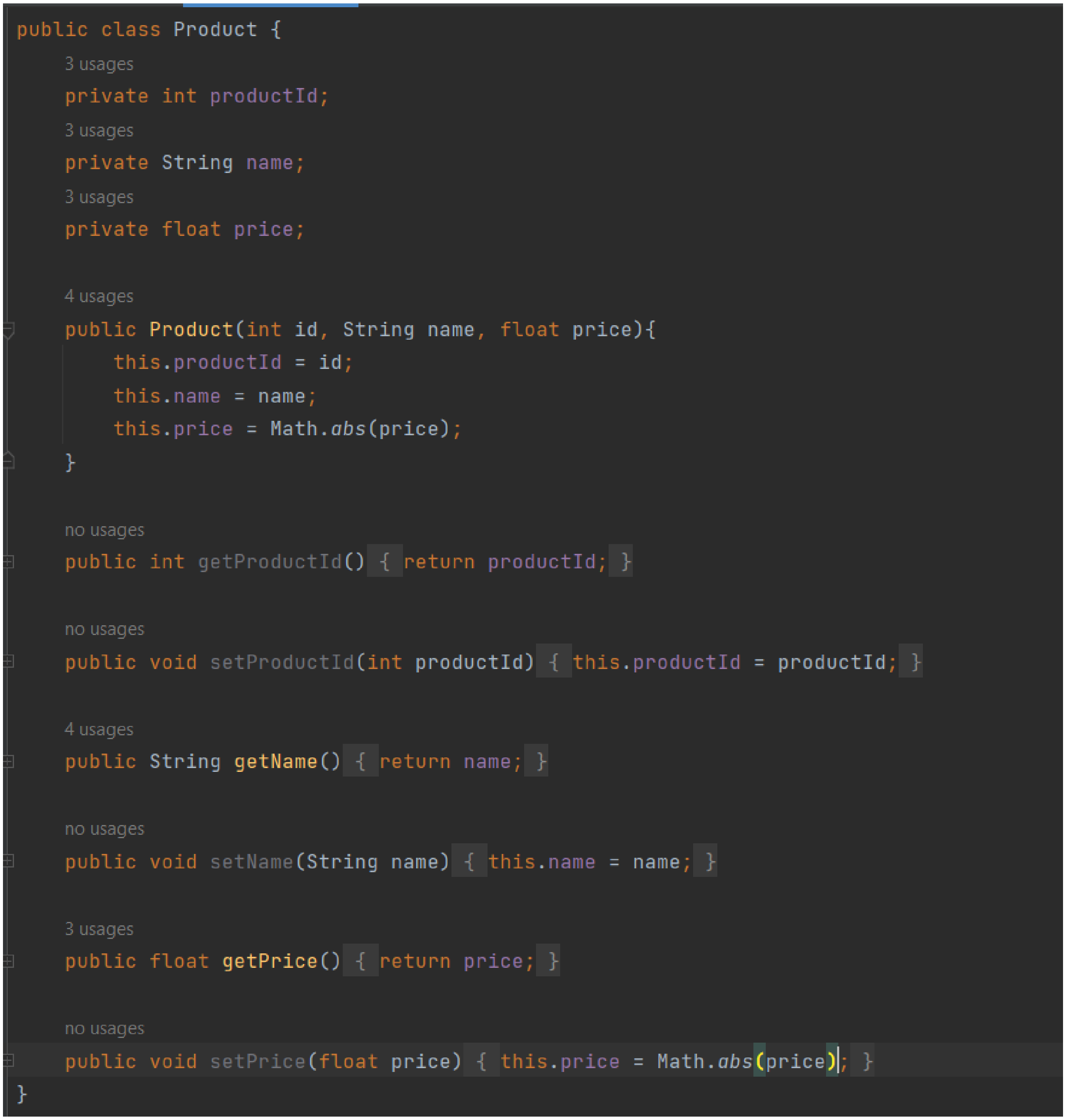
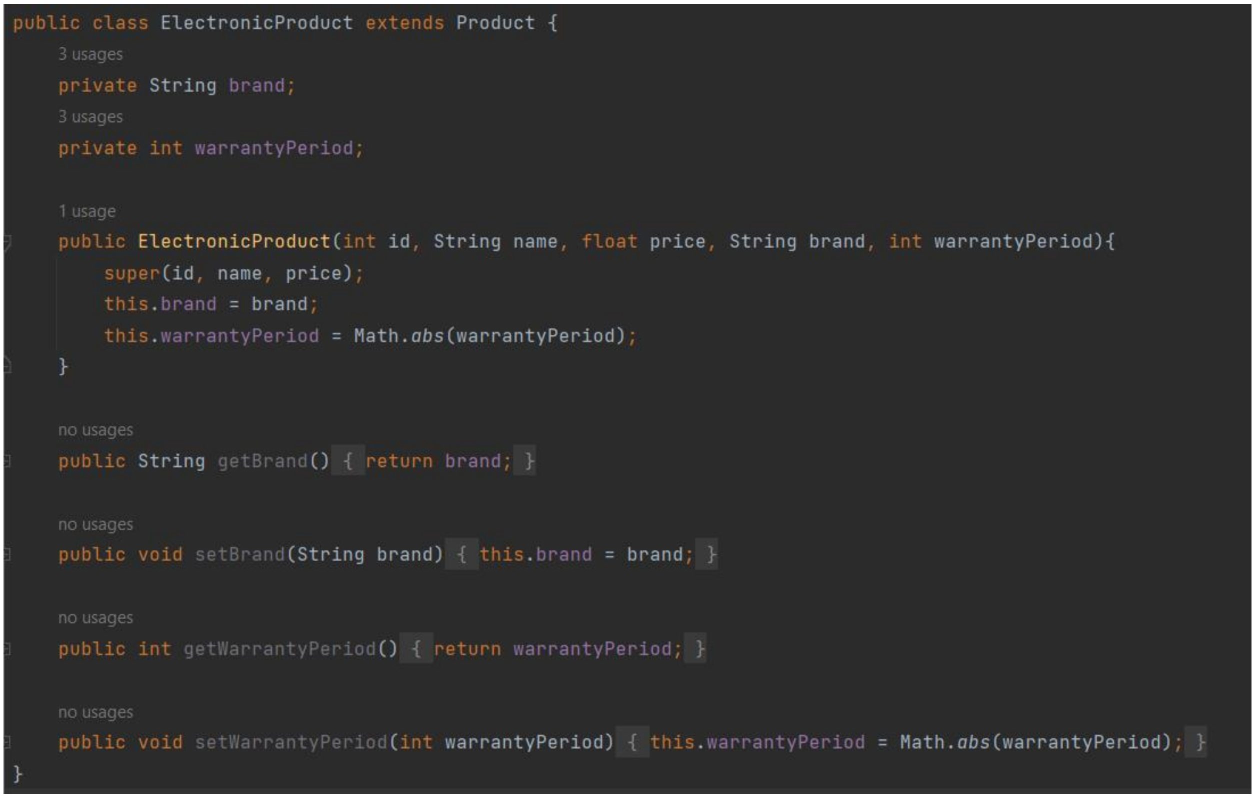
Project

