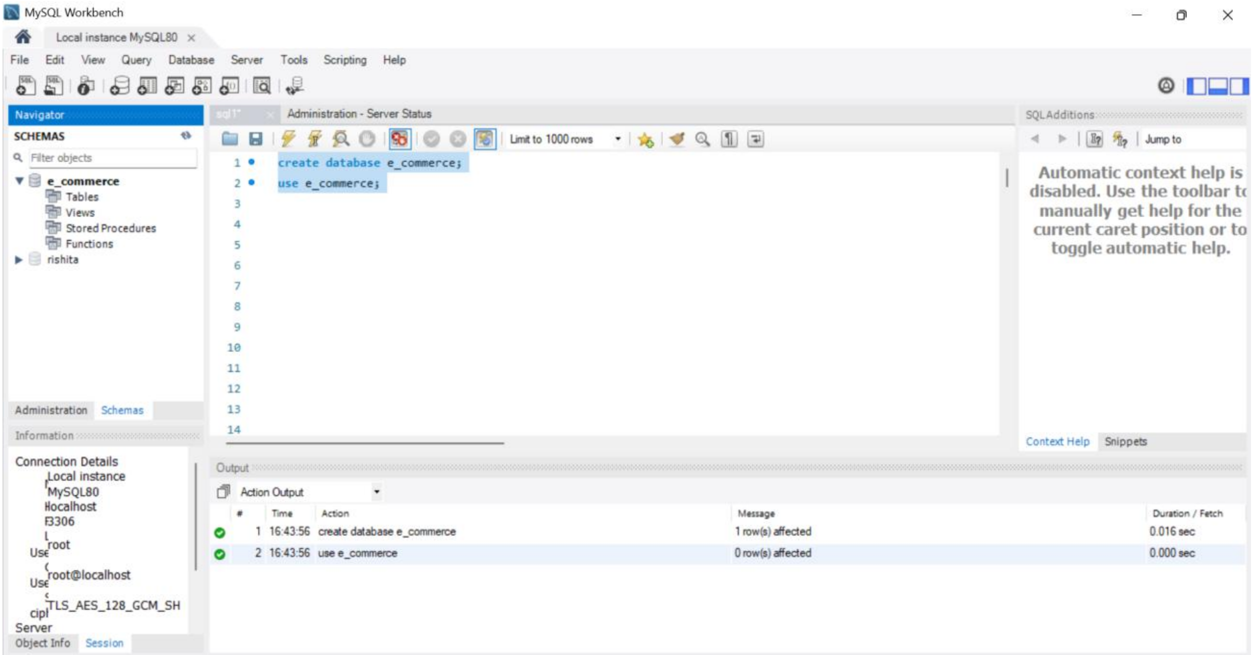
SQL Assignment 01

1. Create Database e_commerce

Query:

create database e_commerce;

use e_commerce;



```
create database e_commerce;
use e_commerce;
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Connection Details
Local instance MySQL80
localhost
3306
Use root
Use root@localhost
cipl TLS_AES_128_GCM_SH
Server

```
#  Time      Action                      Message           Duration / Fetch
1  16:43:56  create database e_commerce  1 row(s) affected  0.016 sec
2  16:43:56  use e_commerce              0 row(s) affected  0.000 sec
```

2. Create following Tables:

Customers:

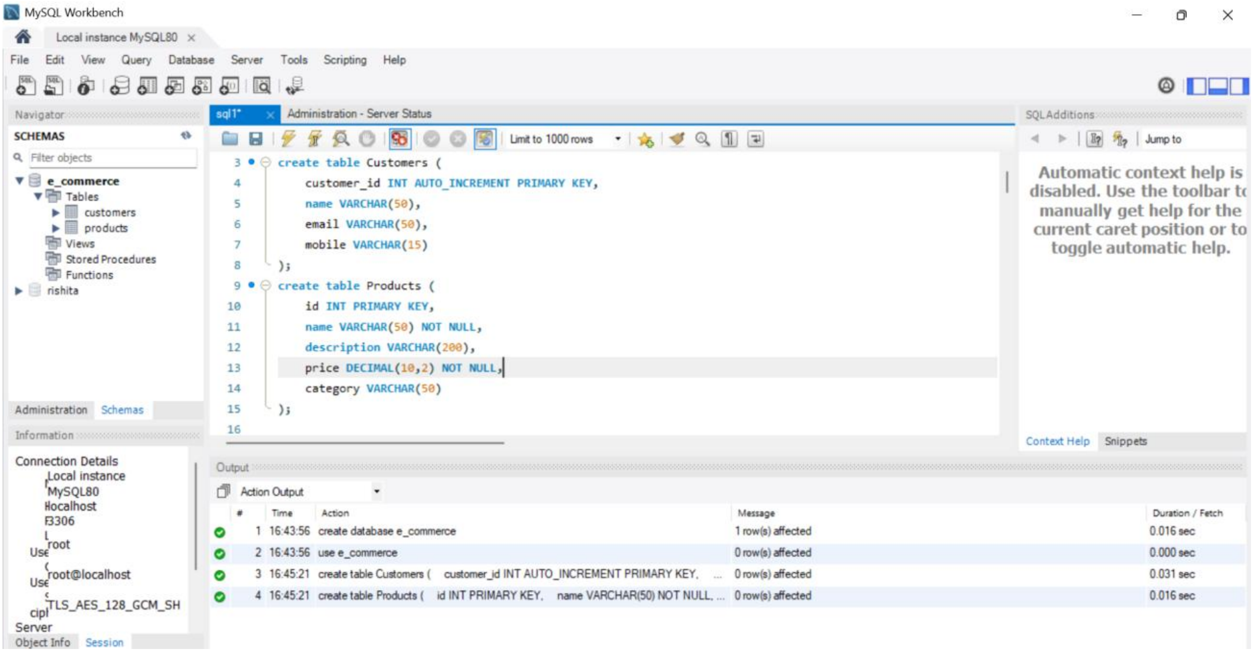
a. customer_id - int auto-increment primary key
b. name - varchar(50)
c. email - varchar(50)
d. mobile - varchar(15)

Products:

a. id - int
b. name - varchar(50) not null
c. description - varchar(200)
d. price - decimal(10, 2) not null
e. category - varchar(50)

Query:

```
create table Customers (
   customer_id INT AUTO_INCREMENT PRIMARY KEY,
   name VARCHAR(50),
   email VARCHAR(50),
   mobile VARCHAR(15)
);
create table Products (
   id INT PRIMARY KEY,
   name VARCHAR(50) NOT NULL,
   description VARCHAR(200),
   price DECIMAL(10,2) NOT NULL,
   category VARCHAR(50)
);
```



```
create table Customers (
    customer_id INT AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(50),
    email VARCHAR(50),
    mobile VARCHAR(15)
);
create table Products (
    id INT PRIMARY KEY,
    name VARCHAR(50) NOT NULL,
    description VARCHAR(200),
    price DECIMAL(10,2) NOT NULL,
    category VARCHAR(50)
);
```

```
#  Time      Action                                                                  Message              Duration / Fetch
1  16:43:56  create database e_commerce                                              1 row(s) affected    0.016 sec
2  16:43:56  use e_commerce                                                          0 row(s) affected    0.000 sec
3  16:45:21  create table Customers (   customer_id INT AUTO_INCREMENT PRIMARY KEY,  ...  0 row(s) affected    0.031 sec
4  16:45:21  create table Products (   id INT PRIMARY KEY,   name VARCHAR(50) NOT NULL, ...  0 row(s) affected    0.016 sec
```

3. Modify Tables(using Alter keyword):

a. Add not null on name and email in the Customers table

b. Add unique key on email in the Customers table

c. Add column age in the Customers table

d. Change column name from id to product_id in the Products table;

e. Add primary key and auto increment on product_id in the Products table

f. Change datatype of description from varchar to text in the products table

Query:

ALTER TABLE Customers

MODIFY column name varchar(50) not null,

MODIFY column email varchar(50) not null,

ADD CONSTRAINT email UNIQUE (email),

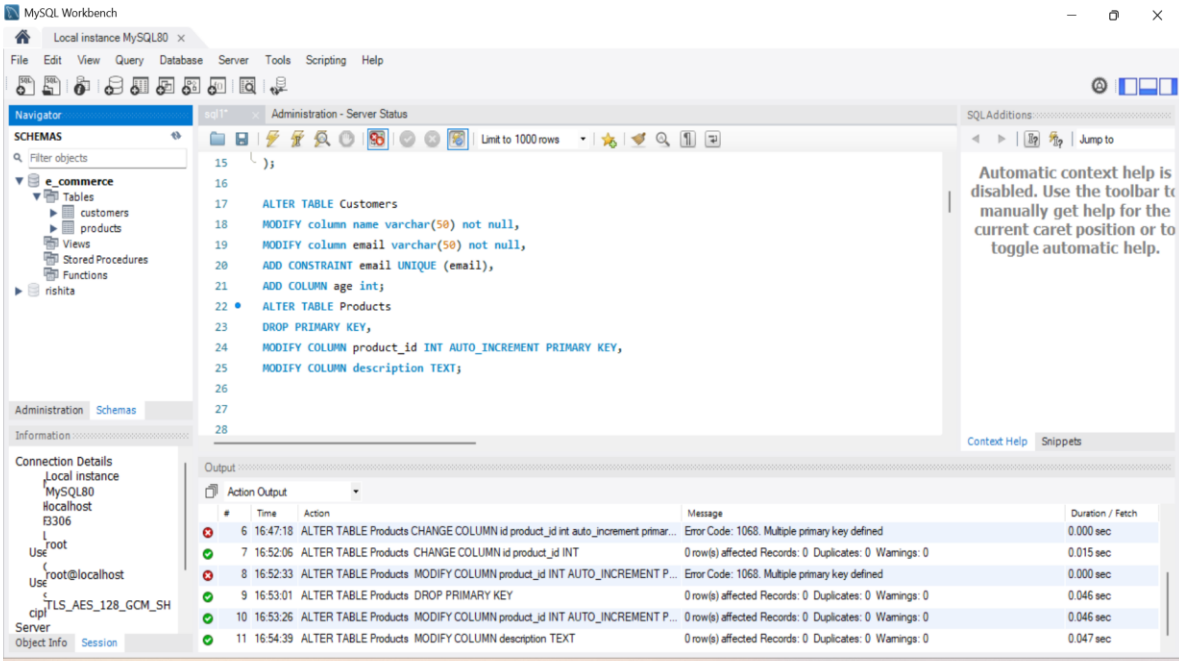
ADD COLUMN age int;

ALTER TABLE Products

DROP PRIMARY KEY,

MODIFY COLUMN product_id INT AUTO_INCREMENT PRIMARY KEY,

MODIFY COLUMN description TEXT;



