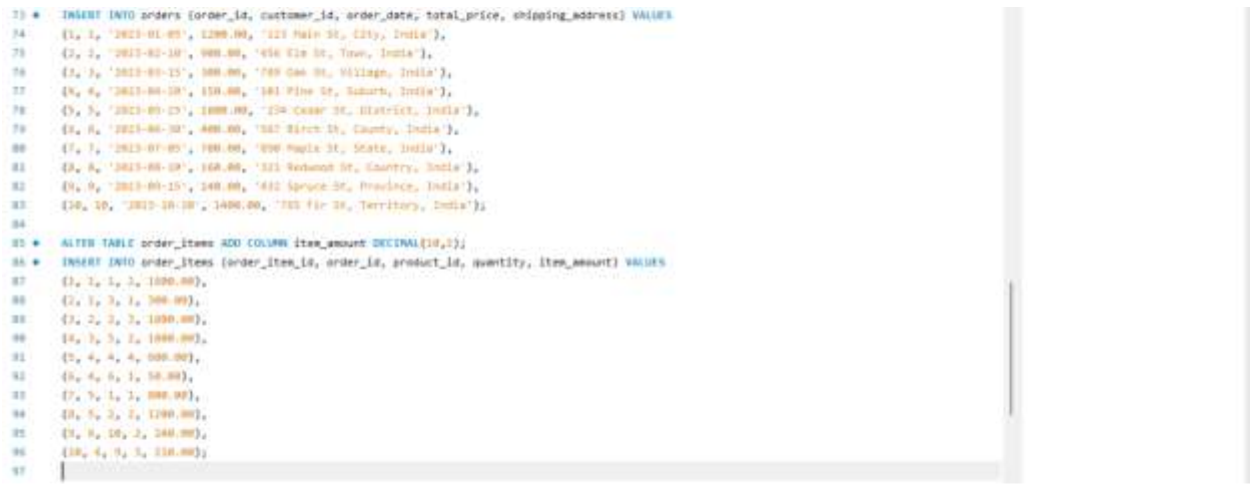


```
CREATE TABLE orders (
    order_id INT PRIMARY KEY,
    customer_id INT,
    order_date DATE,
    total_price DECIMAL(10, 2),
    shipping_address TEXT,
    FOREIGN KEY (customer_id) REFERENCES customers(customer_id)
);

CREATE TABLE order_items (
    order_item_id INT PRIMARY KEY,
    order_id INT,
    product_id INT,
    quantity INT,
    FOREIGN KEY (order_id) REFERENCES orders(order_id),
    FOREIGN KEY (product_id) REFERENCES products(product_id)
);
```

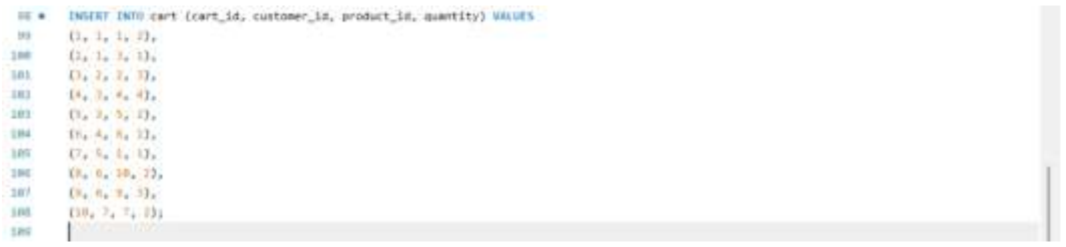
Data Insertion:



```sql
INSERT INTO products (product_id, name, description, price, stockQuantity) VALUES
(1, 'Laptop', 'High-performance laptop', 800.00, 10),
(2, 'Smartphone', 'Latest smartphone', 600.00, 15),
(3, 'Tablet', 'Portable tablet', 300.00, 20),
(4, 'Headphones', 'Noise-cancelling', 150.00, 30),
(5, 'TV', '4K Smart TV', 800.00, 5),
(6, 'Coffee Maker', 'Automatic coffee maker', 50.00, 25),
(7, 'Refrigerator', 'Energy-efficient', 700.00, 10),
(8, 'Microwave Oven', 'Countertop microwave', 80.00, 15),
(9, 'Blender', 'High-speed blender', 70.00, 20),
(10, 'Vacuum Cleaner', 'Bagless vacuum cleaner', 120.00, 1);


ALTER TABLE customers ADD COLUMN address text;
INSERT INTO customers (customer_id, name, email, password, address) VALUES
(1, 'John Doe', 'johndoe@example.com', 'password1', '123 Main St, City'),
(2, 'Jane Smith', 'janesmith@example.com', 'password2', '456 Elm St, Town'),
(3, 'Robert Johnson', 'robert@example.com', 'password3', '789 Oak St, Village'),
(4, 'Sarah Brown', 'sarah@example.com', 'password4', '101 Pine St, Suburb'),
(5, 'David Lee', 'david@example.com', 'password5', '234 Cedar St, District'),
(6, 'Laura Hall', 'laura@example.com', 'password6', '567 Birch St, County'),
(7, 'Michael Davis', 'michael@example.com', 'password7', '890 Maple St, State'),
(8, 'Emma Wilson', 'emma@example.com', 'password8', '321 Redwood St, Country'),
(9, 'William Taylor', 'william@example.com', 'password9', '432 Spruce St, Province'),
(10, 'Olivia Adams', 'olivia@example.com', 'password10', '765 Fir St, Territory');
```