Class Product



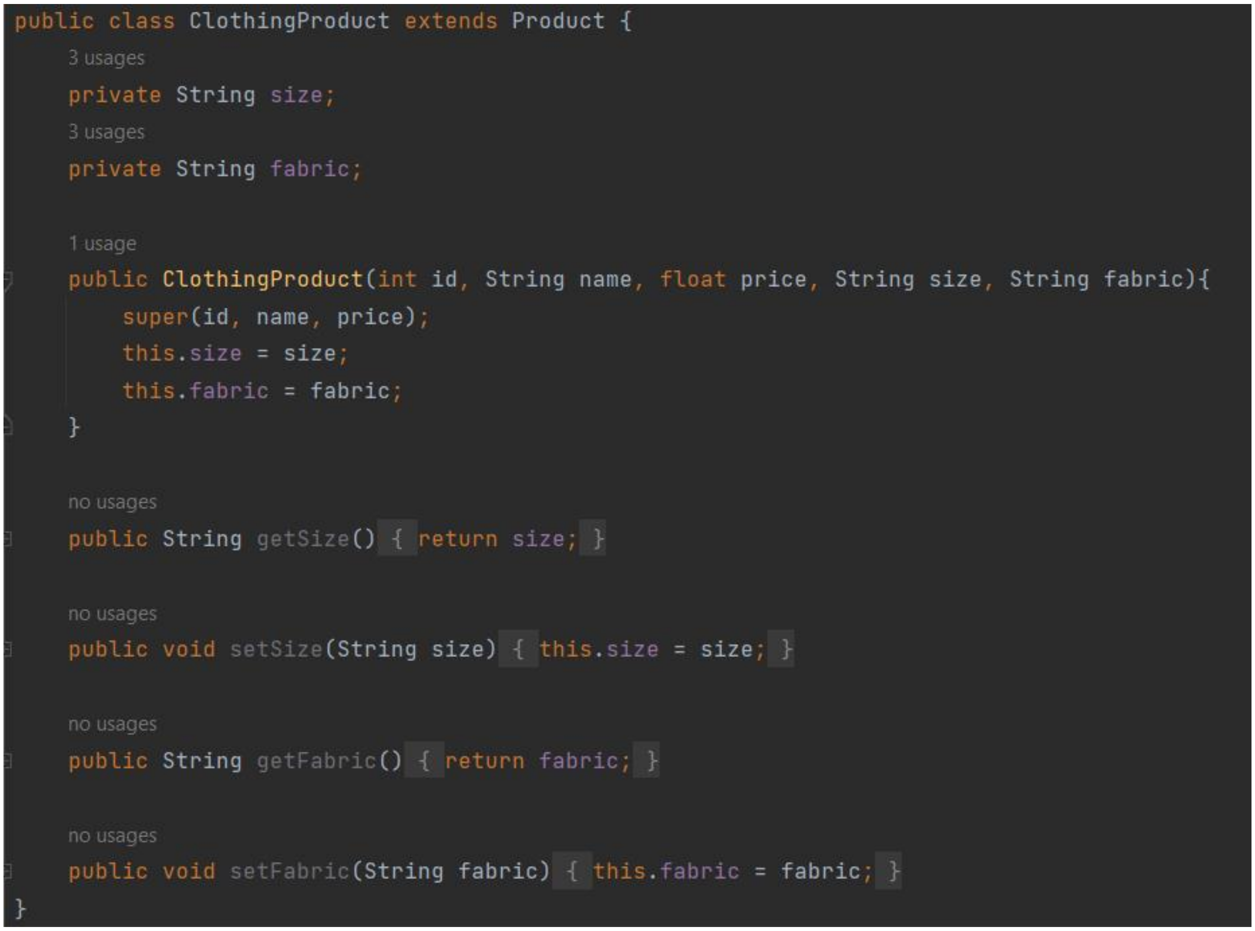
```
public class Product {
    3 usages
    private int productId;
    3 usages
    private String name;
    3 usages
    private float price;

    4 usages
    public Product(int id, String name, float price){
        this.productId = id;
        this.name = name;
        this.price = Math.abs(price);
    }

    no usages
    public int getProductId() { return productId; }

    no usages
    public void setProductId(int productId) { this.productId = productId; }

    4 usages
    public String getName() { return name; }

    no usages
    public void setName(String name) { this.name = name; }

    3 usages
    public float getPrice() { return price; }

    no usages
    public void setPrice(float price) { this.price = Math.abs(price); }
}
```

Class Electronic Product



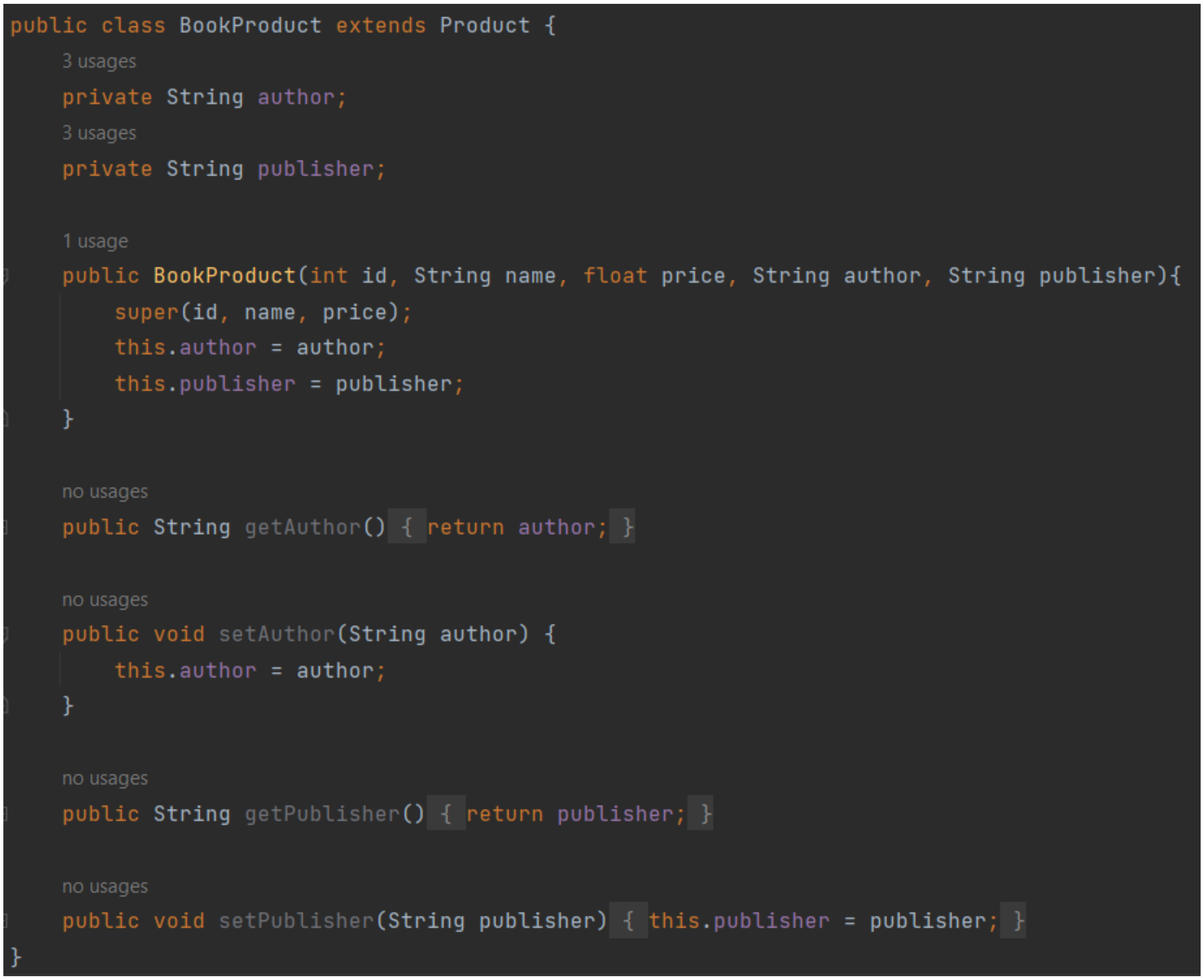
```
public class ElectronicProduct extends Product {
    3 usages
    private String brand;
    3 usages
    private int warrantyPeriod;

    1 usage
    public ElectronicProduct(int id, String name, float price, String brand, int warrantyPeriod){
        super(id, name, price);
        this.brand = brand;
        this.warrantyPeriod = Math.abs(warrantyPeriod);
    }

    no usages
    public String getBrand() { return brand; }

    no usages
    public void setBrand(String brand) { this.brand = brand; }

    no usages
    public int getWarrantyPeriod() { return warrantyPeriod; }

    no usages
    public void setWarrantyPeriod(int warrantyPeriod) { this.warrantyPeriod = Math.abs(warrantyPeriod); }
}
```

Class Clothing Product



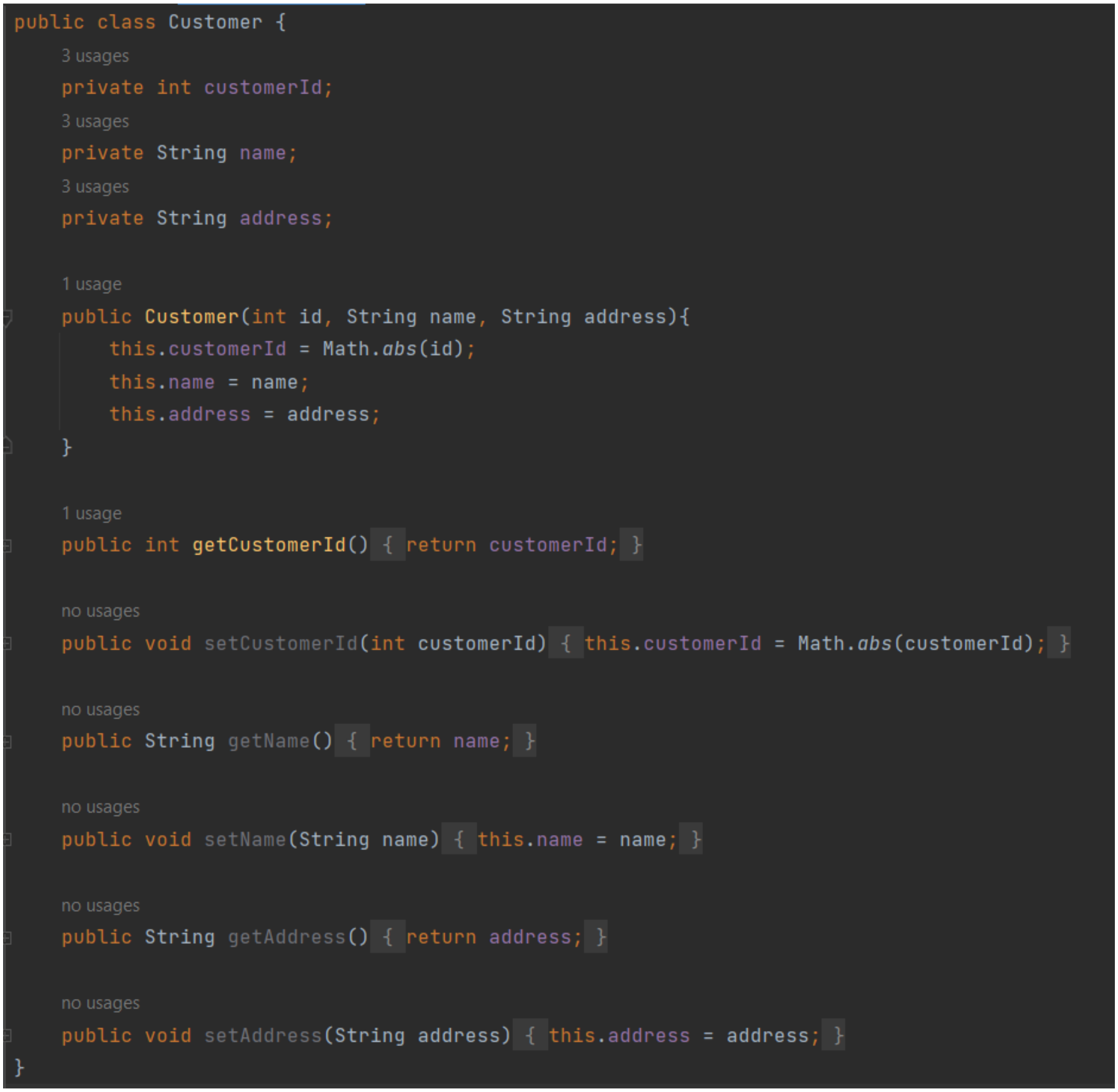
```
public class ClothingProduct extends Product {
    3 usages
    private String size;
    3 usages
    private String fabric;

    1 usage
    public ClothingProduct(int id, String name, float price, String size, String fabric){
        super(id, name, price);
        this.size = size;
        this.fabric = fabric;
    }

    no usages
    public String getSize() { return size; }

    no usages
    public void setSize(String size) { this.size = size; }

    no usages
    public String getFabric() { return fabric; }

    no usages
    public void setFabric(String fabric) { this.fabric = fabric; }
}
```