```
);

ALTER TABLE Customers
MODIFY column name varchar(50) not null,
MODIFY column email varchar(50) not null,
ADD CONSTRAINT email UNIQUE (email),
ADD COLUMN age int;
ALTER TABLE Products
DROP PRIMARY KEY,
MODIFY COLUMN product_id INT AUTO_INCREMENT PRIMARY KEY,
MODIFY COLUMN description TEXT;
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Connection Details
Local instance MySQL80
localhost
3306
Use root
Use root@localhost
cipl TLS_AES_128_GCM_SH
Server

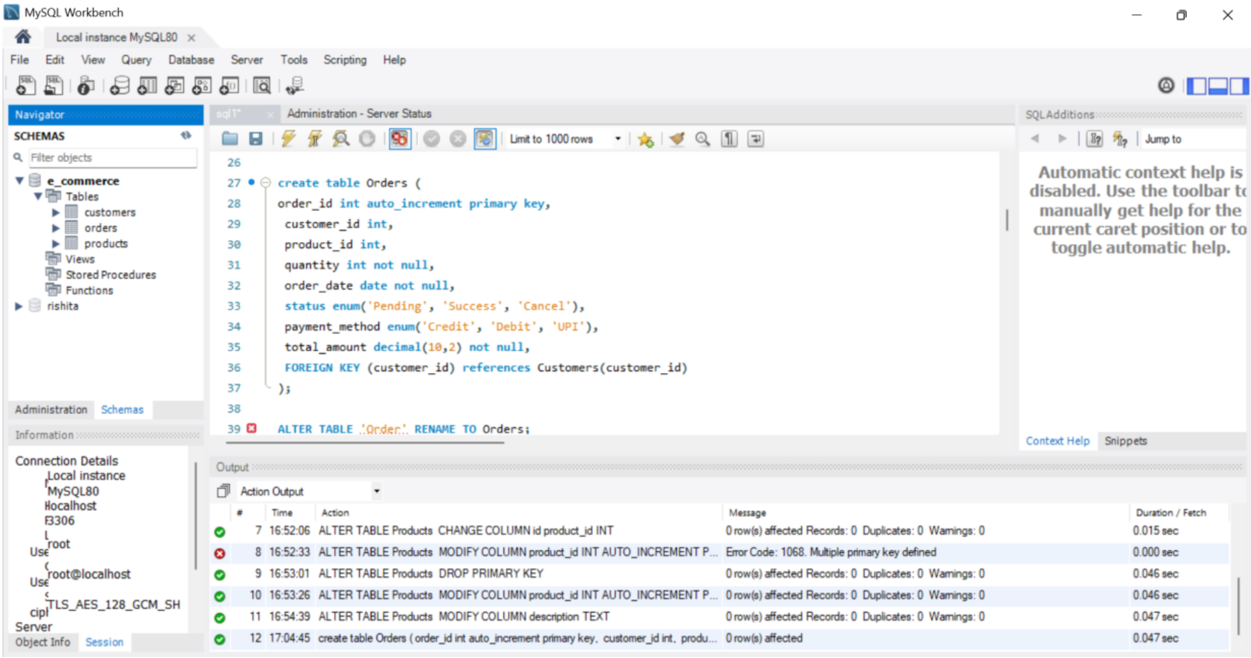
```
 #  Time      Action                                                                 Message                                                     Duration / Fetch
 6  16:47:18  ALTER TABLE Products CHANGE COLUMN id product_id int auto_increment primar...  Error Code: 1068. Multiple primary key defined              0.000 sec
 7  16:52:06  ALTER TABLE Products  CHANGE COLUMN id product_id INT                  0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0     0.015 sec
 8  16:52:33  ALTER TABLE Products  MODIFY COLUMN product_id INT AUTO_INCREMENT P...  Error Code: 1068. Multiple primary key defined              0.000 sec
 9  16:53:01  ALTER TABLE Products  DROP PRIMARY KEY                                 0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0     0.046 sec
10  16:53:26  ALTER TABLE Products  MODIFY COLUMN product_id INT AUTO_INCREMENT P...  0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0     0.046 sec
11  16:54:39  ALTER TABLE Products  MODIFY COLUMN description TEXT                   0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0     0.047 sec
```

4. **Create table Order:**
   a. order_id - int auto-increment primary key
   b. customer_id - int -foreign key
   c. product_id - int
   d. quantity - int not null,
   e. order_date - date not null,
   f. status - enum(Pending, Success, Cancel),
   g. payment_method - enum(Credit, Debit, UPI),
   h. total_amount - decimal(10, 2) not null

Note:Since order is a reserved keyword here we can’t create a table with name order .Therefore naming it as Orders.

Query :

```
create table Order (
order_id int auto_increment primary key,
 customer_id int,
 product_id int,
 quantity int not null,
 order_date date not null,
 status enum('Pending', 'Success', 'Cancel'),
 payment_method enum('Credit', 'Debit', 'UPI'),
 total_amount decimal(10,2) not null,
 FOREIGN KEY (customer_id) references Customers(customer_id)
);
```



```
create table Orders (
order_id int auto_increment primary key,
 customer_id int,
 product_id int,
 quantity int not null,
 order_date date not null,
 status enum('Pending', 'Success', 'Cancel'),
 payment_method enum('Credit', 'Debit', 'UPI'),
 total_amount decimal(10,2) not null,
 FOREIGN KEY (customer_id) references Customers(customer_id)
);

ALTER TABLE 'Order' RENAME TO Orders;
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Connection Details
Local instance MySQL80
localhost
3306
root
root@localhost
TLS_AES_128_GCM_SH
Server

```
 #   Time      Action                                                              Message                                                   Duration / Fetch
 7   16:52:06  ALTER TABLE Products  CHANGE COLUMN id product_id INT               0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0  0.015 sec
 8   16:52:33  ALTER TABLE Products  MODIFY COLUMN product_id INT AUTO_INCREMENT P...  Error Code: 1068. Multiple primary key defined      0.000 sec
 9   16:53:01  ALTER TABLE Products  DROP PRIMARY KEY                              0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0  0.046 sec
 10  16:53:26  ALTER TABLE Products  MODIFY COLUMN product_id INT AUTO_INCREMENT P...  0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0  0.046 sec
 11  16:54:39  ALTER TABLE Products  MODIFY COLUMN description TEXT                0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0  0.047 sec
 12  17:04:45  create table Orders ( order_id int auto_increment primary key,  customer_id int,  produ...  0 row(s) affected      0.047 sec
```

5. **Modify Orders Table(using Alter keyword):**
    a. Change table name Order -> Orders
    b. Set default value pending in status.
    c. Modify payment_method ENUM to add one more value: 'COD'
    d. Make product id as foreign key

Query:

ALTER TABLE Orders RENAME TO Orders;

ALTER TABLE Orders

MODIFY COLUMN status ENUM('Pending', 'Success', 'Cancel') DEFAULT

'Pending';

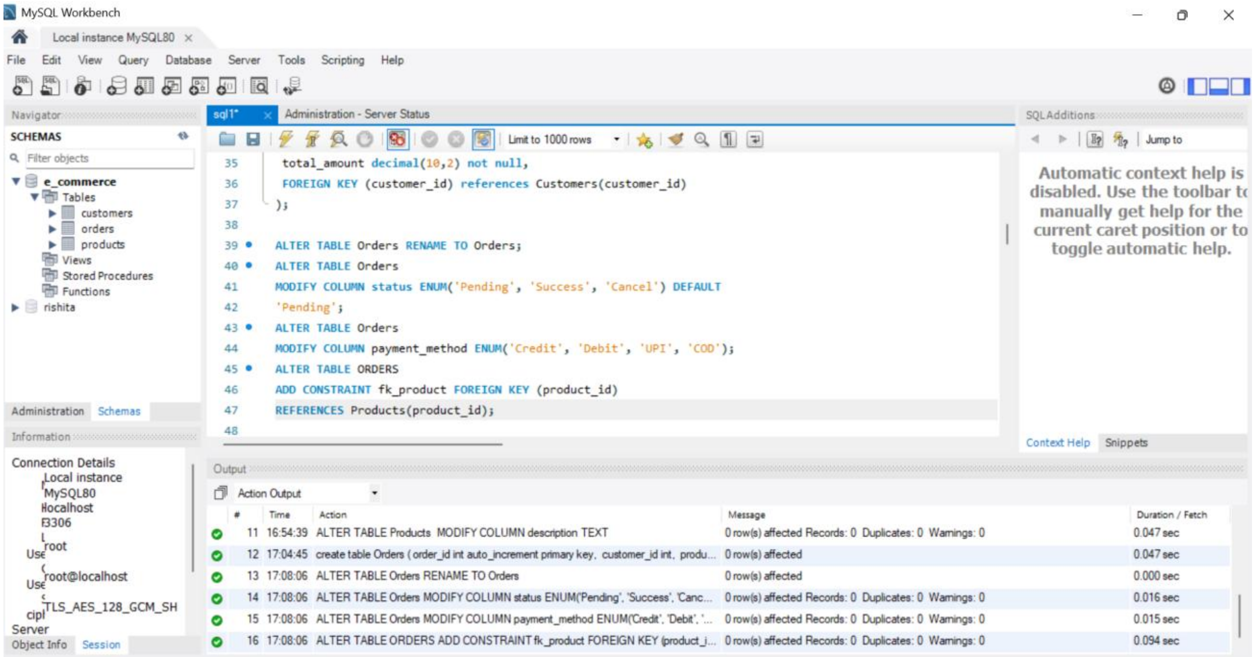
ALTER TABLE Orders

MODIFY COLUMN payment_method ENUM('Credit', 'Debit', 'UPI', 'COD');

ALTER TABLE ORDERS

ADD CONSTRAINT fk_product FOREIGN KEY (product_id)

REFERENCES Products(product_id);