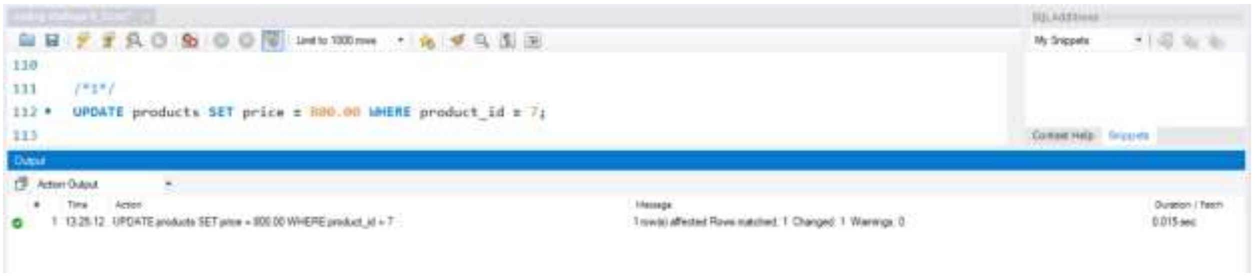
```sql
INSERT INTO orders (order_id, customer_id, order_date, total_price, shipping_address) VALUES
(1, 1, '2023-01-05', 1200.00, '123 Main St, City, India'),
(2, 2, '2023-02-10', 900.00, '456 Elm St, Town, India'),
(3, 3, '2023-03-15', 300.00, '789 Oak St, Village, India'),
(4, 4, '2023-04-20', 150.00, '101 Pine St, Suburb, India'),
(5, 5, '2023-05-25', 1000.00, '234 Cedar St, District, India'),
(6, 6, '2023-06-30', 400.00, '567 Birch St, County, India'),
(7, 7, '2023-07-05', 700.00, '890 Maple St, State, India'),
(8, 8, '2023-08-10', 160.00, '321 Redwood St, Country, India'),
(9, 9, '2023-09-15', 140.00, '432 Spruce St, Province, India'),
(10, 10, '2023-10-20', 1400.00, '765 Fir St, Territory, India');

ALTER TABLE order_items ADD COLUMN item_amount DECIMAL(10,2);
INSERT INTO order_items (order_item_id, order_id, product_id, quantity, item_amount) VALUES
(1, 1, 1, 2, 1000.00),
(2, 1, 3, 1, 300.00),
(3, 2, 2, 3, 1000.00),
(4, 3, 5, 2, 1000.00),
(5, 4, 4, 4, 600.00),
(6, 4, 6, 1, 50.00),
(7, 5, 1, 1, 800.00),
(8, 5, 2, 2, 1200.00),
(9, 8, 10, 2, 240.00),
(10, 6, 9, 3, 210.00);
```



```sql
INSERT INTO cart (cart_id, customer_id, product_id, quantity) VALUES
(1, 1, 1, 2),
(2, 1, 3, 1),
(3, 2, 2, 3),
(4, 3, 4, 4),
(5, 3, 5, 2),
(6, 4, 6, 1),
(7, 5, 1, 1),
(8, 6, 10, 2),
(9, 6, 9, 3),
(10, 7, 7, 2);
```

Queries:

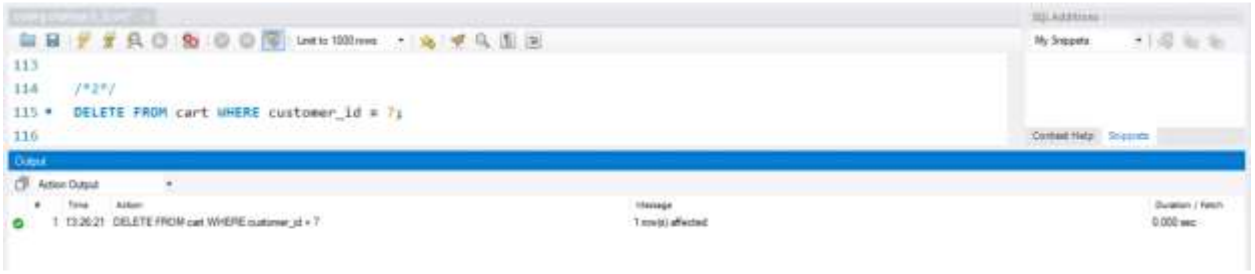
1.



```sql
/*1*/
UPDATE products SET price = 800.00 WHERE product_id = 7;
```

```
#   Time      Action                                               Message                                                       Duration / Fetch
1   13:25:12  UPDATE products SET price = 800.00 WHERE product_id = 7   1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0   0.015 sec
```

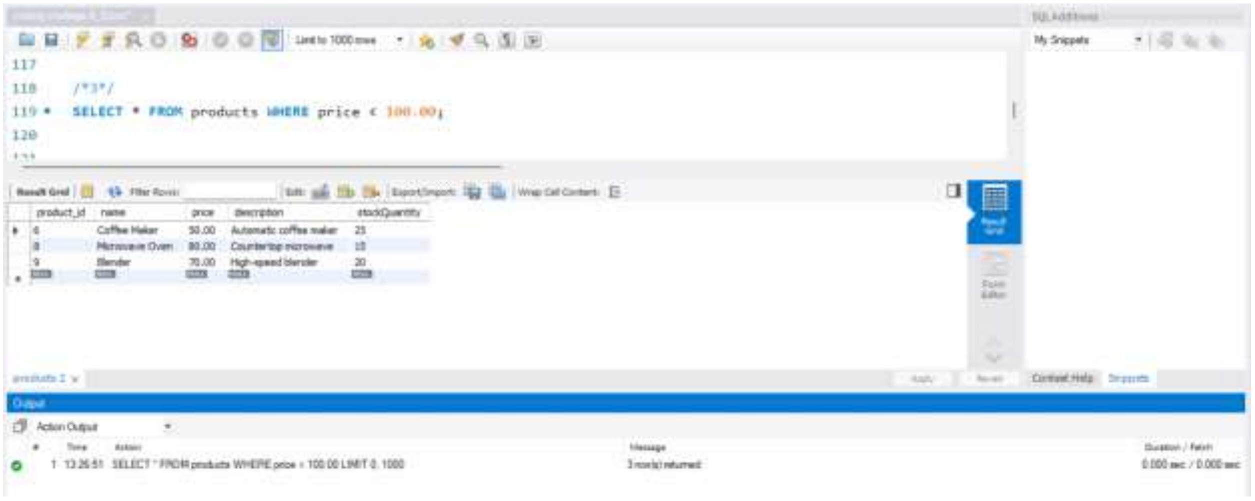
2.



```sql
/*2*/
DELETE FROM cart WHERE customer_id = 7;
```

```
#   Time      Action                                   Message             Duration / Fetch
1   13:26:21  DELETE FROM cart WHERE customer_id = 7   1 row(s) affected   0.000 sec
```

3.

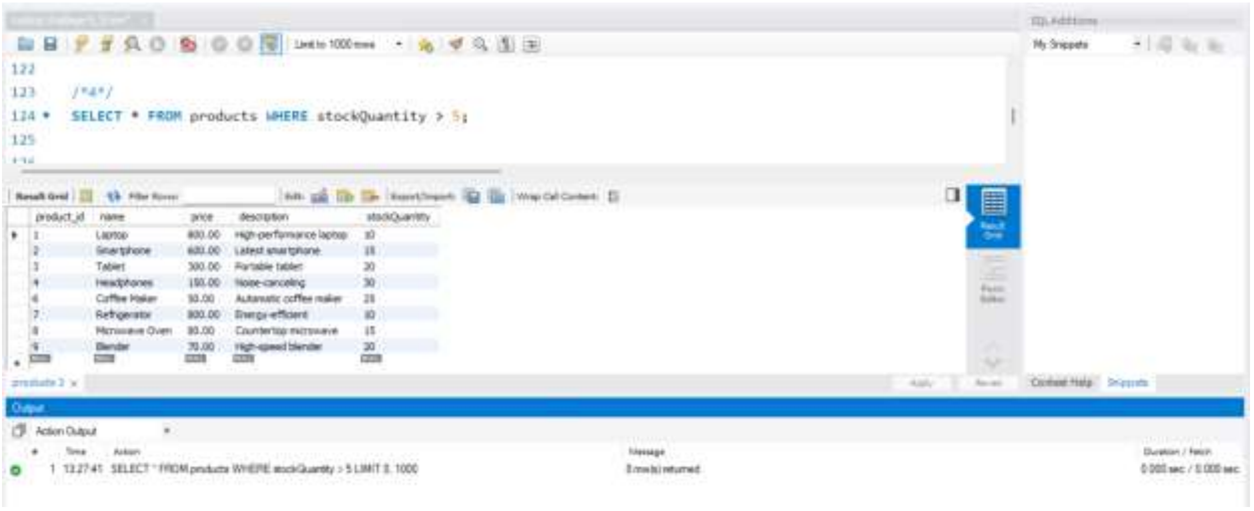


```sql
/*3*/
SELECT * FROM products WHERE price < 100.00;
```