Class Book Product



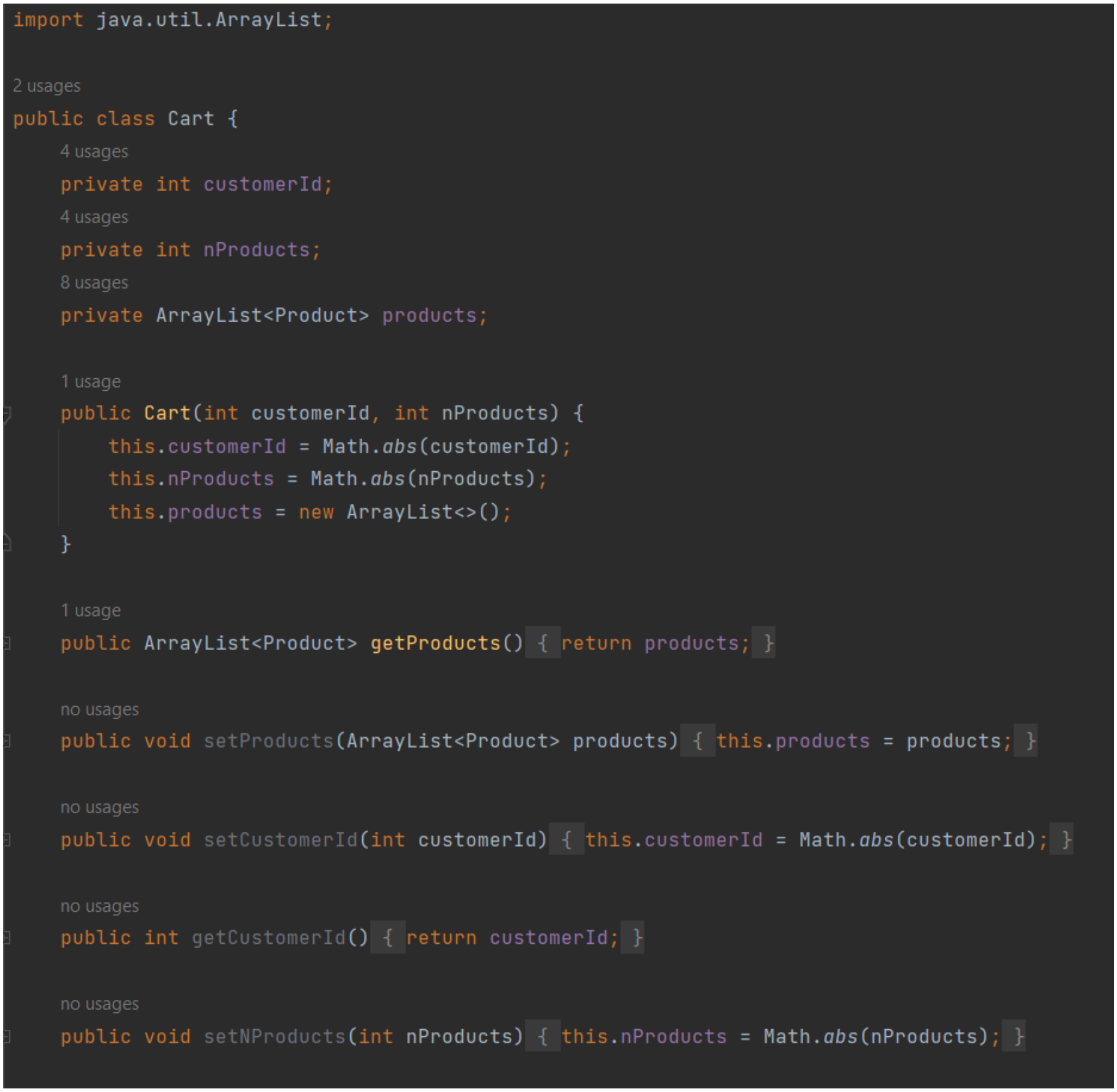
```
public class BookProduct extends Product {
    3 usages
    private String author;
    3 usages
    private String publisher;

    1 usage
    public BookProduct(int id, String name, float price, String author, String publisher){
        super(id, name, price);
        this.author = author;
        this.publisher = publisher;
    }

    no usages
    public String getAuthor() { return author; }

    no usages
    public void setAuthor(String author) {
        this.author = author;
    }

    no usages
    public String getPublisher() { return publisher; }

    no usages
    public void setPublisher(String publisher) { this.publisher = publisher; }
}
```

Class Customer

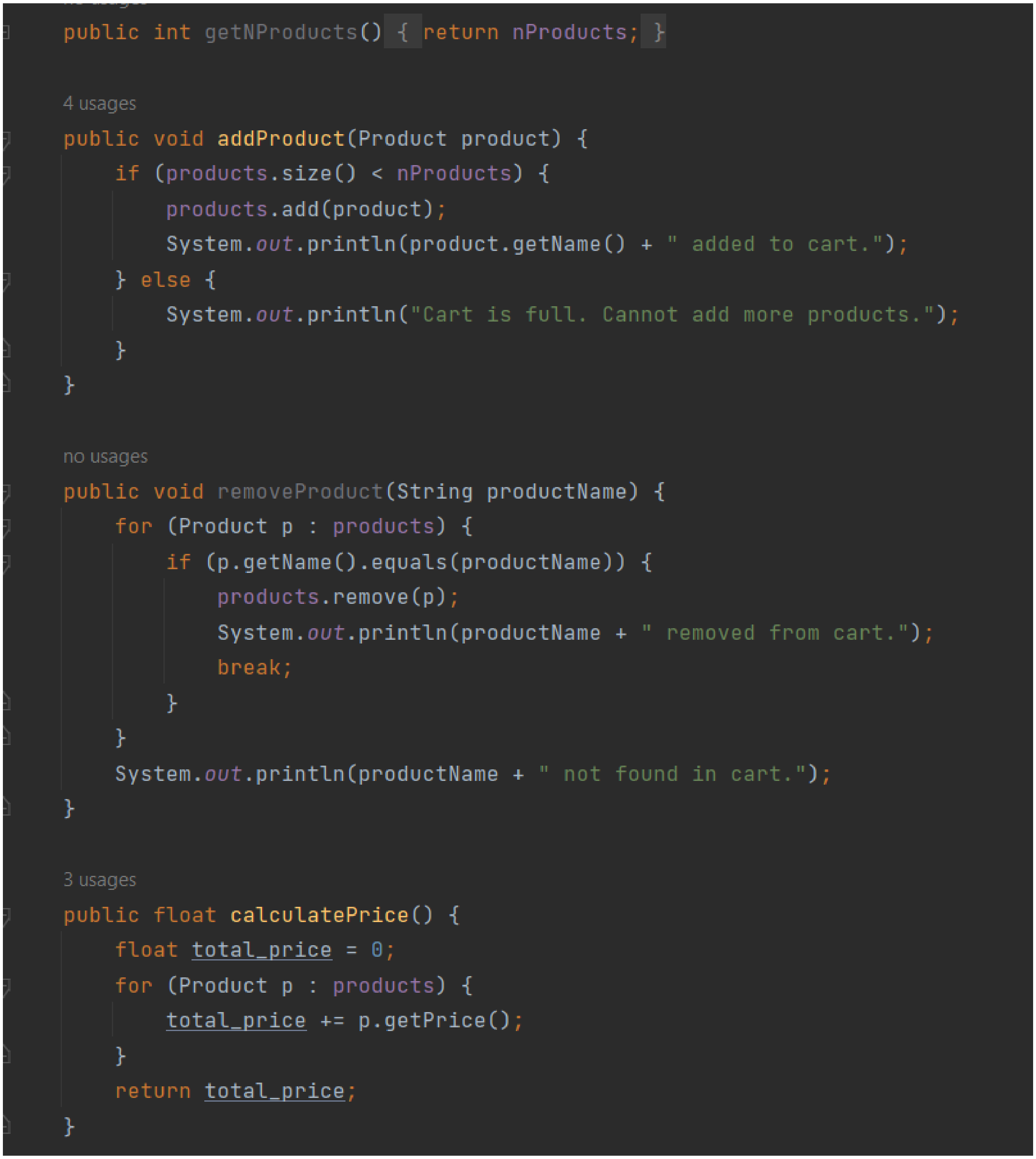


```
public class Customer {
    3 usages
    private int customerId;
    3 usages
    private String name;
    3 usages
    private String address;

    1 usage
    public Customer(int id, String name, String address){
        this.customerId = Math.abs(id);
        this.name = name;
        this.address = address;
    }

    1 usage
    public int getCustomerId() { return customerId; }

    no usages
    public void setCustomerId(int customerId) { this.customerId = Math.abs(customerId); }

    no usages
    public String getName() { return name; }

    no usages
    public void setName(String name) { this.name = name; }

    no usages
    public String getAddress() { return address; }

    no usages
    public void setAddress(String address) { this.address = address; }
}
```