```
  total_amount decimal(10,2) not null,
  FOREIGN KEY (customer_id) references Customers(customer_id)
);

ALTER TABLE Orders RENAME TO Orders;
ALTER TABLE Orders
MODIFY COLUMN status ENUM('Pending', 'Success', 'Cancel') DEFAULT
'Pending';
ALTER TABLE Orders
MODIFY COLUMN payment_method ENUM('Credit', 'Debit', 'UPI', 'COD');
ALTER TABLE ORDERS
ADD CONSTRAINT fk_product FOREIGN KEY (product_id)
REFERENCES Products(product_id);
```

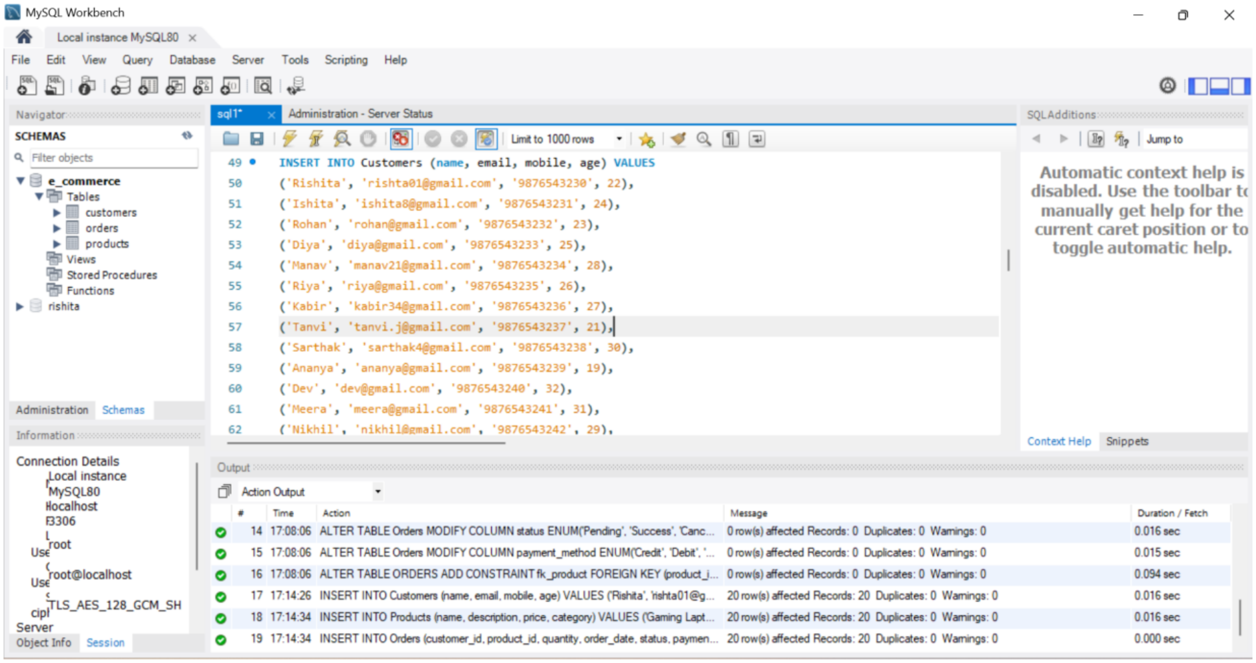
Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

#	Time	Action	Message	Duration / Fetch
11	16:54:39	ALTER TABLE Products MODIFY COLUMN description TEXT	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.047 sec
12	17:04:45	create table Orders (order_id int auto_increment primary key, customer_id int, produ...	0 row(s) affected	0.047 sec
13	17:08:06	ALTER TABLE Orders RENAME TO Orders	0 row(s) affected	0.000 sec
14	17:08:06	ALTER TABLE Orders MODIFY COLUMN status ENUM('Pending', 'Success', 'Canc...	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.016 sec
15	17:08:06	ALTER TABLE Orders MODIFY COLUMN payment_method ENUM('Credit', 'Debit', '...	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.015 sec
16	17:08:06	ALTER TABLE ORDERS ADD CONSTRAINT fk_product FOREIGN KEY (product_i...	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.094 sec

6. Insert 20 sample records in all the tables.

Query:

```
INSERT INTO Customers (name, email, mobile, age) VALUES
('Rishita', 'rishta01@gmail.com', '9876543230', 22),
('Ishita', 'ishita8@gmail.com', '9876543231', 24),
('Rohan', 'rohan@gmail.com', '9876543232', 23),
('Diya', 'diya@gmail.com', '9876543233', 25),
('Manav', 'manav21@gmail.com', '9876543234', 28),
('Riya', 'riya@gmail.com', '9876543235', 26),
('Kabir', 'kabir34@gmail.com', '9876543236', 27),
('Tanvi', 'tanvi.j@gmail.com', '9876543237', 21),
('Sarthak', 'sarthak4@gmail.com', '9876543238', 30),
('Ananya', 'ananya@gmail.com', '9876543239', 19),
('Dev', 'dev@gmail.com', '9876543240', 32),
('Meera', 'meera@gmail.com', '9876543241', 31),
('Nikhil', 'nikhil@gmail.com', '9876543242', 29),
('Simran', 'simran@gmail.com', '9876543243', 22),
('Arjun', 'arjun@gmail.com', '9876543244', 26),
('Pallavi', 'pallavi@gmail.com', '9876543245', 27),
('Harshit', 'harshit@gmail.com', '9876543246', 23),
('Neha', 'neha@gmail.com', '9876543247', 24),
('Vivek', 'vivek@gmail.com', '9876543248', 30),
('Swati', 'swati@gmail.com', '9876543249', 35);
```



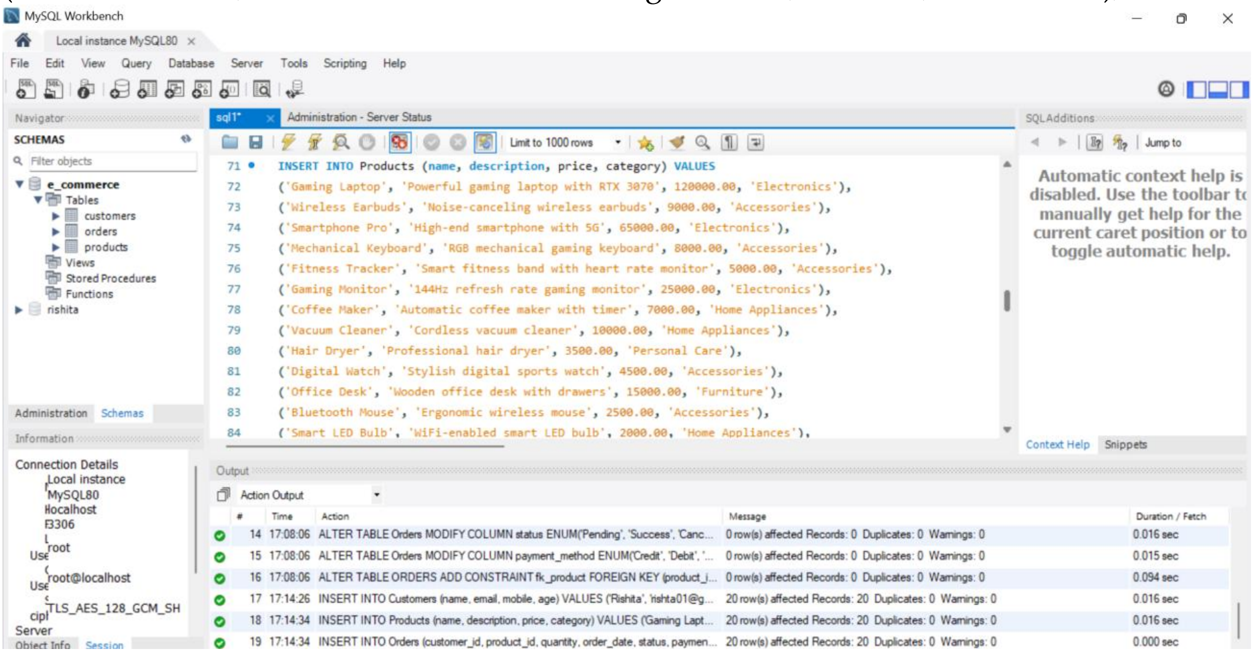
```
INSERT INTO Customers (name, email, mobile, age) VALUES
('Rishita', 'rishta01@gmail.com', '9876543230', 22),
('Ishita', 'ishita8@gmail.com', '9876543231', 24),
('Rohan', 'rohan@gmail.com', '9876543232', 23),
('Diya', 'diya@gmail.com', '9876543233', 25),
('Manav', 'manav21@gmail.com', '9876543234', 28),
('Riya', 'riya@gmail.com', '9876543235', 26),
('Kabir', 'kabir34@gmail.com', '9876543236', 27),
('Tanvi', 'tanvi.j@gmail.com', '9876543237', 21),
('Sarthak', 'sarthak4@gmail.com', '9876543238', 30),
('Ananya', 'ananya@gmail.com', '9876543239', 19),
('Dev', 'dev@gmail.com', '9876543240', 32),
('Meera', 'meera@gmail.com', '9876543241', 31),
('Nikhil', 'nikhil@gmail.com', '9876543242', 29),
```

```
#   Time      Action                                                                    Message                                                       Duration / Fetch
14  17:08:06  ALTER TABLE Orders MODIFY COLUMN status ENUM('Pending', 'Success', 'Canc...   0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0    0.016 sec
15  17:08:06  ALTER TABLE Orders MODIFY COLUMN payment_method ENUM('Credit', 'Debit', '...  0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0    0.015 sec
16  17:08:06  ALTER TABLE ORDERS ADD CONSTRAINT fk_product FOREIGN KEY (product_i...       0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0    0.094 sec
17  17:14:26  INSERT INTO Customers (name, email, mobile, age) VALUES ('Rishita', 'rishta01@g...  20 row(s) affected Records: 20  Duplicates: 0  Warnings: 0  0.016 sec
18  17:14:34  INSERT INTO Products (name, description, price, category) VALUES ('Gaming Lapt...  20 row(s) affected Records: 20  Duplicates: 0  Warnings: 0  0.016 sec
19  17:14:34  INSERT INTO Orders (customer_id, product_id, quantity, order_date, status, paymen...  20 row(s) affected Records: 20  Duplicates: 0  Warnings: 0  0.000 sec
```