product_id	name	price	description	stockQuantity
6	Coffee Maker	50.00	Automatic coffee maker	25
8	Microwave Oven	80.00	Countertop microwave	15
9	Blender	70.00	High-speed blender	20
NULL	NULL	NULL	NULL	NULL

```
#   Time      Action                                                      Message             Duration / Fetch
1   13:26:51  SELECT * FROM products WHERE price < 100.00 LIMIT 0, 1000   3 row(s) returned   0.000 sec / 0.000 sec
```

4.

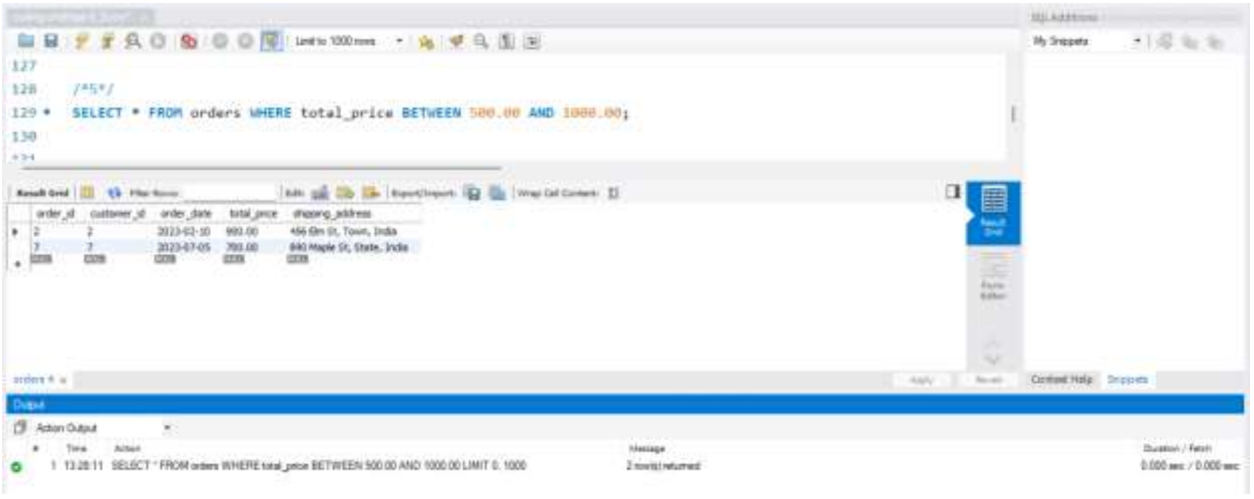


```
/*4*/
SELECT * FROM products WHERE stockQuantity > 5;
```

product_id	name	price	description	stockQuantity
1	Laptop	800.00	High-performance laptop	10
2	Smartphone	600.00	Latest smartphone	15
3	Tablet	300.00	Portable tablet	20
4	Headphones	150.00	Noise-canceling	30
6	Coffee Maker	50.00	Automatic coffee maker	25
7	Refrigerator	800.00	Energy-efficient	10
8	Microwave Oven	80.00	Countertop microwave	15
9	Blender	70.00	High-speed blender	20
NULL	NULL	NULL	NULL	NULL

```
1 13:27:41 SELECT * FROM products WHERE stockQuantity > 5 LIMIT 0, 1000    8 row(s) returned    0.000 sec / 0.000 sec
```

5.

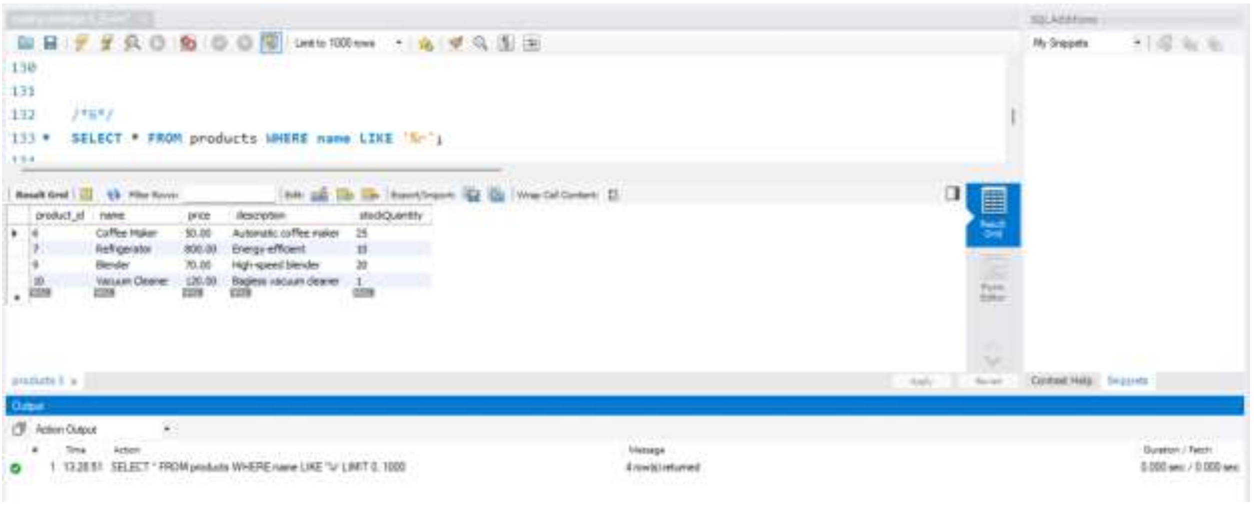


```
/*5*/
SELECT * FROM orders WHERE total_price BETWEEN 500.00 AND 1000.00;
```

order_id	customer_id	order_date	total_price	shipping_address
2	2	2023-02-10	900.00	456 Elm St, Town, India
7	7	2023-07-05	700.00	840 Maple St, State, India
NULL	NULL	NULL	NULL	NULL

```
1 13:28:11 SELECT * FROM orders WHERE total_price BETWEEN 500.00 AND 1000.00 LIMIT 0, 1000    2 row(s) returned    0.000 sec / 0.000 sec
```

6.