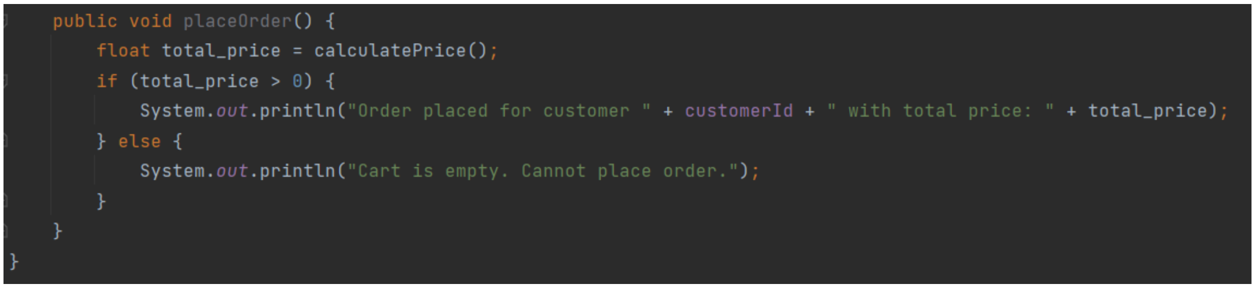
Class Cart



```
import java.util.ArrayList;

2 usages
public class Cart {
    4 usages
    private int customerId;
    4 usages
    private int nProducts;
    8 usages
    private ArrayList<Product> products;

    1 usage
    public Cart(int customerId, int nProducts) {
        this.customerId = Math.abs(customerId);
        this.nProducts = Math.abs(nProducts);
        this.products = new ArrayList<>();
    }

    1 usage
    public ArrayList<Product> getProducts() { return products; }

    no usages
    public void setProducts(ArrayList<Product> products) { this.products = products; }

    no usages
    public void setCustomerId(int customerId) { this.customerId = Math.abs(customerId); }

    no usages
    public int getCustomerId() { return customerId; }

    no usages
    public void setNProducts(int nProducts) { this.nProducts = Math.abs(nProducts); }
```

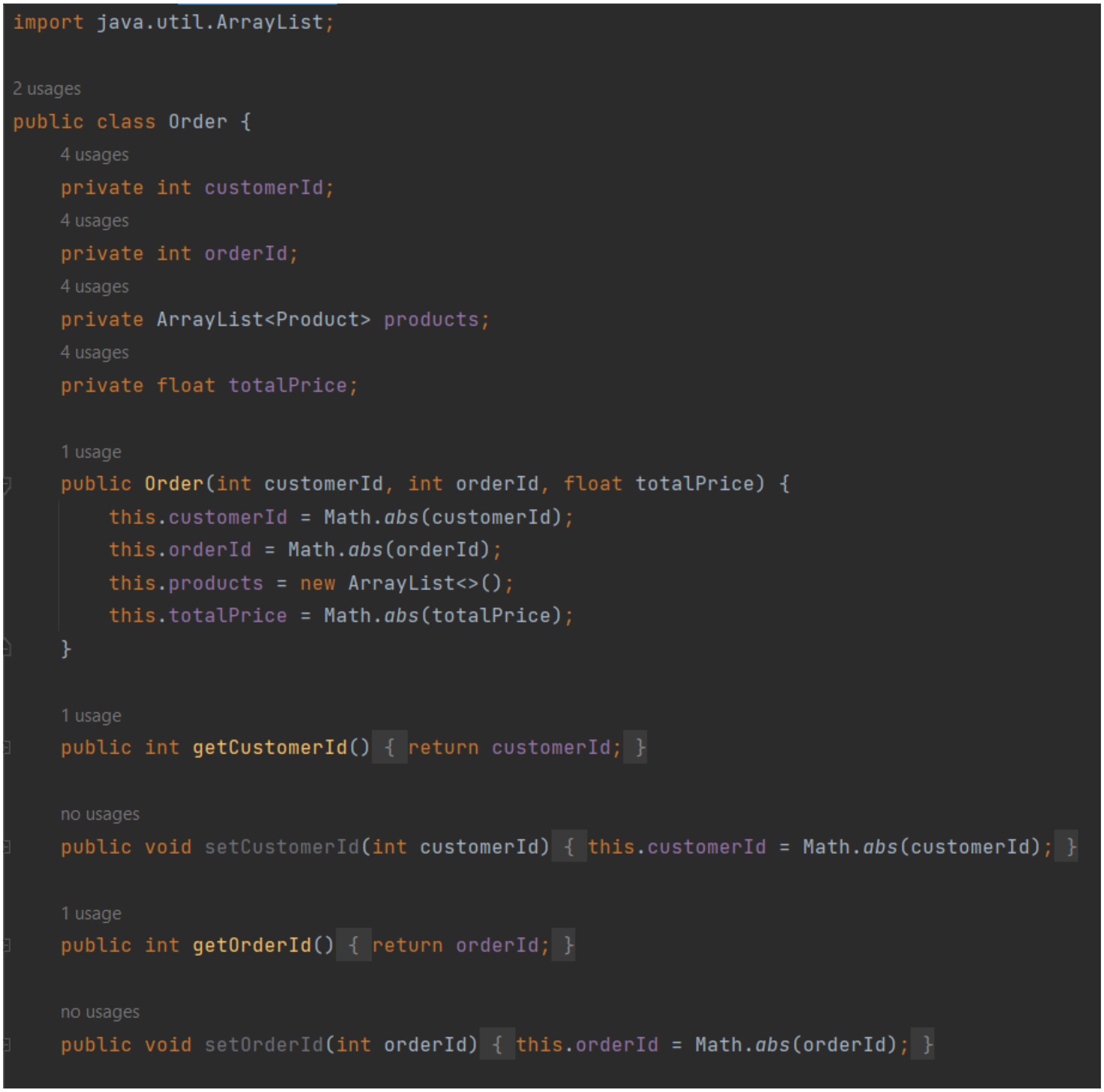


```
    public int getNProducts() { return nProducts; }

    4 usages
    public void addProduct(Product product) {
        if (products.size() < nProducts) {
            products.add(product);
            System.out.println(product.getName() + " added to cart.");
        } else {
            System.out.println("Cart is full. Cannot add more products.");
        }
    }

    no usages
    public void removeProduct(String productName) {
        for (Product p : products) {
            if (p.getName().equals(productName)) {
                products.remove(p);
                System.out.println(productName + " removed from cart.");
                break;
            }
        }
        System.out.println(productName + " not found in cart.");
    }

    3 usages
    public float calculatePrice() {
        float total_price = 0;
        for (Product p : products) {
            total_price += p.getPrice();
        }
        return total_price;
    }
```