```
INSERT INTO Products (name, description, price, category) VALUES
('Gaming Laptop', 'Powerful gaming laptop with RTX 3070', 120000.00, 'Electronics'),
('Wireless Earbuds', 'Noise-canceling wireless earbuds', 9000.00, 'Accessories'),
('Smartphone Pro', 'High-end smartphone with 5G', 65000.00, 'Electronics'),
('Mechanical Keyboard', 'RGB mechanical gaming keyboard', 8000.00, 'Accessories'),
('Fitness Tracker', 'Smart fitness band with heart rate monitor', 5000.00, 'Accessories'),
('Gaming Monitor', '144Hz refresh rate gaming monitor', 25000.00, 'Electronics'),
('Coffee Maker', 'Automatic coffee maker with timer', 7000.00, 'Home Appliances'),
('Vacuum Cleaner', 'Cordless vacuum cleaner', 10000.00, 'Home Appliances'),
('4K Smart TV', 'Ultra HD 55-inch smart TV', 55000.00, 'Electronics'),
('Wireless Gaming Headset', '7.1 surround sound wireless headset', 15000.00, 'Electronics'),
('Smart Home Speaker', 'Voice-controlled smart speaker', 12000.00, 'Electronics'),
('Action Camera', '4K waterproof action camera', 18000.00, 'Electronics'),
('VR Headset', 'Virtual reality headset with motion tracking', 35000.00, 'Electronics'),
('High-Speed Router', 'WiFi 6 dual-band router', 8000.00, 'Electronics'),
('Drone Camera', 'Quadcopter drone with 4K camera', 45000.00, 'Electronics'),
('Portable Power Bank', '20,000mAh fast-charging power bank', 4000.00, 'Electronics'),
```

('Noise-Canceling Headphones', 'Wireless over-ear noise-canceling headphones', 22000.00, 'Electronics'),

('Smart Doorbell', 'WiFi video doorbell with night vision', 10000.00, 'Electronics');



```
INSERT INTO Products (name, description, price, category) VALUES
('Gaming Laptop', 'Powerful gaming laptop with RTX 3070', 120000.00, 'Electronics'),
('Wireless Earbuds', 'Noise-canceling wireless earbuds', 9000.00, 'Accessories'),
('Smartphone Pro', 'High-end smartphone with 5G', 65000.00, 'Electronics'),
('Mechanical Keyboard', 'RGB mechanical gaming keyboard', 8000.00, 'Accessories'),
('Fitness Tracker', 'Smart fitness band with heart rate monitor', 5000.00, 'Accessories'),
('Gaming Monitor', '144Hz refresh rate gaming monitor', 25000.00, 'Electronics'),
('Coffee Maker', 'Automatic coffee maker with timer', 7000.00, 'Home Appliances'),
('Vacuum Cleaner', 'Cordless vacuum cleaner', 10000.00, 'Home Appliances'),
('Hair Dryer', 'Professional hair dryer', 3500.00, 'Personal Care'),
('Digital Watch', 'Stylish digital sports watch', 4500.00, 'Accessories'),
('Office Desk', 'Wooden office desk with drawers', 15000.00, 'Furniture'),
('Bluetooth Mouse', 'Ergonomic wireless mouse', 2500.00, 'Accessories'),
('Smart LED Bulb', 'WiFi-enabled smart LED bulb', 2000.00, 'Home Appliances'),
```

Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or to toggle automatic help.

Connection Details
Local instance MySQL80
localhost
3306
root
root@localhost
TLS_AES_128_GCM_SH
Server

```
#   Time      Action                                                                      Message                                                    Duration / Fetch
14  17:08:06  ALTER TABLE Orders MODIFY COLUMN status ENUM('Pending', 'Success', 'Canc...   0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0    0.016 sec
15  17:08:06  ALTER TABLE Orders MODIFY COLUMN payment_method ENUM('Credit', 'Debit', '...  0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0    0.015 sec
16  17:08:06  ALTER TABLE ORDERS ADD CONSTRAINT fk_product FOREIGN KEY (product_i...         0 row(s) affected Records: 0  Duplicates: 0  Warnings: 0    0.094 sec
17  17:14:26  INSERT INTO Customers (name, email, mobile, age) VALUES ('Rishita', 'rishta01@g...  20 row(s) affected Records: 20  Duplicates: 0  Warnings: 0  0.016 sec
18  17:14:34  INSERT INTO Products (name, description, price, category) VALUES ('Gaming Lapt...  20 row(s) affected Records: 20  Duplicates: 0  Warnings: 0  0.016 sec
19  17:14:34  INSERT INTO Orders (customer_id, product_id, quantity, order_date, status, paymen...  20 row(s) affected Records: 20  Duplicates: 0  Warnings: 0  0.000 sec
```

INSERT INTO Orders (customer_id, product_id, quantity, order_date, status, payment_method, total_amount) VALUES

(1, 1, 1, '2024-09-21', 'Success', 'Credit', 120000.00),

(2, 2, 2, '2024-09-22', 'Pending', 'UPI', 18000.00),

(3, 3, 1, '2024-09-23', 'Cancel', 'Debit', 65000.00),

(4, 4, 1, '2024-09-24', 'Success', 'UPI', 8000.00),

(5, 5, 2, '2024-09-25', 'Pending', 'Credit', 10000.00),

(6, 6, 1, '2024-09-26', 'Success', 'Debit', 25000.00),

(7, 7, 3, '2024-09-27', 'Cancel', 'UPI', 21000.00),

(8, 8, 1, '2024-09-28', 'Pending', 'Credit', 10000.00),

(9, 9, 1, '2024-09-29', 'Success', 'COD', 3500.00),

(10, 10, 2, '2024-09-30', 'Pending', 'UPI', 9000.00),

(11, 11, 1, '2024-10-01', 'Success', 'Credit', 15000.00),

(12, 12, 1, '2024-10-02', 'Cancel', 'Debit', 2500.00),

(13, 13, 2, '2024-10-03', 'Pending', 'COD', 4000.00),

(14, 14, 1, '2024-10-04', 'Success', 'UPI', 18000.00), (15, 15, 2, '2024-10-05', 'Cancel', 'Credit', 60000.00),

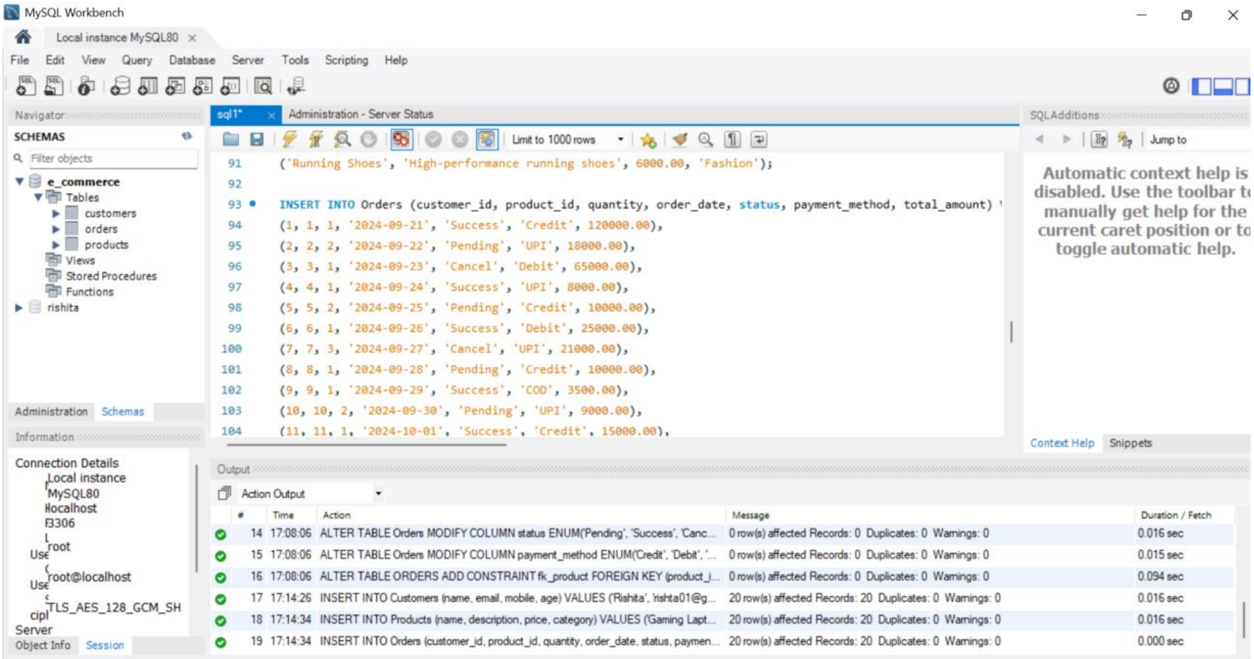
(16, 16, 1, '2024-10-06', 'Pending', 'UPI', 2500.00),

(17, 17, 1, '2024-10-07', 'Success', 'Debit', 4000.00),

(18, 18, 3, '2024-10-08', 'Cancel', 'COD', 9000.00),

(19, 19, 2, '2024-10-09', 'Pending', 'Credit', 12000.00),

(20, 20, 1, '2024-10-10', 'Success', 'UPI', 6000.00);



```
('Running Shoes', 'High-performance running shoes', 6000.00, 'Fashion');