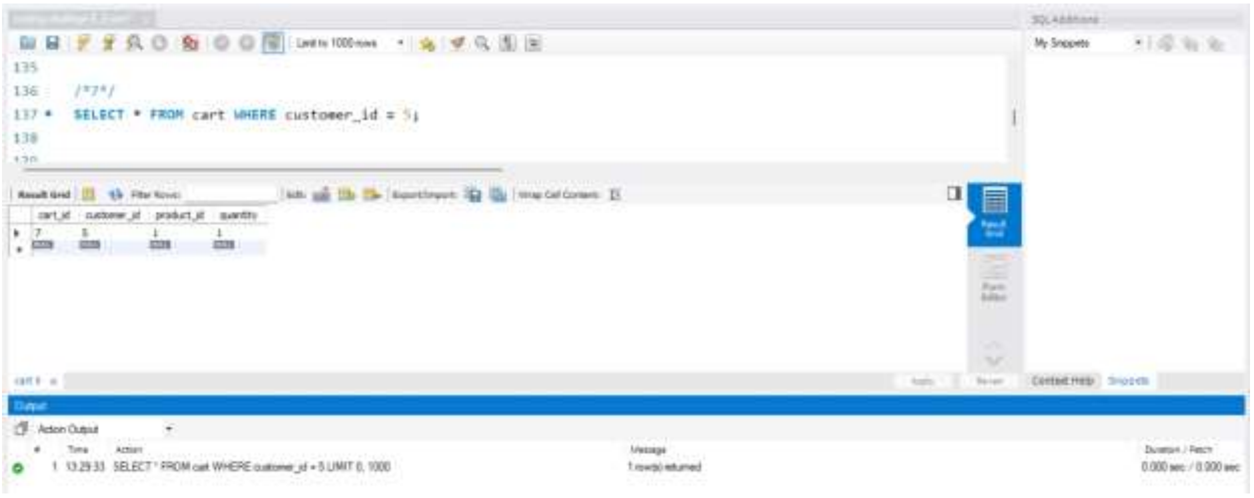


```
/*6*/
SELECT * FROM products WHERE name LIKE '%r';
```

product_id	name	price	description	stockQuantity
4	Coffee Maker	50.00	Automatic coffee maker	25
7	Refrigerator	800.00	Energy-efficient	10
9	Blender	70.00	High-speed blender	20
10	Vacuum Cleaner	120.00	Bagless vacuum cleaner	1
NULL	NULL	NULL	NULL	NULL

```
#   Time      Action                                                   Message            Duration / Fetch
1   13:28:51  SELECT * FROM products WHERE name LIKE '%r' LIMIT 0, 1000  4 row(s) returned  0.000 sec / 0.000 sec
```

7.

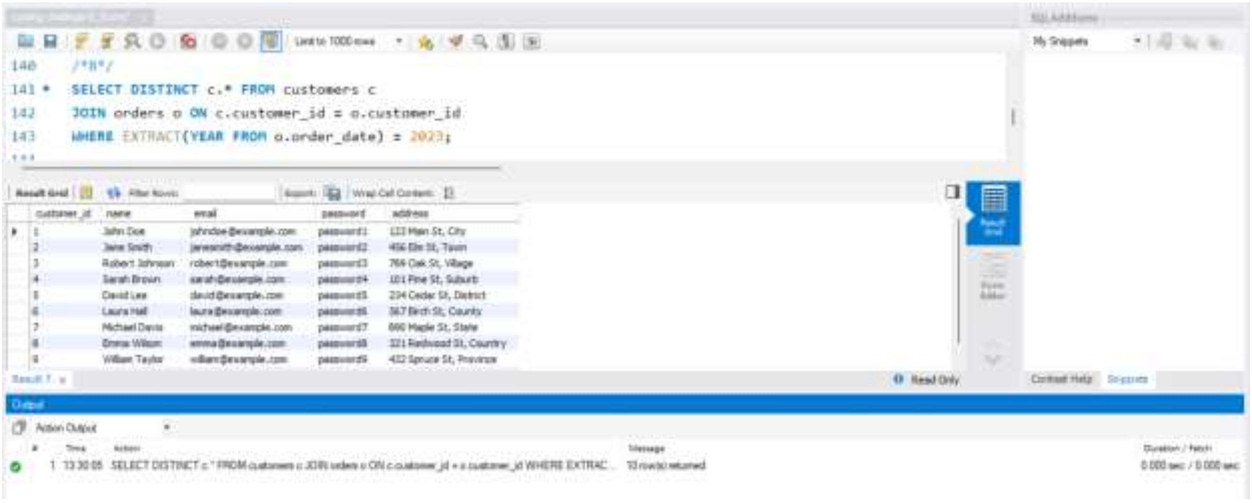


```
/*7*/
SELECT * FROM cart WHERE customer_id = 5;
```

cart_id	customer_id	product_id	quantity
7	5	1	1
NULL	NULL	NULL	NULL

```
#   Time      Action                                              Message            Duration / Fetch
1   13:29:33  SELECT * FROM cart WHERE customer_id = 5 LIMIT 0, 1000  1 row(s) returned  0.000 sec / 0.000 sec
```

8.

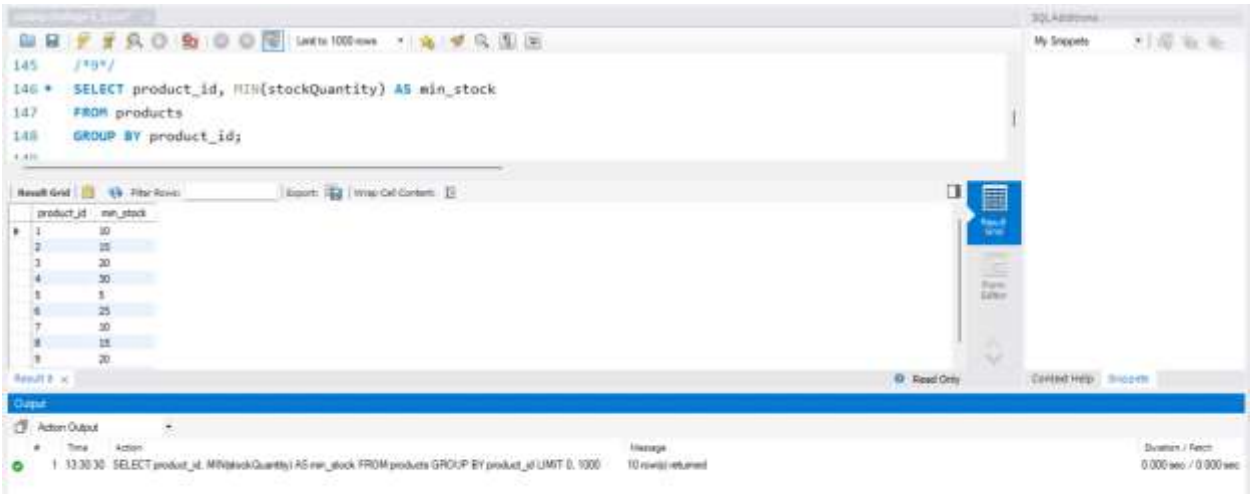


```sql
/*8*/
SELECT DISTINCT c.* FROM customers c
JOIN orders o ON c.customer_id = o.customer_id
WHERE EXTRACT(YEAR FROM o.order_date) = 2023;
```

customer_id	name	email	password	address
1	John Doe	johndoe@example.com	password1	123 Main St, City
2	Jane Smith	janesmith@example.com	password2	456 Elm St, Town
3	Robert Johnson	robert@example.com	password3	789 Oak St, Village
4	Sarah Brown	sarah@example.com	password4	101 Pine St, Suburb
5	David Lee	david@example.com	password5	234 Cedar St, District
6	Laura Hall	laura@example.com	password6	567 Birch St, County
7	Michael Davis	michael@example.com	password7	890 Maple St, State
8	Emma Wilson	emma@example.com	password8	321 Redwood St, Country
9	William Taylor	william@example.com	password9	432 Spruce St, Province

```
#  Time      Action                                                                              Message              Duration / Fetch
1  13:30:05  SELECT DISTINCT c.* FROM customers c JOIN orders o ON c.customer_id = o.customer_id WHERE EXTRAC...  10 row(s) returned  0.000 sec / 0.000 sec
```

9.