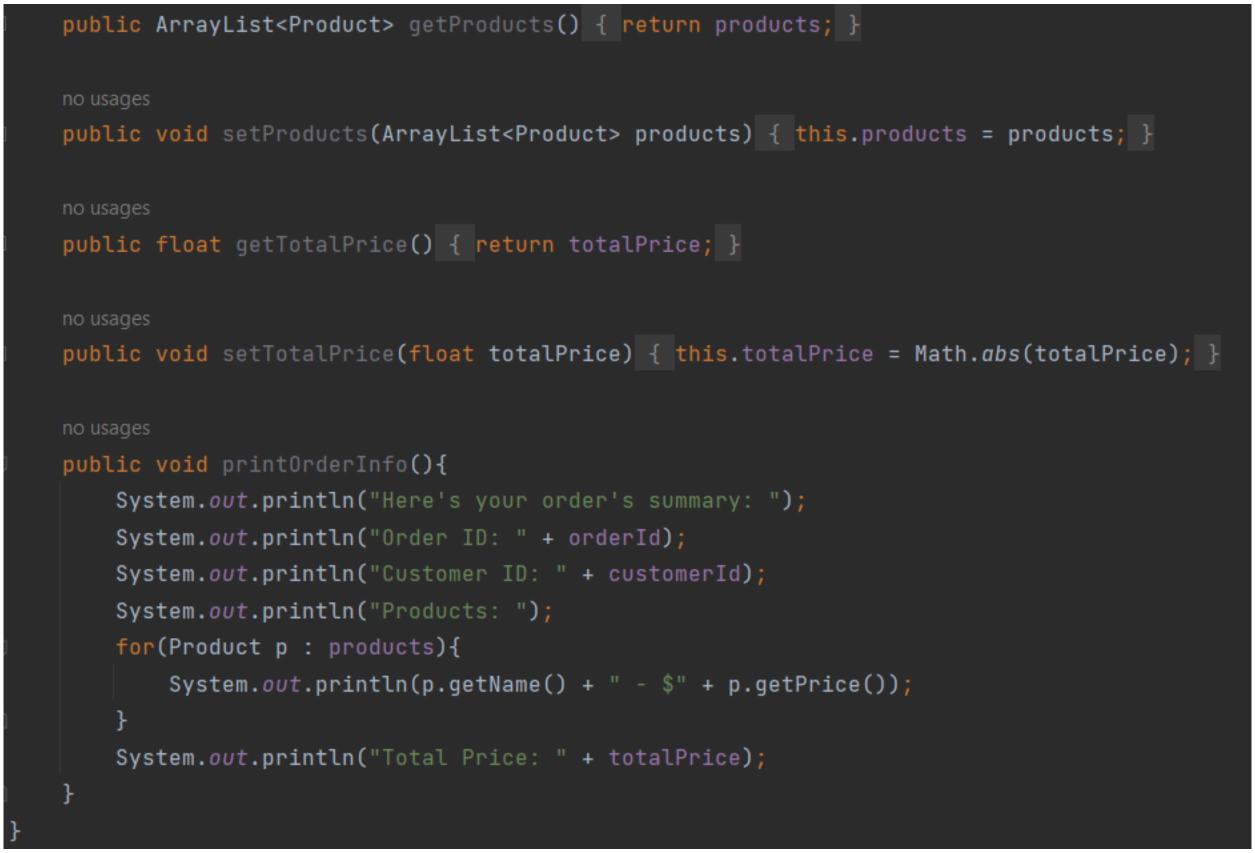


```
    public void placeOrder() {
        float total_price = calculatePrice();
        if (total_price > 0) {
            System.out.println("Order placed for customer " + customerId + " with total price: " + total_price);
        } else {
            System.out.println("Cart is empty. Cannot place order.");
        }
    }
}
```

Class Order

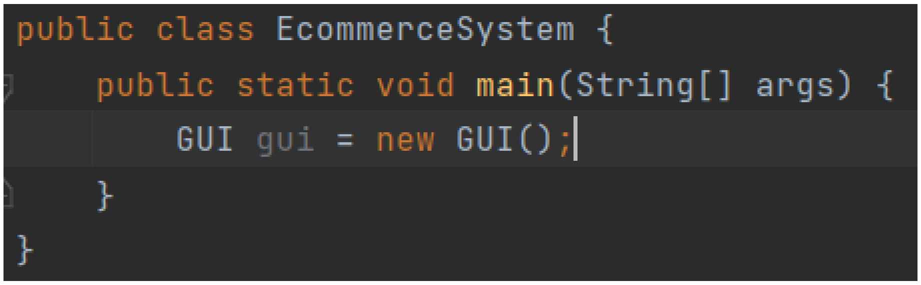


```
import java.util.ArrayList;

2 usages
public class Order {
    4 usages
    private int customerId;
    4 usages
    private int orderId;
    4 usages
    private ArrayList<Product> products;
    4 usages
    private float totalPrice;

    1 usage
    public Order(int customerId, int orderId, float totalPrice) {
        this.customerId = Math.abs(customerId);
        this.orderId = Math.abs(orderId);
        this.products = new ArrayList<>();
        this.totalPrice = Math.abs(totalPrice);
    }

    1 usage
    public int getCustomerId() { return customerId; }

    no usages
    public void setCustomerId(int customerId) { this.customerId = Math.abs(customerId); }

    1 usage
    public int getOrderId() { return orderId; }

    no usages
    public void setOrderId(int orderId) { this.orderId = Math.abs(orderId); }
```



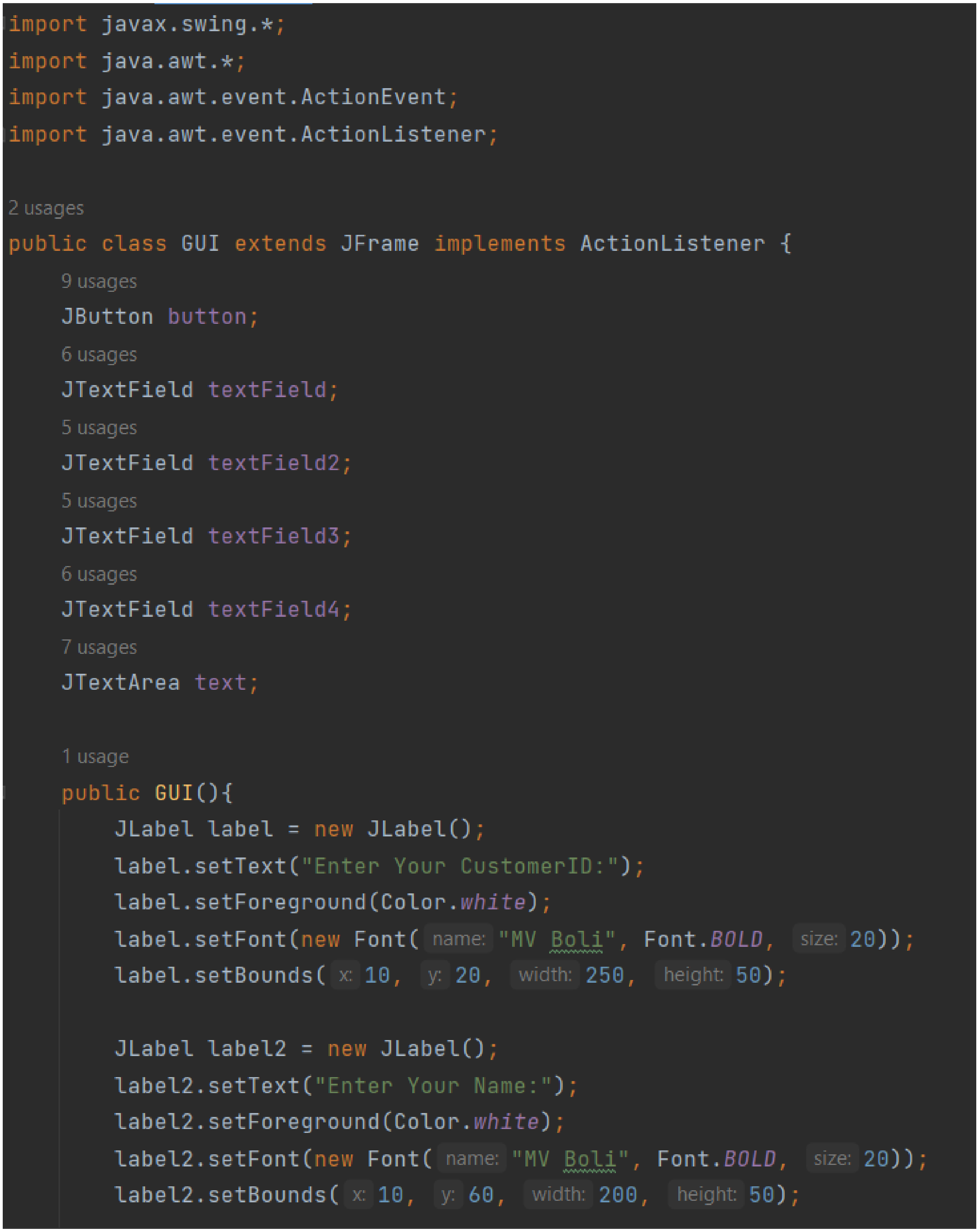
```
    public ArrayList<Product> getProducts() { return products; }

    no usages
    public void setProducts(ArrayList<Product> products) { this.products = products; }

    no usages
    public float getTotalPrice() { return totalPrice; }

    no usages
    public void setTotalPrice(float totalPrice) { this.totalPrice = Math.abs(totalPrice); }

    no usages
    public void printOrderInfo(){
        System.out.println("Here's your order's summary: ");
        System.out.println("Order ID: " + orderId);
        System.out.println("Customer ID: " + customerId);
        System.out.println("Products: ");
        for(Product p : products){
            System.out.println(p.getName() + " - $" + p.getPrice());
        }
        System.out.println("Total Price: " + totalPrice);
    }
}
```