INSERT INTO Orders (customer_id, product_id, quantity, order_date, status, payment_method, total_amount) '
(1, 1, 1, '2024-09-21', 'Success', 'Credit', 120000.00),
(2, 2, 2, '2024-09-22', 'Pending', 'UPI', 18000.00),
(3, 3, 1, '2024-09-23', 'Cancel', 'Debit', 65000.00),
(4, 4, 1, '2024-09-24', 'Success', 'UPI', 8000.00),
(5, 5, 2, '2024-09-25', 'Pending', 'Credit', 10000.00),
(6, 6, 1, '2024-09-26', 'Success', 'Debit', 25000.00),
(7, 7, 3, '2024-09-27', 'Cancel', 'UPI', 21000.00),
(8, 8, 1, '2024-09-28', 'Pending', 'Credit', 10000.00),
(9, 9, 1, '2024-09-29', 'Success', 'COD', 3500.00),
(10, 10, 2, '2024-09-30', 'Pending', 'UPI', 9000.00),
(11, 11, 1, '2024-10-01', 'Success', 'Credit', 15000.00),
```

Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.

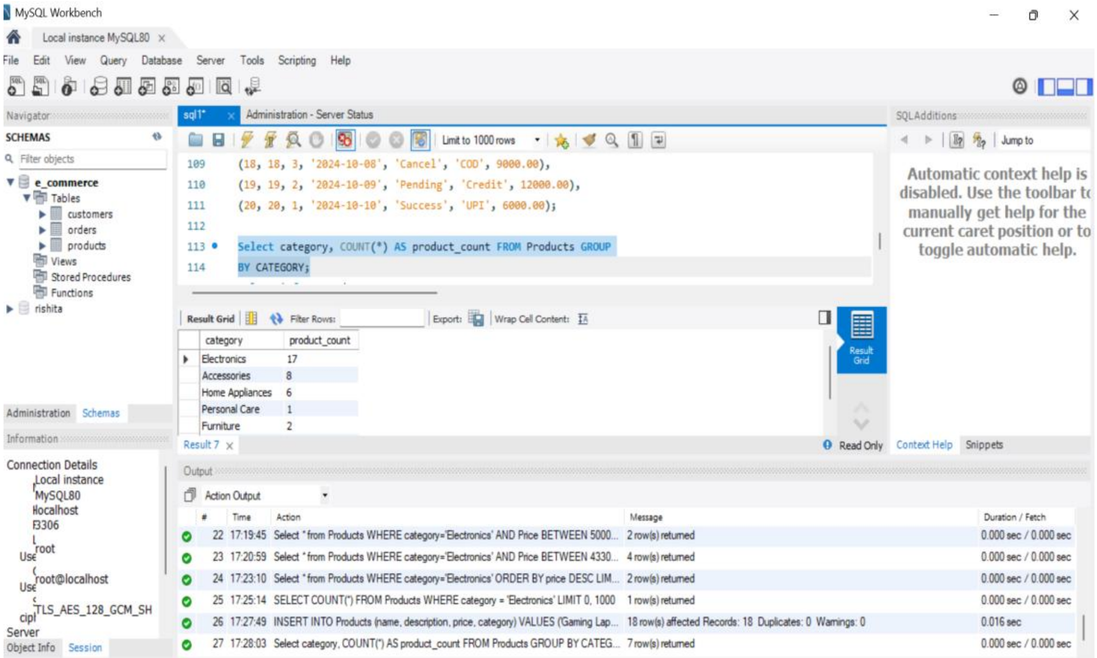
	#	Time	Action	Message	Duration / Fetch
✓	14	17:08:06	ALTER TABLE Orders MODIFY COLUMN status ENUM('Pending', 'Success', 'Canc...	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.016 sec
✓	15	17:08:06	ALTER TABLE Orders MODIFY COLUMN payment_method ENUM('Credit', 'Debit', '...	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.015 sec
✓	16	17:08:06	ALTER TABLE ORDERS ADD CONSTRAINT fk_product FOREIGN KEY (product_i...	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.094 sec
✓	17	17:14:26	INSERT INTO Customers (name, email, mobile, age) VALUES ('Rishita', 'rishta01@g...	20 row(s) affected Records: 20 Duplicates: 0 Warnings: 0	0.016 sec
✓	18	17:14:34	INSERT INTO Products (name, description, price, category) VALUES ('Gaming Lapt...	20 row(s) affected Records: 20 Duplicates: 0 Warnings: 0	0.016 sec
✓	19	17:14:34	INSERT INTO Orders (customer_id, product_id, quantity, order_date, status, paymen...	20 row(s) affected Records: 20 Duplicates: 0 Warnings: 0	0.000 sec

7. Perform following queries:

a. Count the number of products as product_count in each category.

Query:

Select category, COUNT(*) AS product_count FROM Products GROUP BY CATEGORY;



```
(18, 18, 3, '2024-10-08', 'Cancel', 'COD', 9000.00),
(19, 19, 2, '2024-10-09', 'Pending', 'Credit', 12000.00),
(20, 20, 1, '2024-10-10', 'Success', 'UPI', 6000.00);

Select category, COUNT(*) AS product_count FROM Products GROUP
BY CATEGORY;
```

category	product_count
Electronics	17
Accessories	8
Home Appliances	6
Personal Care	1
Furniture	2

Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or to toggle automatic help.

Local instance MySQL80
localhost
3306
root
root@localhost
TLS_AES_128_GCM_SH

```
#   Time      Action                                                                   Message                                                   Duration / Fetch
22  17:19:45  Select * from Products WHERE category='Electronics' AND Price BETWEEN 5000...  2 row(s) returned                                         0.000 sec / 0.000 sec
23  17:20:59  Select * from Products WHERE category='Electronics' AND Price BETWEEN 4330...  4 row(s) returned                                         0.000 sec / 0.000 sec
24  17:23:10  Select * from Products WHERE category='Electronics' ORDER BY price DESC LIM...  2 row(s) returned                                         0.000 sec / 0.000 sec
25  17:25:14  SELECT COUNT(*) FROM Products WHERE category = 'Electronics' LIMIT 0, 1000     1 row(s) returned                                         0.000 sec / 0.000 sec
26  17:27:49  INSERT INTO Products (name, description, price, category) VALUES ('Gaming Lap...  18 row(s) affected Records: 18  Duplicates: 0  Warnings: 0  0.016 sec
27  17:28:03  Select category, COUNT(*) AS product_count FROM Products GROUP BY CATEG...      7 row(s) returned                                         0.000 sec / 0.000 sec
```

b. Retrieve all products that belong to the 'Electronics' category, have a price between $50 and $500, and whose name contains the letter 'a'.

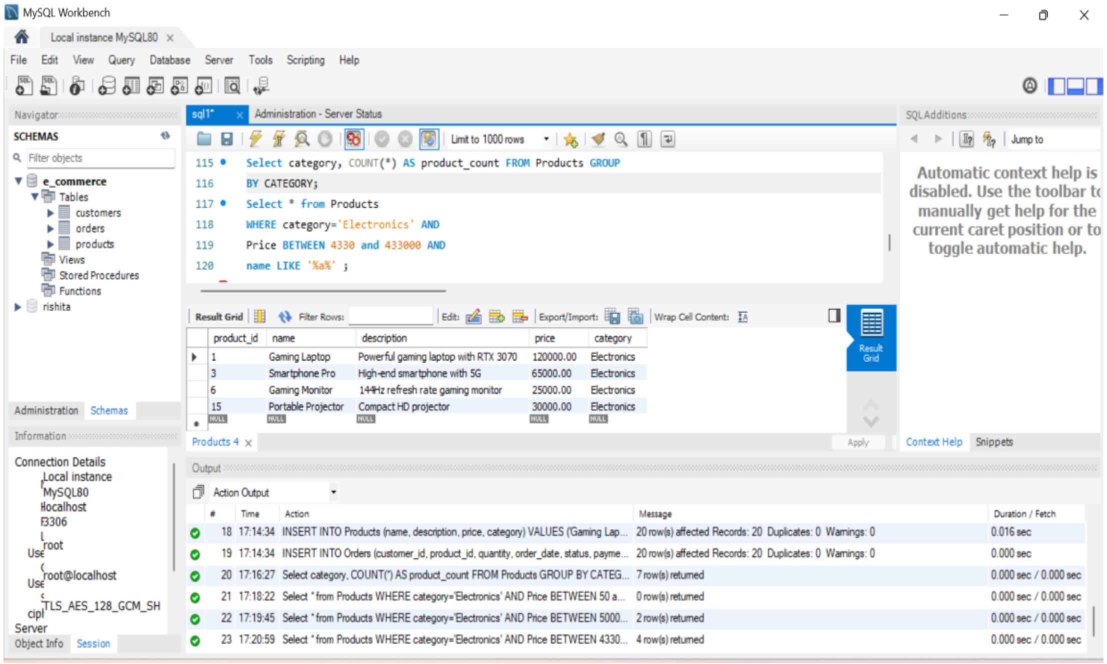
(Note: Price of 1 $=86.6)

Query: Select * from Products

WHERE category='Electronics' AND

Price BETWEEN 4330 and 433000 AND

name LIKE '%a%' ;