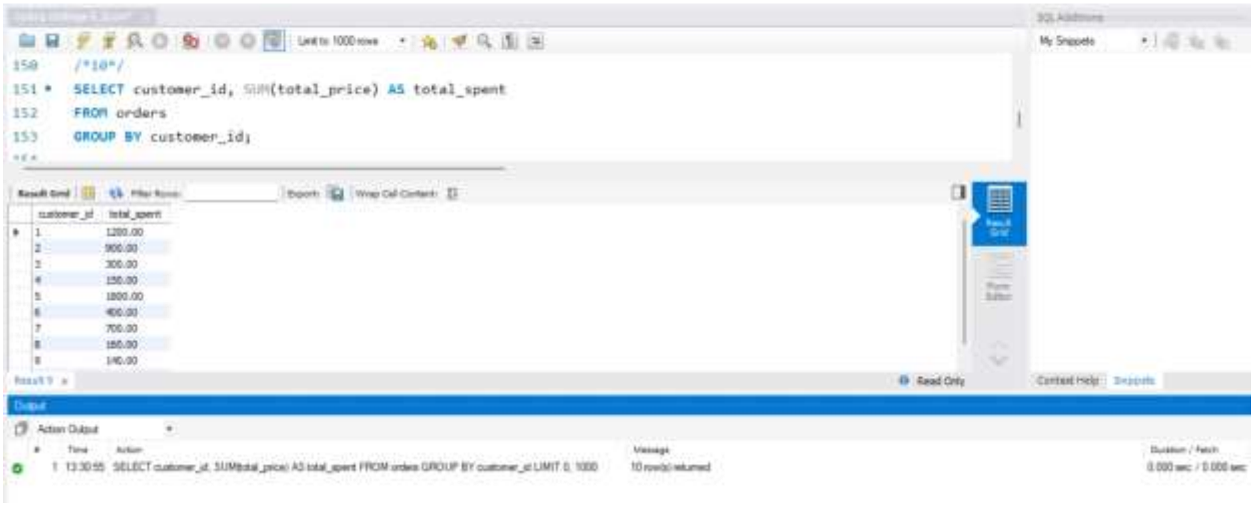


```sql
/*9*/
SELECT product_id, MIN(stockQuantity) AS min_stock
FROM products
GROUP BY product_id;
```

product_id	min_stock
1	10
2	15
3	20
4	30
5	5
6	25
7	30
8	15
9	20

```
#  Time      Action                                                                                     Message              Duration / Fetch
1  13:30:30  SELECT product_id, MIN(stockQuantity) AS min_stock FROM products GROUP BY product_id LIMIT 0, 1000  10 row(s) returned  0.000 sec / 0.000 sec
```

10.

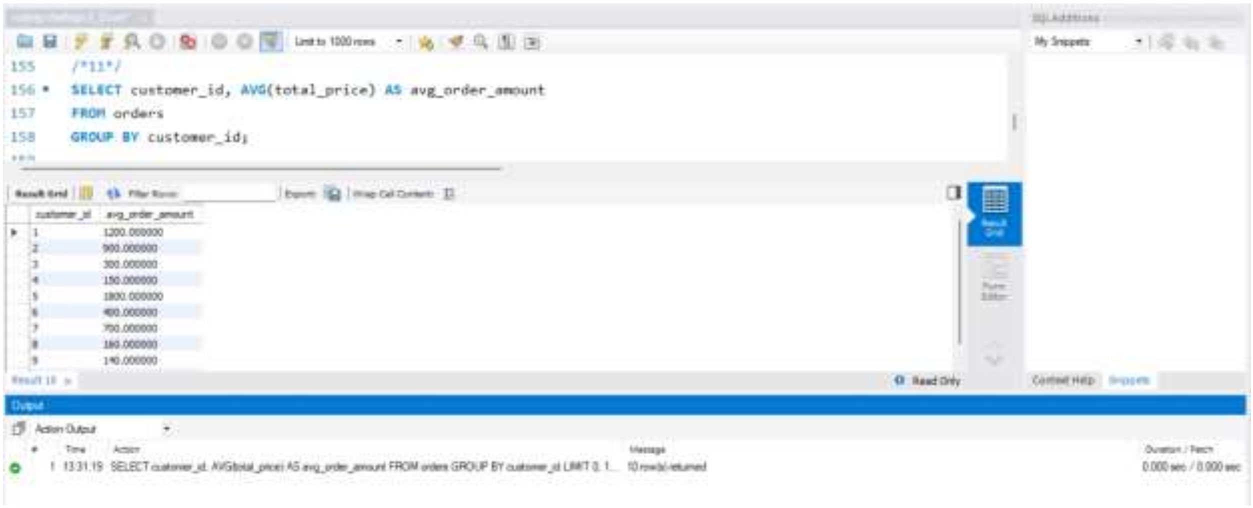


```
/*10*/
SELECT customer_id, SUM(total_price) AS total_spent
FROM orders
GROUP BY customer_id;
```

customer_id	total_spent
1	1200.00
2	900.00
3	300.00
4	150.00
5	1800.00
6	400.00
7	700.00
8	180.00
9	140.00

```
#  Time      Action                                                                                              Message              Duration / Fetch
1  13:30:55  SELECT customer_id, SUM(total_price) AS total_spent FROM orders GROUP BY customer_id LIMIT 0, 1000   10 row(s) returned   0.000 sec / 0.000 sec
```

11.