Class Ecommerce System

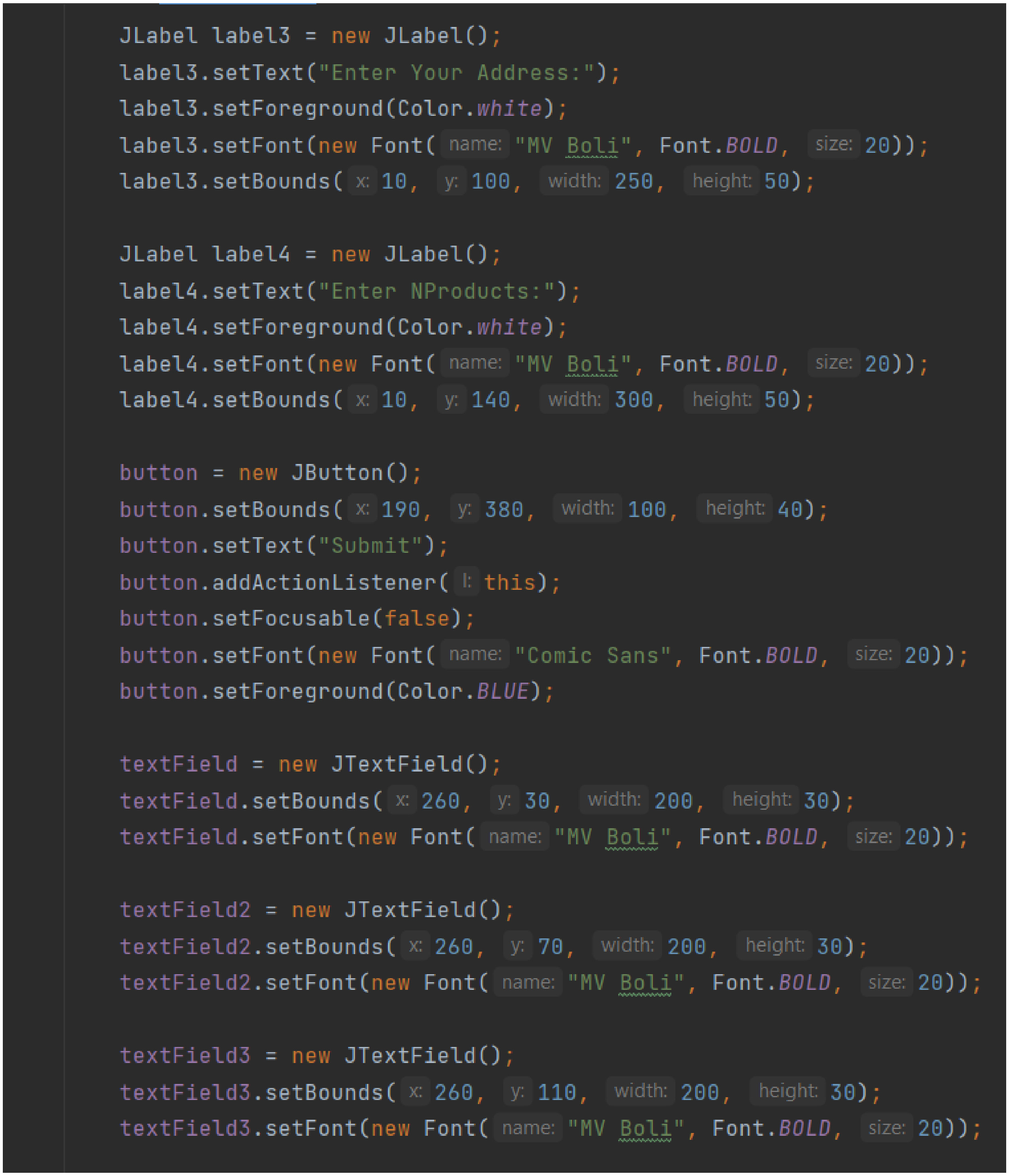


```
public class EcommerceSystem {
    public static void main(String[] args) {
        GUI gui = new GUI();
    }
}
```