```
Select category, COUNT(*) AS product_count FROM Products GROUP
BY CATEGORY;
Select * from Products
WHERE category='Electronics' AND
Price BETWEEN 4330 and 433000 AND
name LIKE '%a%' ;
```

product_id	name	description	price	category
1	Gaming Laptop	Powerful gaming laptop with RTX 3070	120000.00	Electronics
3	Smartphone Pro	High-end smartphone with 5G	65000.00	Electronics
6	Gaming Monitor	144Hz refresh rate gaming monitor	25000.00	Electronics
15	Portable Projector	Compact HD projector	30000.00	Electronics
NULL	NULL	NULL	NULL	NULL

Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or to toggle automatic help.

Local instance MySQL80
localhost
3306
root
root@localhost
TLS_AES_128_GCM_SH

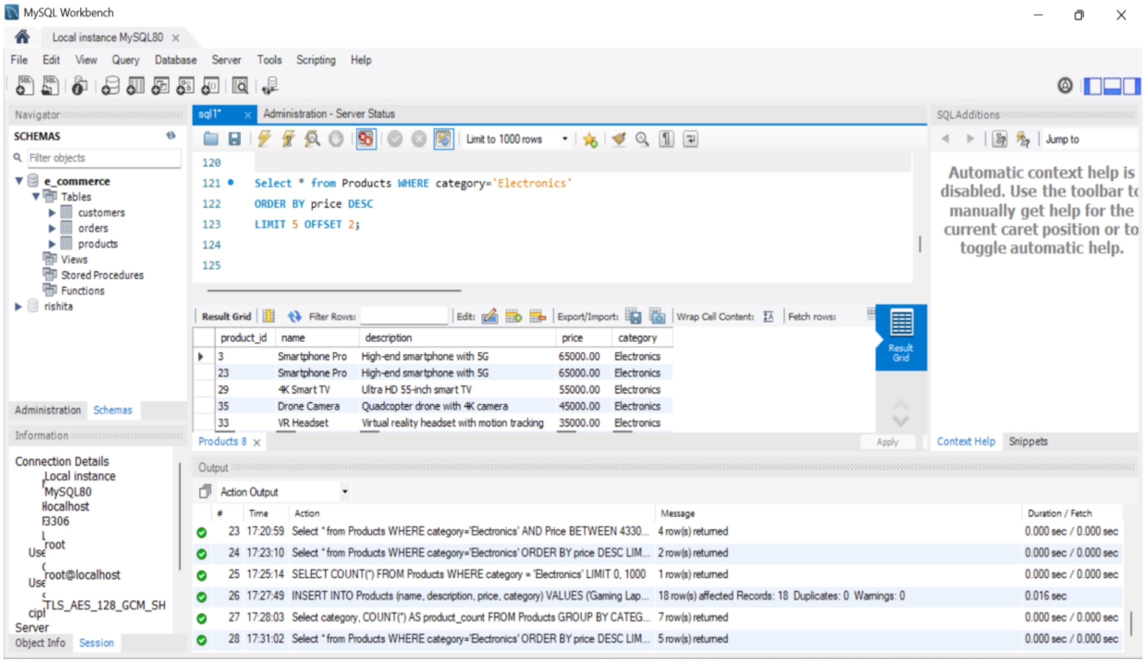
```
#   Time      Action                                                                      Message                                                   Duration / Fetch
18  17:14:34  INSERT INTO Products (name, description, price, category) VALUES ('Gaming Lap...  20 row(s) affected Records: 20  Duplicates: 0  Warnings: 0  0.016 sec
19  17:14:34  INSERT INTO Orders (customer_id, product_id, quantity, order_date, status, payme...  20 row(s) affected Records: 20  Duplicates: 0  Warnings: 0  0.000 sec
20  17:16:27  Select category, COUNT(*) AS product_count FROM Products GROUP BY CATEG...         7 row(s) returned                                         0.000 sec / 0.000 sec
21  17:18:22  Select * from Products WHERE category='Electronics' AND Price BETWEEN 50 a...      0 row(s) returned                                         0.000 sec / 0.000 sec
22  17:19:45  Select * from Products WHERE category='Electronics' AND Price BETWEEN 5000...     2 row(s) returned                                         0.000 sec / 0.000 sec
23  17:20:59  Select * from Products WHERE category='Electronics' AND Price BETWEEN 4330...     4 row(s) returned                                         0.000 sec / 0.000 sec
```

c. Get the top 5 most expensive products in the 'Electronics' category, skipping the first 2.

Query :

Select * from Products WHERE category='Electronics'

ORDER BY price DESC LIMIT 5 OFFSET 2;



```
Select * from Products WHERE category='Electronics'
ORDER BY price DESC
LIMIT 5 OFFSET 2;
```

product_id	name	description	price	category
3	Smartphone Pro	High-end smartphone with 5G	65000.00	Electronics
23	Smartphone Pro	High-end smartphone with 5G	65000.00	Electronics
29	4K Smart TV	Ultra HD 55-inch smart TV	55000.00	Electronics
35	Drone Camera	Quadcopter drone with 4K camera	45000.00	Electronics
33	VR Headset	Virtual reality headset with motion tracking	35000.00	Electronics

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

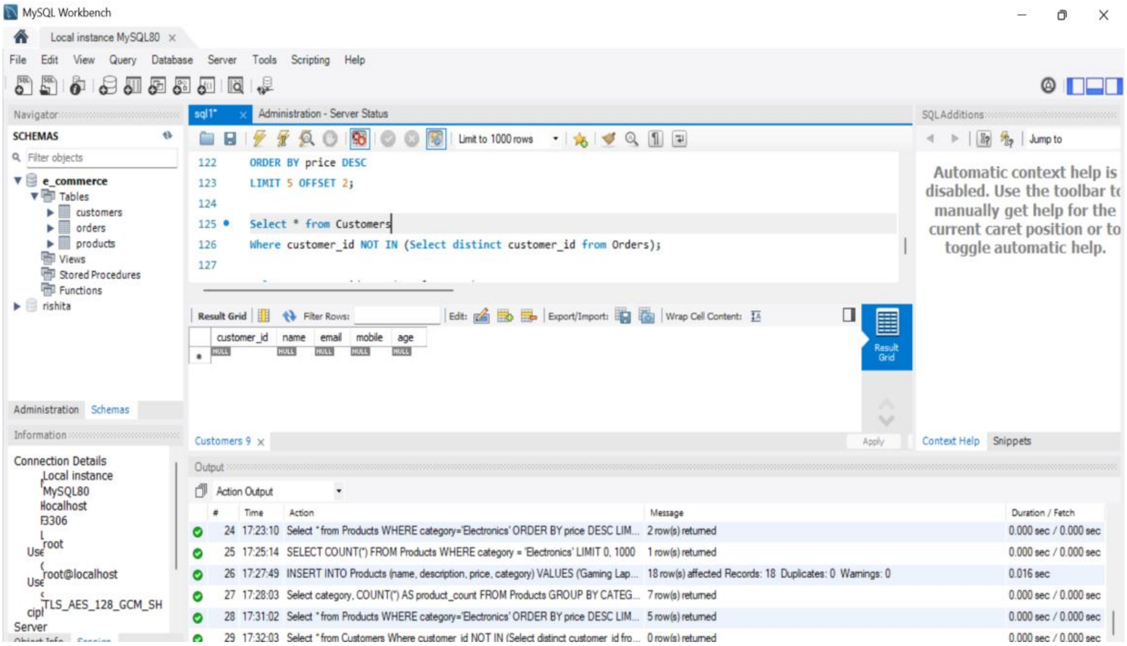
Connection Details
Local instance MySQL80
localhost
3306
root
root@localhost
TLS_AES_128_GCM_SH
Server

```
#   Time      Action                                                                Message                                                     Duration / Fetch
23  17:20:59  Select * from Products WHERE category='Electronics' AND Price BETWEEN 4330...  4 row(s) returned                                          0.000 sec / 0.000 sec
24  17:23:10  Select * from Products WHERE category='Electronics' ORDER BY price DESC LIM...  2 row(s) returned                                          0.000 sec / 0.000 sec
25  17:25:14  SELECT COUNT(*) FROM Products WHERE category = 'Electronics' LIMIT 0, 1000     1 row(s) returned                                          0.000 sec / 0.000 sec
26  17:27:49  INSERT INTO Products (name, description, price, category) VALUES ('Gaming Lap...  18 row(s) affected Records: 18  Duplicates: 0  Warnings: 0  0.016 sec
27  17:28:03  Select category, COUNT(*) AS product_count FROM Products GROUP BY CATEG...      7 row(s) returned                                          0.000 sec / 0.000 sec
28  17:31:02  Select * from Products WHERE category='Electronics' ORDER BY price DESC LIM...  5 row(s) returned                                          0.000 sec / 0.000 sec
```

d. Retrieve customers who have not placed any orders.

Query :

Select * from Customers
Where customer_id NOT IN (Select distinct customer_id from Orders);



```sql
ORDER BY price DESC
LIMIT 5 OFFSET 2;

Select * from Customers
Where customer_id NOT IN (Select distinct customer_id from Orders);
```

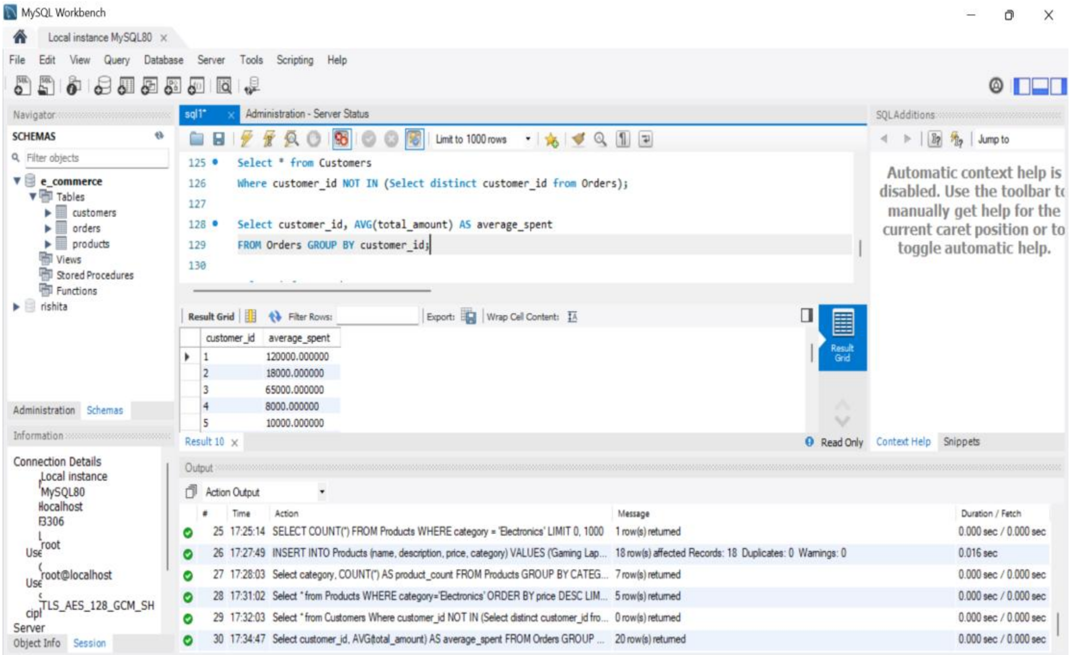
customer_id	name	email	mobile	age
NULL	NULL	NULL	NULL	NULL

```
#   Time      Action                                                                      Message                                              Duration / Fetch
24  17:23:10  Select * from Products WHERE category='Electronics' ORDER BY price DESC LIM...  2 row(s) returned                                    0.000 sec / 0.000 sec
25  17:25:14  SELECT COUNT(*) FROM Products WHERE category = 'Electronics' LIMIT 0, 1000       1 row(s) returned                                    0.000 sec / 0.000 sec
26  17:27:49  INSERT INTO Products (name, description, price, category) VALUES ('Gaming Lap...  18 row(s) affected Records: 18  Duplicates: 0  Warnings: 0  0.016 sec
27  17:28:03  Select category, COUNT(*) AS product_count FROM Products GROUP BY CATEG...       7 row(s) returned                                    0.000 sec / 0.000 sec
28  17:31:02  Select * from Products WHERE category='Electronics' ORDER BY price DESC LIM...  5 row(s) returned                                    0.000 sec / 0.000 sec
29  17:32:03  Select * from Customers Where customer_id NOT IN (Select distinct customer_id fro...  0 row(s) returned                              0.000 sec / 0.000 sec
```

e. Find the average total amount spent by each customer.

Query:

Select customer_id, AVG(total_amount) AS average_spent
FROM Orders GROUP BY customer_id;