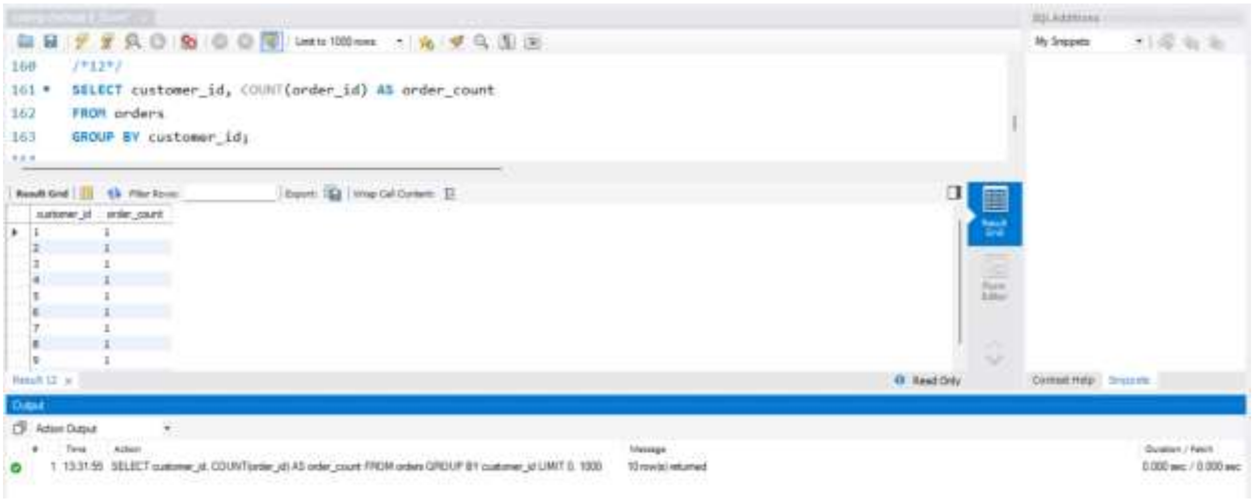


```
/*11*/
SELECT customer_id, AVG(total_price) AS avg_order_amount
FROM orders
GROUP BY customer_id;
```

customer_id	avg_order_amount
1	1200.000000
2	900.000000
3	300.000000
4	150.000000
5	1800.000000
6	400.000000
7	700.000000
8	180.000000
9	140.000000

```
#  Time      Action                                                                                          Message              Duration / Fetch
1  13:31:19  SELECT customer_id, AVG(total_price) AS avg_order_amount FROM orders GROUP BY customer_id LIMIT 0, 1...   10 row(s) returned   0.000 sec / 0.000 sec
```

12.

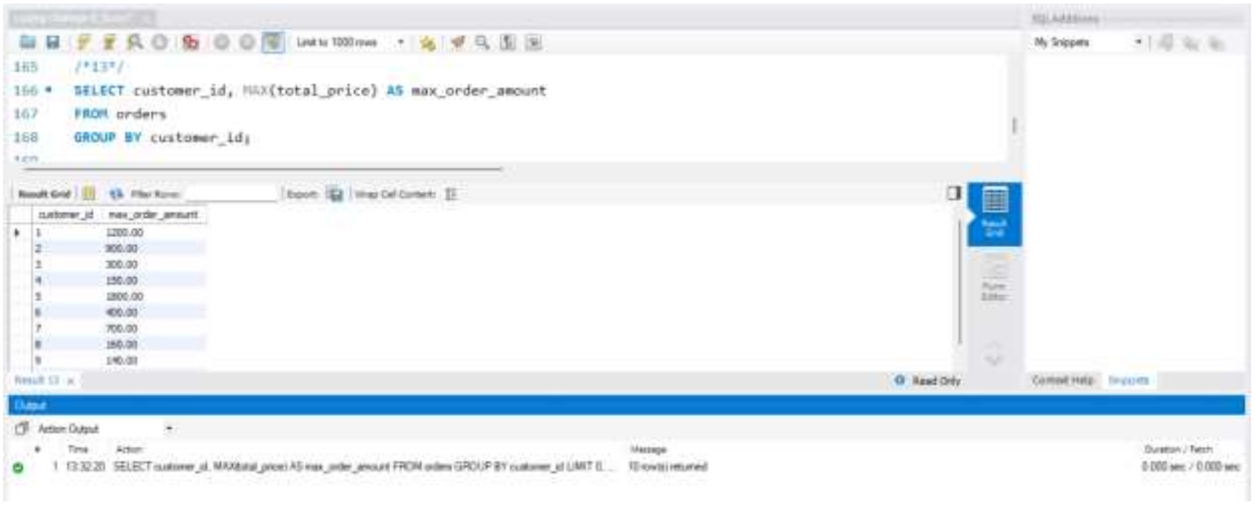


```
/*12*/
SELECT customer_id, COUNT(order_id) AS order_count
FROM orders
GROUP BY customer_id;
```

customer_id	order_count
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1

```
#   Time      Action                                                                                        Message              Duration / Fetch
1   13:31:55  SELECT customer_id, COUNT(order_id) AS order_count FROM orders GROUP BY customer_id LIMIT 0, 1000   10 row(s) returned   0.000 sec / 0.000 sec
```

13.

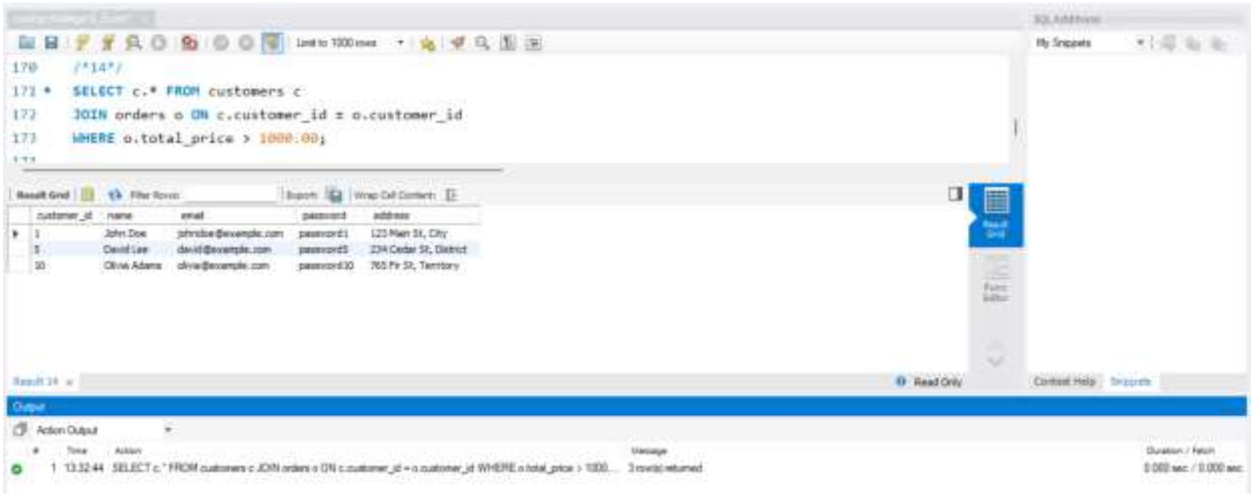


```
/*13*/
SELECT customer_id, MAX(total_price) AS max_order_amount
FROM orders
GROUP BY customer_id;
```

customer_id	max_order_amount
1	1200.00
2	900.00
3	300.00
4	150.00
5	1800.00
6	400.00
7	700.00
8	160.00
9	140.00

```
#   Time      Action                                                                                           Message              Duration / Fetch
1   13:32:20  SELECT customer_id, MAX(total_price) AS max_order_amount FROM orders GROUP BY customer_id LIMIT 0, ...   10 row(s) returned   0.000 sec / 0.000 sec
```

14.