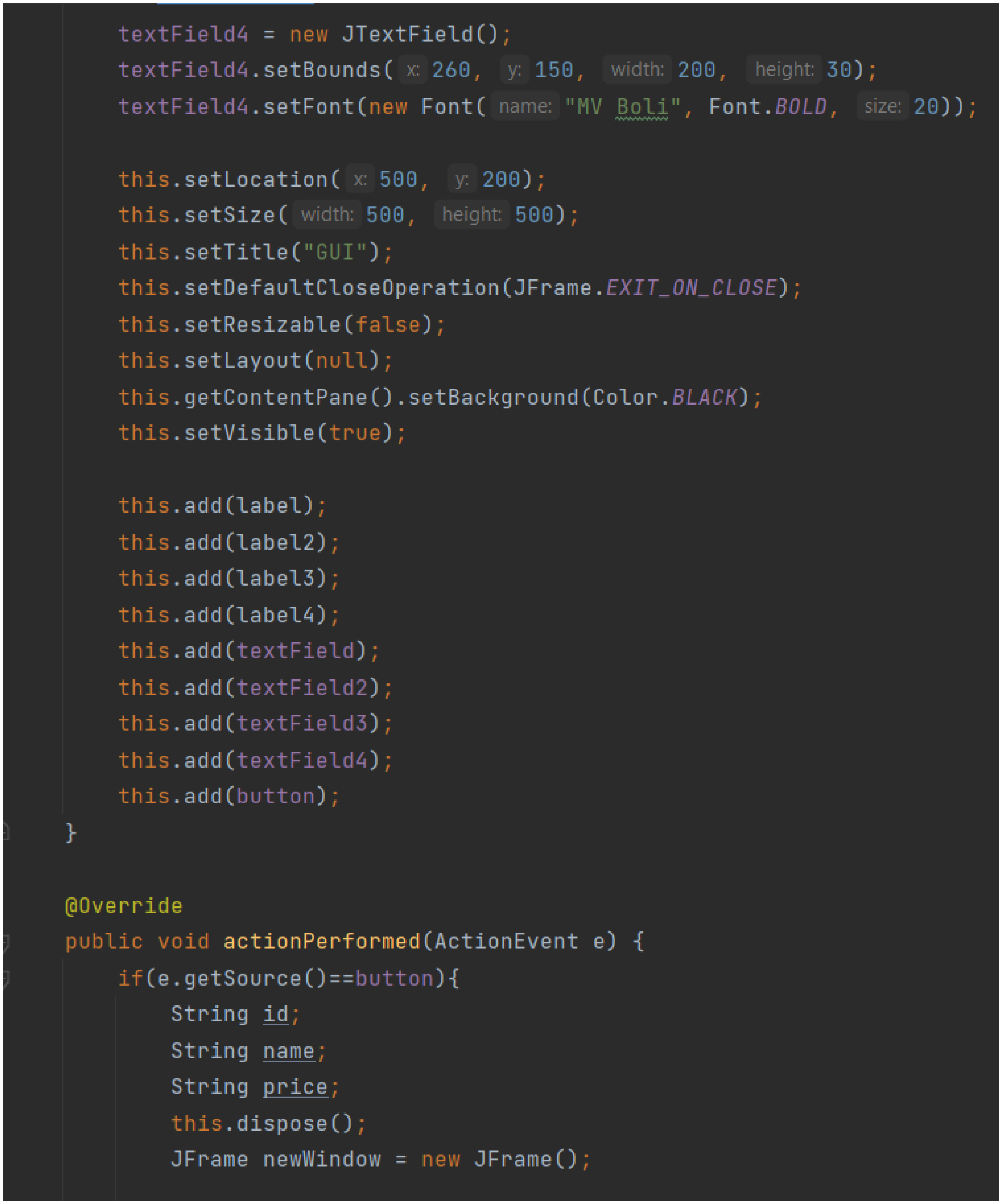
Class GUI



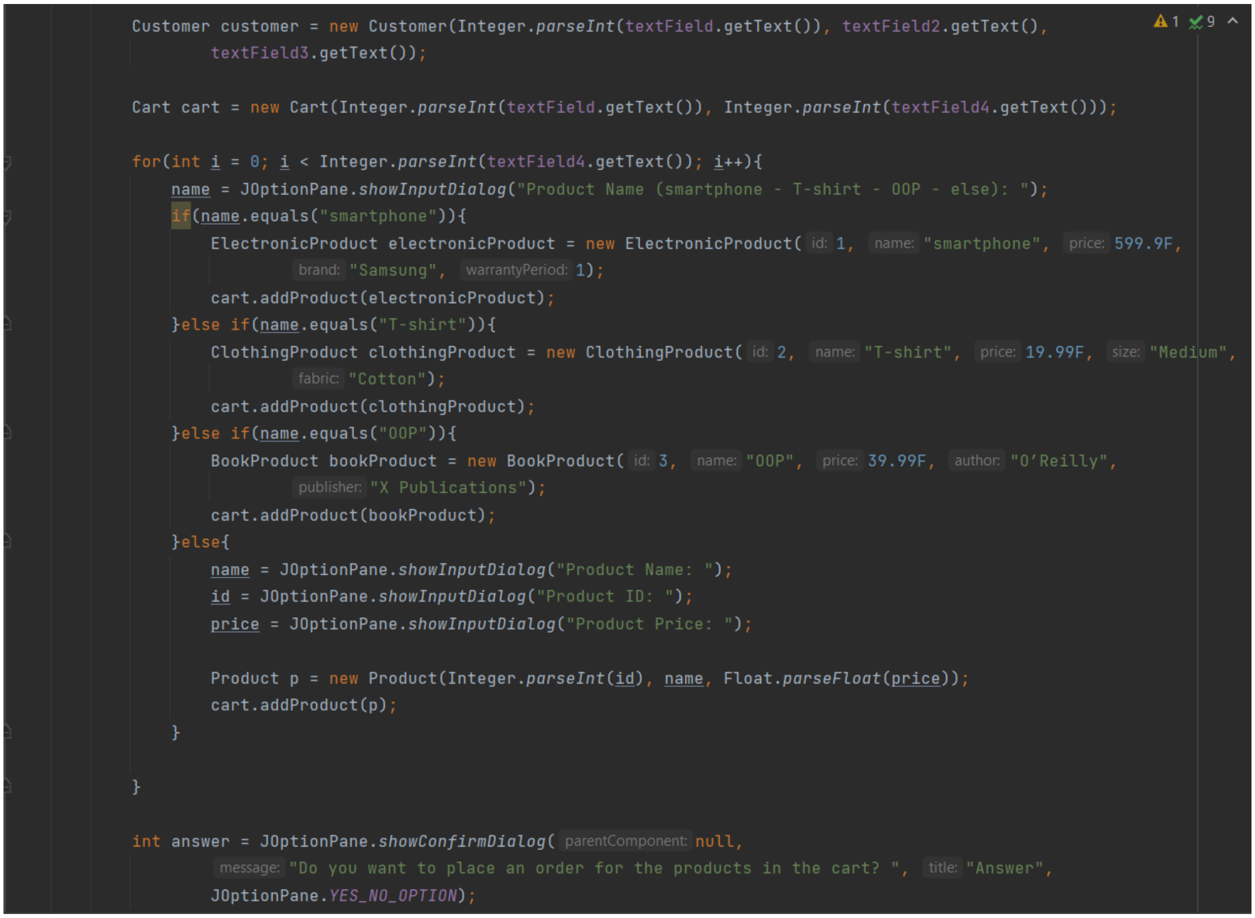
```
import javax.swing.*;
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

2 usages
public class GUI extends JFrame implements ActionListener {
    9 usages
    JButton button;
    6 usages
    JTextField textField;
    5 usages
    JTextField textField2;
    5 usages
    JTextField textField3;
    6 usages
    JTextField textField4;
    7 usages
    JTextArea text;

    1 usage
    public GUI(){
        JLabel label = new JLabel();
        label.setText("Enter Your CustomerID:");
        label.setForeground(Color.white);
        label.setFont(new Font( name: "MV Boli", Font.BOLD,  size: 20));
        label.setBounds( x: 10,  y: 20,  width: 250,  height: 50);

        JLabel label2 = new JLabel();
        label2.setText("Enter Your Name:");
        label2.setForeground(Color.white);
        label2.setFont(new Font( name: "MV Boli", Font.BOLD,  size: 20));
        label2.setBounds( x: 10,  y: 60,  width: 200,  height: 50);
```



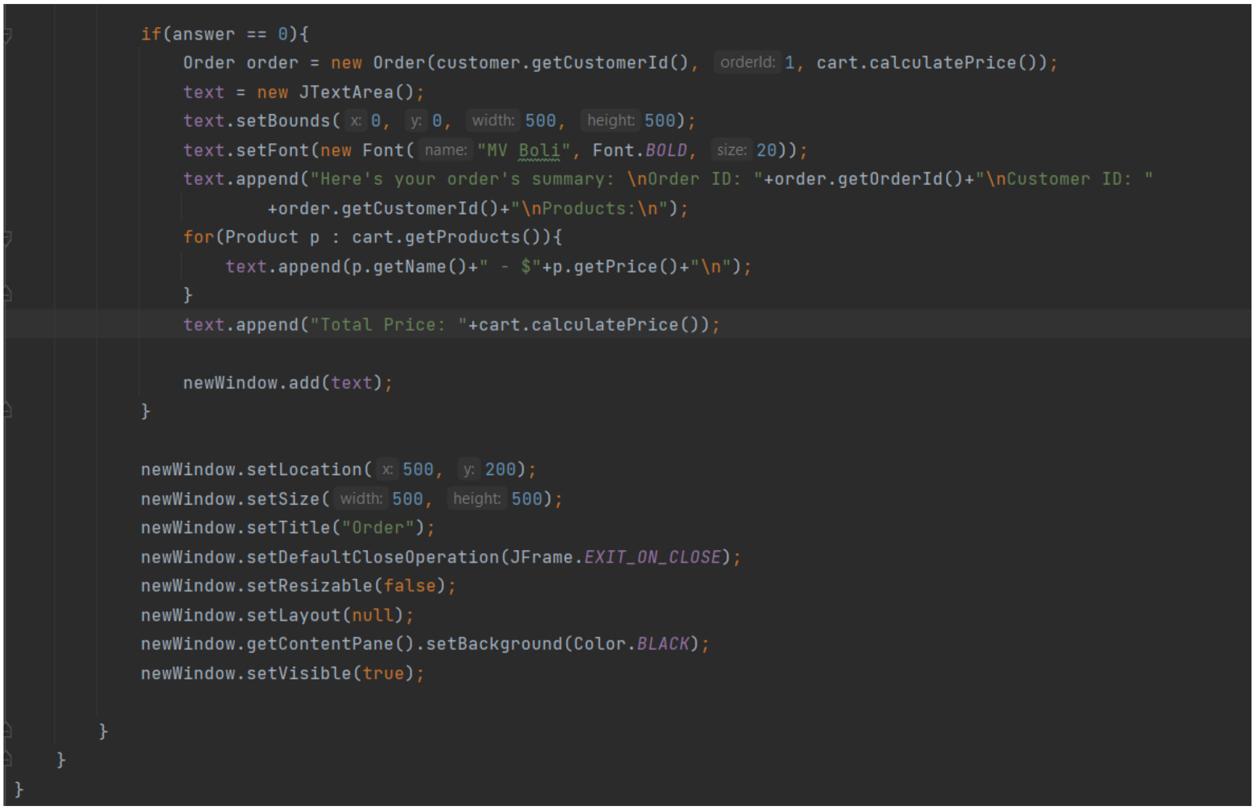
```
JLabel label3 = new JLabel();
label3.setText("Enter Your Address:");
label3.setForeground(Color.white);
label3.setFont(new Font( name: "MV Boli", Font.BOLD,  size: 20));
label3.setBounds( x: 10,  y: 100,  width: 250,  height: 50);

JLabel label4 = new JLabel();
label4.setText("Enter NProducts:");
label4.setForeground(Color.white);
label4.setFont(new Font( name: "MV Boli", Font.BOLD,  size: 20));
label4.setBounds( x: 10,  y: 140,  width: 300,  height: 50);

button = new JButton();
button.setBounds( x: 190,  y: 380,  width: 100,  height: 40);
button.setText("Submit");
button.addActionListener( l: this);
button.setFocusable(false);
button.setFont(new Font( name: "Comic Sans", Font.BOLD,  size: 20));
button.setForeground(Color.BLUE);

textField = new JTextField();
textField.setBounds( x: 260,  y: 30,  width: 200,  height: 30);
textField.setFont(new Font( name: "MV Boli", Font.BOLD,  size: 20));

textField2 = new JTextField();
textField2.setBounds( x: 260,  y: 70,  width: 200,  height: 30);
textField2.setFont(new Font( name: "MV Boli", Font.BOLD,  size: 20));

textField3 = new JTextField();
textField3.setBounds( x: 260,  y: 110,  width: 200,  height: 30);
textField3.setFont(new Font( name: "MV Boli", Font.BOLD,  size: 20));
```



```
        textField4 = new JTextField();
        textField4.setBounds( x: 260,  y: 150,  width: 200,  height: 30);
        textField4.setFont(new Font( name: "MV Boli", Font.BOLD,  size: 20));

        this.setLocation( x: 500,  y: 200);
        this.setSize( width: 500,  height: 500);
        this.setTitle("GUI");
        this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        this.setResizable(false);
        this.setLayout(null);
        this.getContentPane().setBackground(Color.BLACK);
        this.setVisible(true);

        this.add(label);
        this.add(label2);
        this.add(label3);
        this.add(label4);
        this.add(textField);
        this.add(textField2);
        this.add(textField3);
        this.add(textField4);
        this.add(button);
    }

    @Override
    public void actionPerformed(ActionEvent e) {
        if(e.getSource()==button){
            String id;
            String name;
            String price;
            this.dispose();
            JFrame newWindow = new JFrame();
```