```sql
Select * from Customers
Where customer_id NOT IN (Select distinct customer_id from Orders);

Select customer_id, AVG(total_amount) AS average_spent
FROM Orders GROUP BY customer_id;
```

customer_id	average_spent
1	120000.000000
2	18000.000000
3	65000.000000
4	8000.000000
5	10000.000000

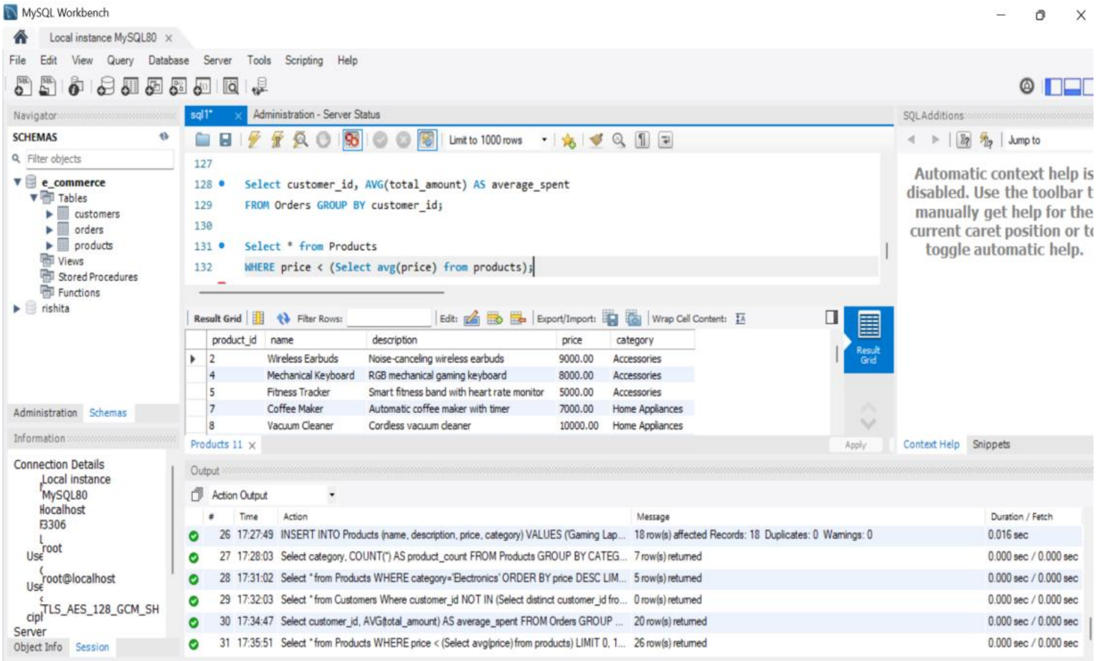
```
#   Time      Action                                                                      Message                                              Duration / Fetch
25  17:25:14  SELECT COUNT(*) FROM Products WHERE category = 'Electronics' LIMIT 0, 1000       1 row(s) returned                                    0.000 sec / 0.000 sec
26  17:27:49  INSERT INTO Products (name, description, price, category) VALUES ('Gaming Lap...  18 row(s) affected Records: 18  Duplicates: 0  Warnings: 0  0.016 sec
27  17:28:03  Select category, COUNT(*) AS product_count FROM Products GROUP BY CATEG...       7 row(s) returned                                    0.000 sec / 0.000 sec
28  17:31:02  Select * from Products WHERE category='Electronics' ORDER BY price DESC LIM...  5 row(s) returned                                    0.000 sec / 0.000 sec
29  17:32:03  Select * from Customers Where customer_id NOT IN (Select distinct customer_id fro...  0 row(s) returned                              0.000 sec / 0.000 sec
30  17:34:47  Select customer_id, AVG(total_amount) AS average_spent FROM Orders GROUP ...     20 row(s) returned                                   0.000 sec / 0.000 sec
```

f. Get the products that have a price less than the average price of all products.

Query:

Select * from Products

WHERE price < (Select avg(price) from products);



Connection Details
Local instance MySQL80
localhost
3306
Use root
Use root@localhost
cipl TLS_AES_128_GCM_SH
Server

```
Select customer_id, AVG(total_amount) AS average_spent
FROM Orders GROUP BY customer_id;

Select * from Products
WHERE price < (Select avg(price) from products);
```

	product_id	name	description	price	category
▸	2	Wireless Earbuds	Noise-canceling wireless earbuds	9000.00	Accessories
	4	Mechanical Keyboard	RGB mechanical gaming keyboard	8000.00	Accessories
	5	Fitness Tracker	Smart fitness band with heart rate monitor	5000.00	Accessories
	7	Coffee Maker	Automatic coffee maker with timer	7000.00	Home Appliances
	8	Vacuum Cleaner	Cordless vacuum cleaner	10000.00	Home Appliances

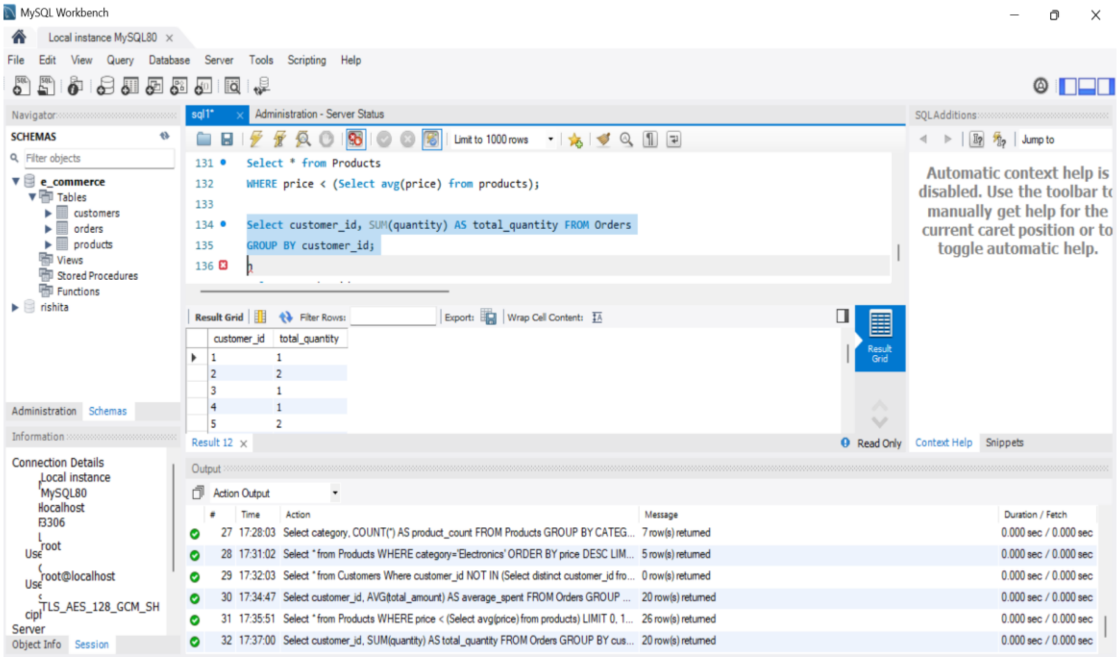
Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.

```
#   Time      Action                                                                       Message                                                      Duration / Fetch
26  17:27:49  INSERT INTO Products (name, description, price, category) VALUES ('Gaming Lap...  18 row(s) affected Records: 18  Duplicates: 0  Warnings: 0  0.016 sec
27  17:28:03  Select category, COUNT(*) AS product_count FROM Products GROUP BY CATEG...         7 row(s) returned                                            0.000 sec / 0.000 sec
28  17:31:02  Select * from Products WHERE category='Electronics' ORDER BY price DESC LIM...     5 row(s) returned                                            0.000 sec / 0.000 sec
29  17:32:03  Select * from Customers Where customer_id NOT IN (Select distinct customer_id fro...  0 row(s) returned                                         0.000 sec / 0.000 sec
30  17:34:47  Select customer_id, AVG(total_amount) AS average_spent FROM Orders GROUP ...        20 row(s) returned                                           0.000 sec / 0.000 sec
31  17:35:51  Select * from Products WHERE price < (Select avg(price) from products) LIMIT 0, 1...  26 row(s) returned                                        0.000 sec / 0.000 sec
```

g. Calculate the total quantity of products ordered by each customer:

Query:

Select customer_id, SUM(quantity) AS total_quantity FROM Orders GROUP BY customer_id;



Connection Details
Local instance MySQL80
localhost
3306
Use root
Use root@localhost
cipl TLS_AES_128_GCM_SH
Server

```
Select * from Products
WHERE price < (Select avg(price) from products);