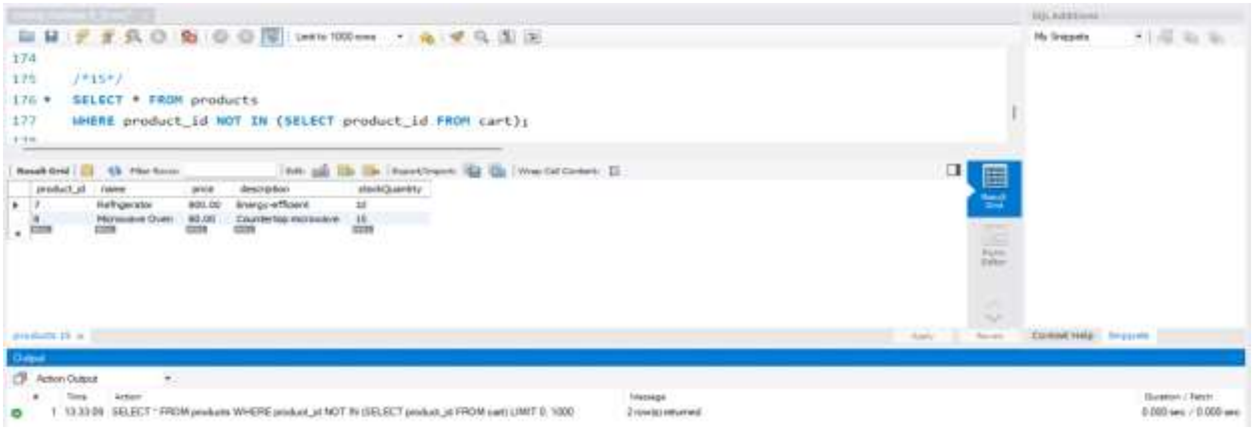


```sql
/*14*/
SELECT c.* FROM customers c
JOIN orders o ON c.customer_id = o.customer_id
WHERE o.total_price > 1000.00;
```

customer_id	name	email	password	address
1	John Doe	johndoe@example.com	password1	123 Main St, City
5	David Lee	david@example.com	password5	234 Cedar St, District
10	Olivia Adams	olivia@example.com	password10	765 Fir St, Territory

```
#  Time      Action                                                                                                    Message             Duration / Fetch
1  13:32:44  SELECT c.* FROM customers c JOIN orders o ON c.customer_id = o.customer_id WHERE o.total_price > 1000...  3 row(s) returned   0.000 sec / 0.000 sec
```

15.

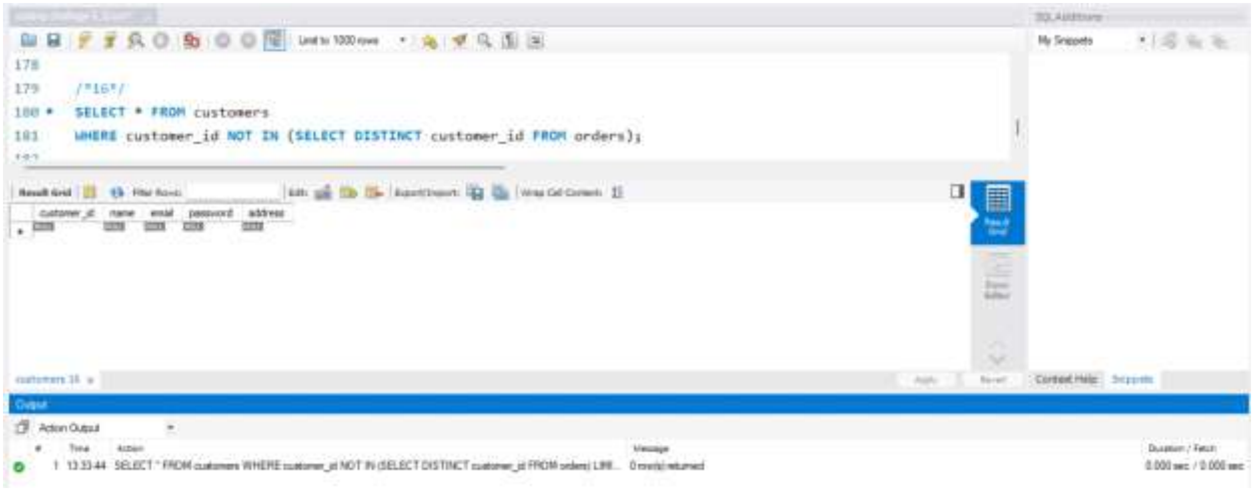


```sql
/*15*/
SELECT * FROM products
WHERE product_id NOT IN (SELECT product_id FROM cart);
```

product_id	name	price	description	stockQuantity
7	Refrigerator	800.00	Energy-efficient	10
8	Microwave Oven	80.00	Countertop microwave	15
NULL	NULL	NULL	NULL	NULL

```
#  Time      Action                                                                                     Message             Duration / Fetch
1  13:33:09  SELECT * FROM products WHERE product_id NOT IN (SELECT product_id FROM cart) LIMIT 0, 1000  2 row(s) returned   0.000 sec / 0.000 sec
```

16.

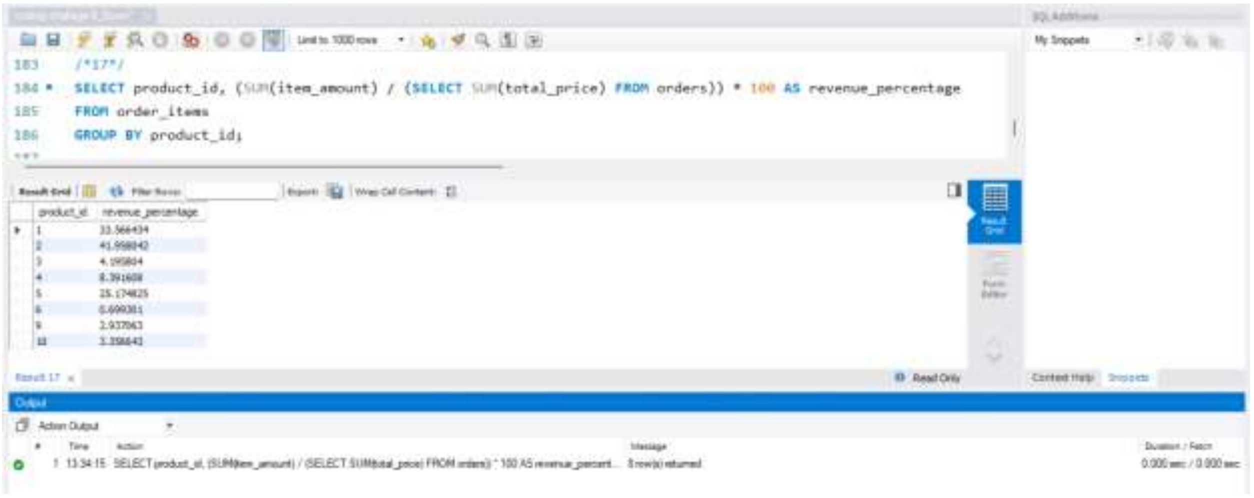


```sql
/*16*/
SELECT * FROM customers
WHERE customer_id NOT IN (SELECT DISTINCT customer_id FROM orders);
```

customer_id	name	email	password	address
NULL	NULL	NULL	NULL	NULL

```
#  Time      Action                                                                                        Message             Duration / Fetch
1  13:33:44  SELECT * FROM customers WHERE customer_id NOT IN (SELECT DISTINCT customer_id FROM orders) LIM...  0 row(s) returned   0.000 sec / 0.000 sec
```

17.

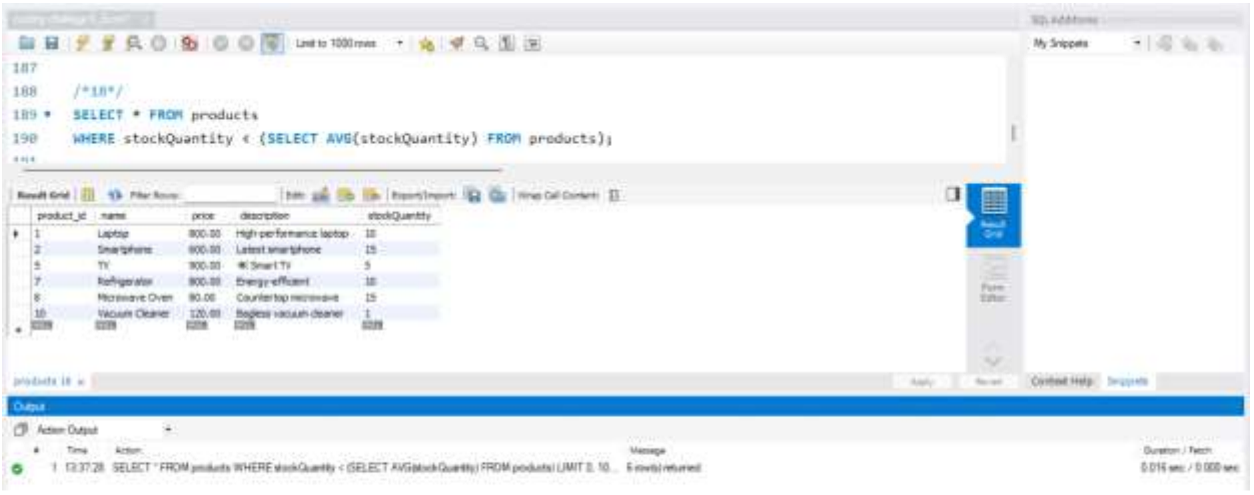


```sql
/*17*/
SELECT product_id, (SUM(item_amount) / (SELECT SUM(total_price) FROM orders)) * 100 AS revenue_percentage
FROM order_items
GROUP BY product_id;
```

product_id	revenue_percentage
1	33.566434
2	41.958042
3	4.195804
4	8.391608
5	25.174825
6	0.699301
9	2.937063
10	3.356643

```
#  Time      Action                                                                                              Message
1  13:34:15  SELECT product_id, (SUM(item_amount) / (SELECT SUM(total_price) FROM orders)) * 100 AS revenue_percent...  8 row(s) returned
```

18.

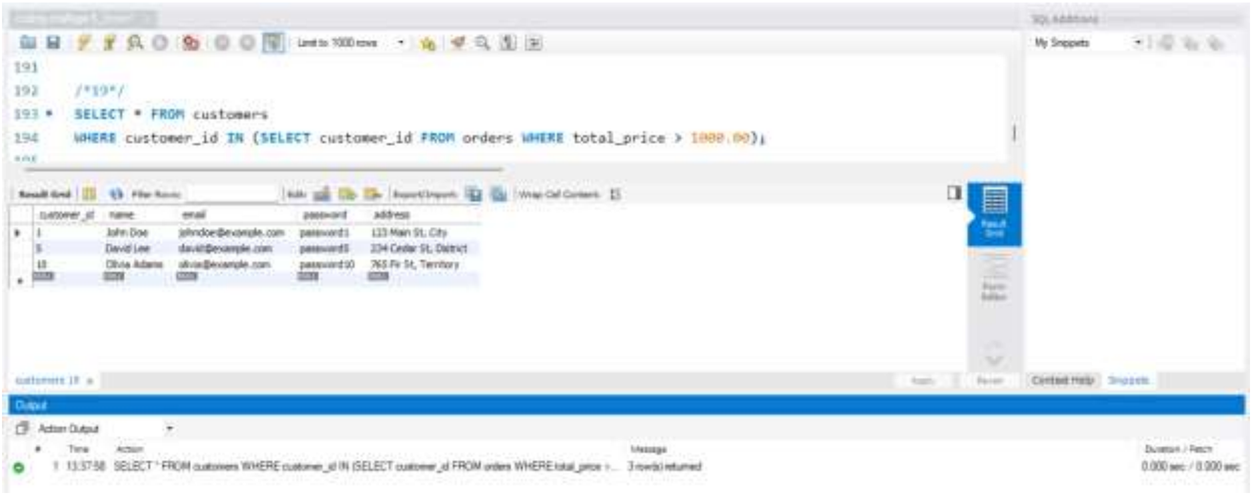


```sql
/*18*/
SELECT * FROM products
WHERE stockQuantity < (SELECT AVG(stockQuantity) FROM products);
```

product_id	name	price	description	stockQuantity
1	Laptop	800.00	High-performance laptop	10
2	Smartphone	600.00	Latest smartphone	15
5	TV	900.00	4K Smart TV	5
7	Refrigerator	800.00	Energy-efficient	10
8	Microwave Oven	80.00	Countertop microwave	15
10	Vacuum Cleaner	120.00	Bagless vacuum cleaner	1
NULL	NULL	NULL	NULL	NULL

```
#  Time      Action                                                                                         Message
1  13:37:28  SELECT * FROM products WHERE stockQuantity < (SELECT AVG(stockQuantity) FROM products) LIMIT 0, 10...  6 row(s) returned
```

19.



```sql
/*19*/
SELECT * FROM customers
WHERE customer_id IN (SELECT customer_id FROM orders WHERE total_price > 1000.00);
```

customer_id	name	email	password	address
1	John Doe	johndoe@example.com	password1	123 Main St, City
5	David Lee	david@example.com	password5	234 Cedar St, District
10	Olivia Adams	olivia@example.com	password10	765 Fir St, Territory
NULL	NULL	NULL	NULL	NULL

```
#  Time      Action                                                                                  Message            Duration / Fetch
1  13:37:58  SELECT * FROM customers WHERE customer_id IN (SELECT customer_id FROM orders WHERE total_price >...  3 row(s) returned  0.000 sec / 0.000 sec
```