Select customer_id, SUM(quantity) AS total_quantity FROM Orders
GROUP BY customer_id;
)
```

	customer_id	total_quantity
▸	1	1
	2	2
	3	1
	4	1
	5	2

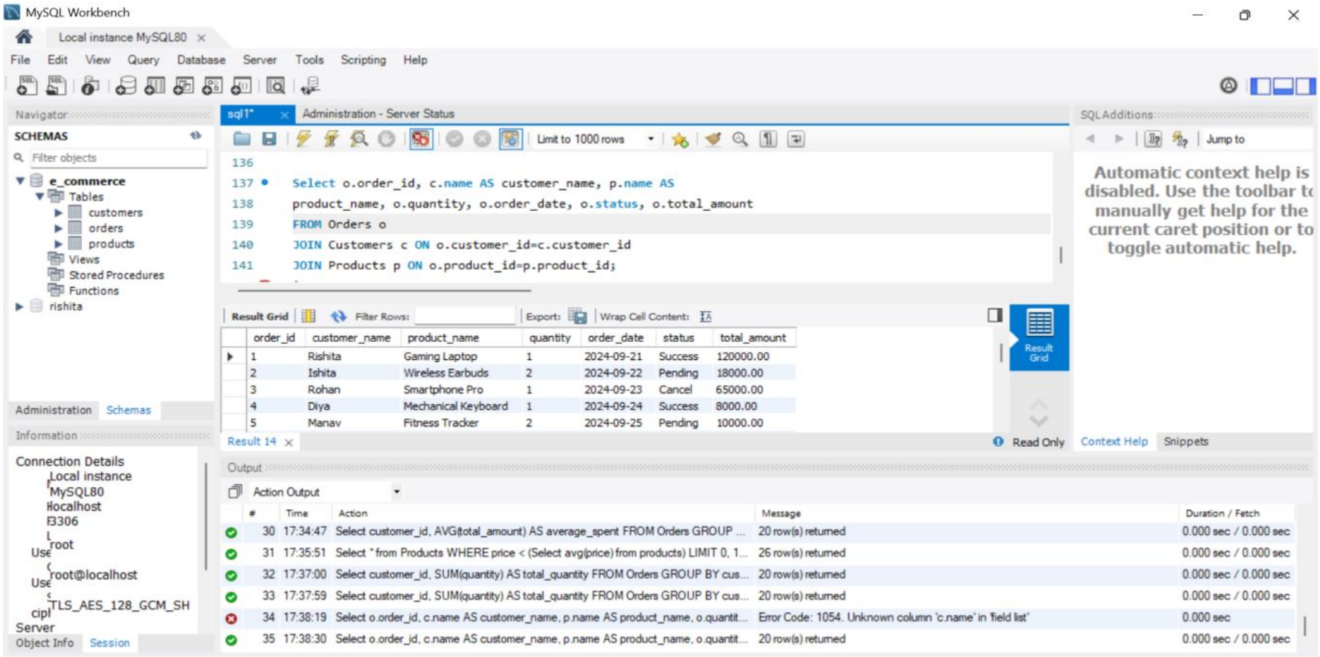
Automatic context help is disabled. Use the toolbar tc manually get help for the current caret position or to toggle automatic help.

```
#   Time      Action                                                                       Message             Duration / Fetch
27  17:28:03  Select category, COUNT(*) AS product_count FROM Products GROUP BY CATEG...         7 row(s) returned   0.000 sec / 0.000 sec
28  17:31:02  Select * from Products WHERE category='Electronics' ORDER BY price DESC LIM...     5 row(s) returned   0.000 sec / 0.000 sec
29  17:32:03  Select * from Customers Where customer_id NOT IN (Select distinct customer_id fro...  0 row(s) returned  0.000 sec / 0.000 sec
30  17:34:47  Select customer_id, AVG(total_amount) AS average_spent FROM Orders GROUP ...        20 row(s) returned  0.000 sec / 0.000 sec
31  17:35:51  Select * from Products WHERE price < (Select avg(price) from products) LIMIT 0, 1...  26 row(s) returned  0.000 sec / 0.000 sec
32  17:37:00  Select customer_id, SUM(quantity) AS total_quantity FROM Orders GROUP BY cus...     20 row(s) returned  0.000 sec / 0.000 sec
```

h. List all orders along with customer name and product name.

Query:

Select o.order_id, c.name AS customer_name, p.name AS product_name, o.quantity, o.order_date, o.status, o.total_amount
FROM Orders o
JOIN Customers c ON o.customer_id=c.customer_id
JOIN Products p ON o.product_id=p.product_id;



```
Select o.order_id, c.name AS customer_name, p.name AS
product_name, o.quantity, o.order_date, o.status, o.total_amount
FROM Orders o
JOIN Customers c ON o.customer_id=c.customer_id
JOIN Products p ON o.product_id=p.product_id;
```

order_id	customer_name	product_name	quantity	order_date	status	total_amount
1	Rishita	Gaming Laptop	1	2024-09-21	Success	120000.00
2	Ishita	Wireless Earbuds	2	2024-09-22	Pending	18000.00
3	Rohan	Smartphone Pro	1	2024-09-23	Cancel	65000.00
4	Diya	Mechanical Keyboard	1	2024-09-24	Success	8000.00
5	Manav	Fitness Tracker	2	2024-09-25	Pending	10000.00

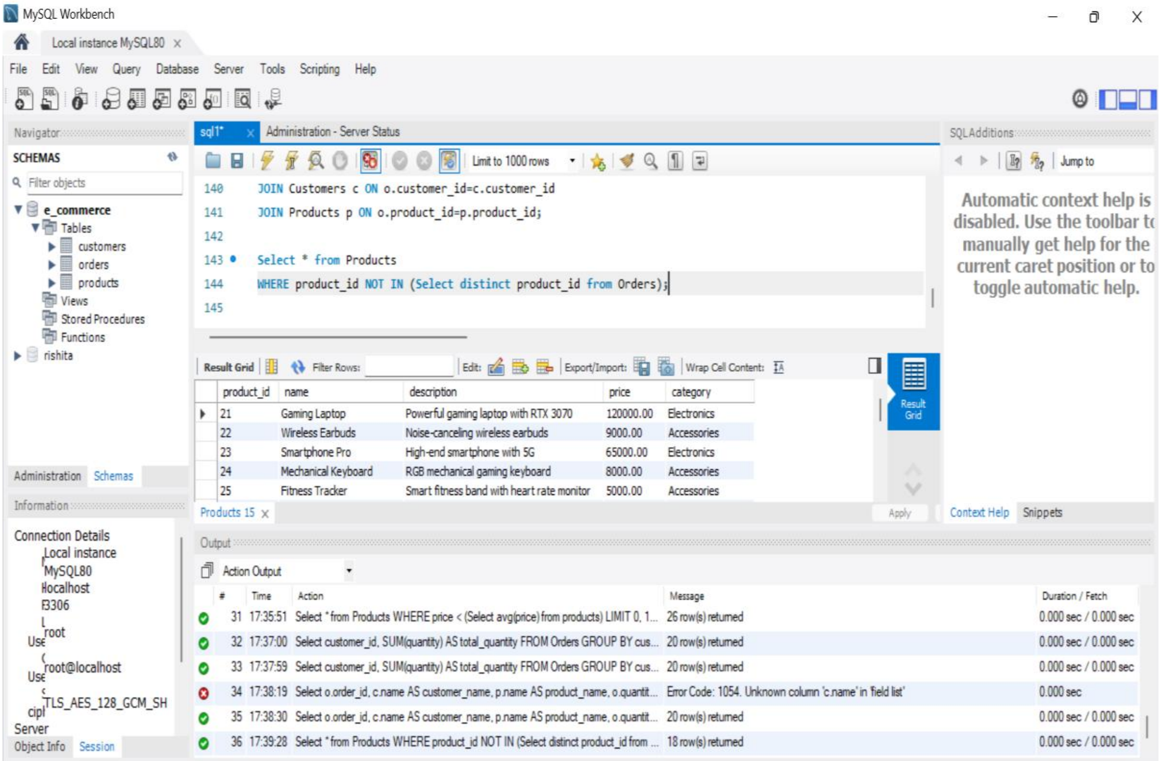
Automatic context help is disabled. Use the toolbar tc manually get help for the current caret position or to toggle automatic help.

```
   #  Time      Action                                                                  Message                                             Duration / Fetch
✓ 30  17:34:47  Select customer_id, AVG(total_amount) AS average_spent FROM Orders GROUP ...  20 row(s) returned                                  0.000 sec / 0.000 sec
✓ 31  17:35:51  Select * from Products WHERE price < (Select avg(price) from products) LIMIT 0, 1...  26 row(s) returned                      0.000 sec / 0.000 sec
✓ 32  17:37:00  Select customer_id, SUM(quantity) AS total_quantity FROM Orders GROUP BY cus...  20 row(s) returned                               0.000 sec / 0.000 sec
✓ 33  17:37:59  Select customer_id, SUM(quantity) AS total_quantity FROM Orders GROUP BY cus...  20 row(s) returned                               0.000 sec / 0.000 sec
✗ 34  17:38:19  Select o.order_id, c.name AS customer_name, p.name AS product_name, o.quantit...  Error Code: 1054. Unknown column 'c.name' in 'field list'  0.000 sec
✓ 35  17:38:30  Select o.order_id, c.name AS customer_name, p.name AS product_name, o.quantit...  20 row(s) returned                               0.000 sec / 0.000 sec
```

i. Find products that have never been ordered.

Query:

Select * from Products
WHERE product_id NOT IN (Select distinct product_id from Orders);



```sql
    JOIN Customers c ON o.customer_id=c.customer_id
    JOIN Products p ON o.product_id=p.product_id;

    Select * from Products
    WHERE product_id NOT IN (Select distinct product_id from Orders);
```

product_id	name	description	price	category
21	Gaming Laptop	Powerful gaming laptop with RTX 3070	120000.00	Electronics
22	Wireless Earbuds	Noise-canceling wireless earbuds	9000.00	Accessories
23	Smartphone Pro	High-end smartphone with 5G	65000.00	Electronics
24	Mechanical Keyboard	RGB mechanical gaming keyboard	8000.00	Accessories
25	Fitness Tracker	Smart fitness band with heart rate monitor	5000.00	Accessories

Connection Details
Local instance MySQL80
localhost
3306
root
root@localhost
TLS_AES_128_GCM_SH

```
#   Time      Action                                                                  Message                                               Duration / Fetch
31  17:35:51  Select * from Products WHERE price < (Select avg(price) from products) LIMIT 0, 1...  26 row(s) returned                  0.000 sec / 0.000 sec
32  17:37:00  Select customer_id, SUM(quantity) AS total_quantity FROM Orders GROUP BY cus...  20 row(s) returned                     0.000 sec / 0.000 sec
33  17:37:59  Select customer_id, SUM(quantity) AS total_quantity FROM Orders GROUP BY cus...  20 row(s) returned                     0.000 sec / 0.000 sec
34  17:38:19  Select o.order_id, c.name AS customer_name, p.name AS product_name, o.quantit...  Error Code: 1054. Unknown column 'c.name' in 'field list'  0.000 sec
35  17:38:30  Select o.order_id, c.name AS customer_name, p.name AS product_name, o.quantit...  20 row(s) returned                     0.000 sec / 0.000 sec
36  17:39:28  Select * from Products WHERE product_id NOT IN (Select distinct product_id from ...  18 row(s) returned                 0.000 sec / 0.000 sec
```