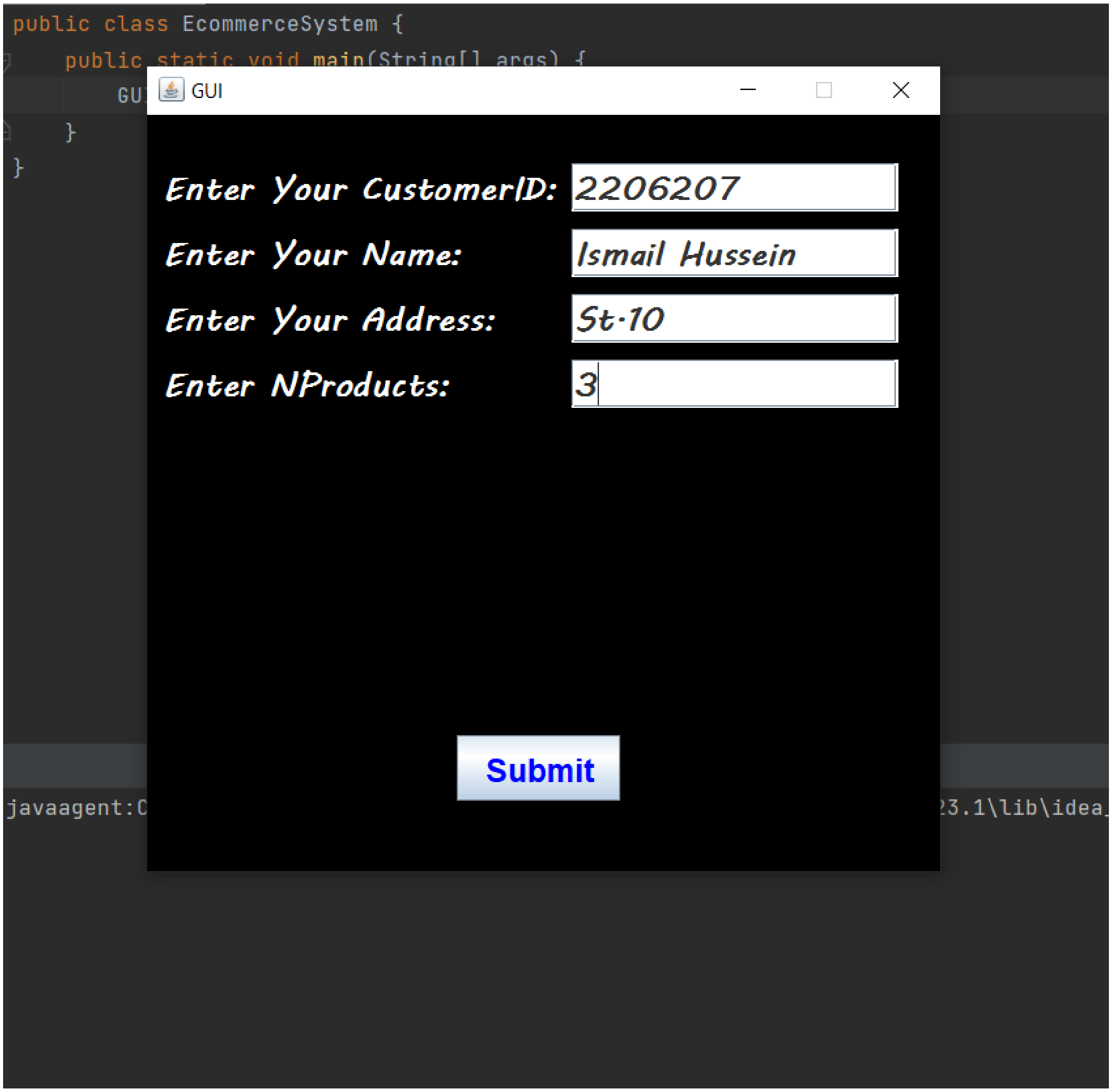


```
Customer customer = new Customer(Integer.parseInt(textField.getText()), textField2.getText(),
        textField3.getText());

Cart cart = new Cart(Integer.parseInt(textField.getText()), Integer.parseInt(textField4.getText()));

for(int i = 0; i < Integer.parseInt(textField4.getText()); i++){
    name = JOptionPane.showInputDialog("Product Name (smartphone - T-shirt - OOP - else): ");
    if(name.equals("smartphone")){
        ElectronicProduct electronicProduct = new ElectronicProduct( id: 1,  name: "smartphone",  price: 599.9F,
                 brand: "Samsung",  warrantyPeriod: 1);
        cart.addProduct(electronicProduct);
    }else if(name.equals("T-shirt")){
        ClothingProduct clothingProduct = new ClothingProduct( id: 2,  name: "T-shirt",  price: 19.99F,  size: "Medium",
                 fabric: "Cotton");
        cart.addProduct(clothingProduct);
    }else if(name.equals("OOP")){
        BookProduct bookProduct = new BookProduct( id: 3,  name: "OOP",  price: 39.99F,  author: "O'Reilly",
                 publisher: "X Publications");
        cart.addProduct(bookProduct);
    }else{
        name = JOptionPane.showInputDialog("Product Name: ");
        id = JOptionPane.showInputDialog("Product ID: ");
        price = JOptionPane.showInputDialog("Product Price: ");

        Product p = new Product(Integer.parseInt(id), name, Float.parseFloat(price));
        cart.addProduct(p);
    }

}

int answer = JOptionPane.showConfirmDialog( parentComponent: null,
         message: "Do you want to place an order for the products in the cart? ",  title: "Answer",
        JOptionPane.YES_NO_OPTION);
```



```
            if(answer == 0){
                Order order = new Order(customer.getCustomerId(),  orderId: 1, cart.calculatePrice());
                text = new JTextArea();
                text.setBounds( x: 0,  y: 0,  width: 500,  height: 500);
                text.setFont(new Font( name: "MV Boli", Font.BOLD,  size: 20));
                text.append("Here's your order's summary: \nOrder ID: "+order.getOrderId()+"\nCustomer ID: "
                        +order.getCustomerId()+"\nProducts:\n");
                for(Product p : cart.getProducts()){
                    text.append(p.getName()+" - $"+p.getPrice()+"\n");
                }
                text.append("Total Price: "+cart.calculatePrice());

                newWindow.add(text);
            }

            newWindow.setLocation( x: 500,  y: 200);
            newWindow.setSize( width: 500,  height: 500);
            newWindow.setTitle("Order");
            newWindow.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
            newWindow.setResizable(false);
            newWindow.setLayout(null);
            newWindow.getContentPane().setBackground(Color.BLACK);
            newWindow.setVisible(true);

        }
    }
}
```

Output



```
public class EcommerceSystem {
    public static void main(String[] args) {
        GU
    }
}
```

```
javaagent:C                                                   23.1\lib\idea_
```

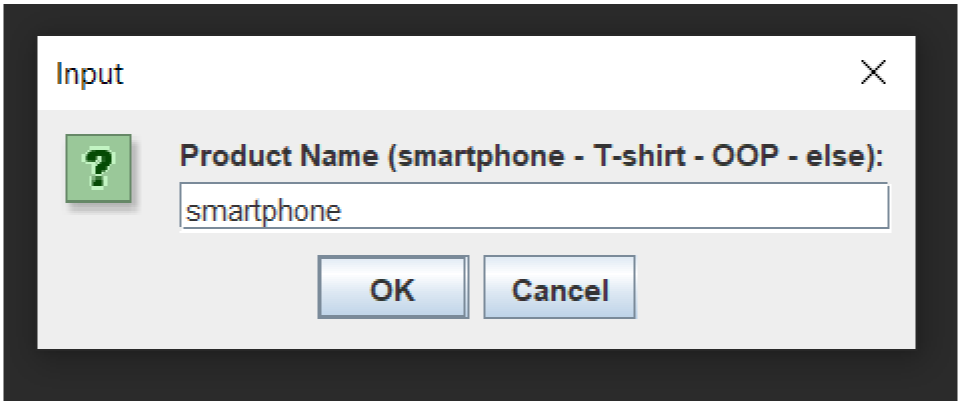
GUI

Enter Your CustomerID: 2206207

Enter Your Name: Ismail Hussein

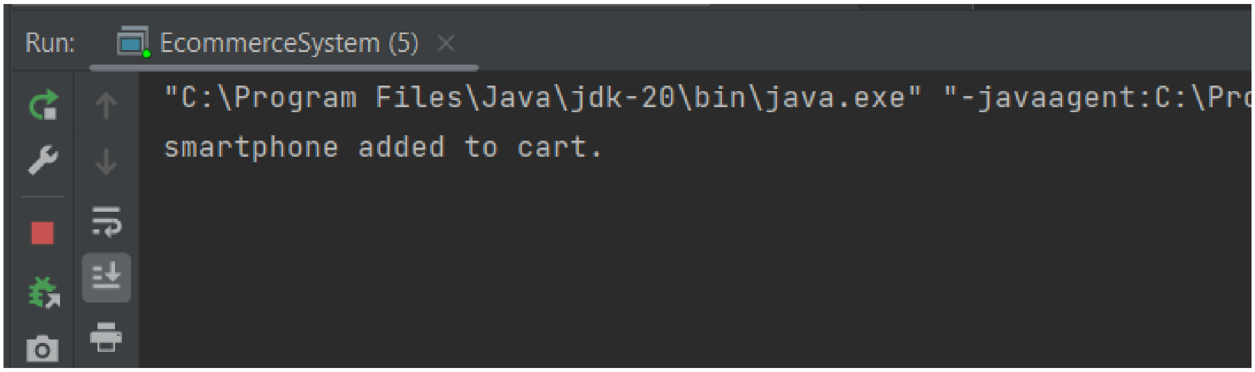
Enter Your Address: St-10

Enter NProducts: 3

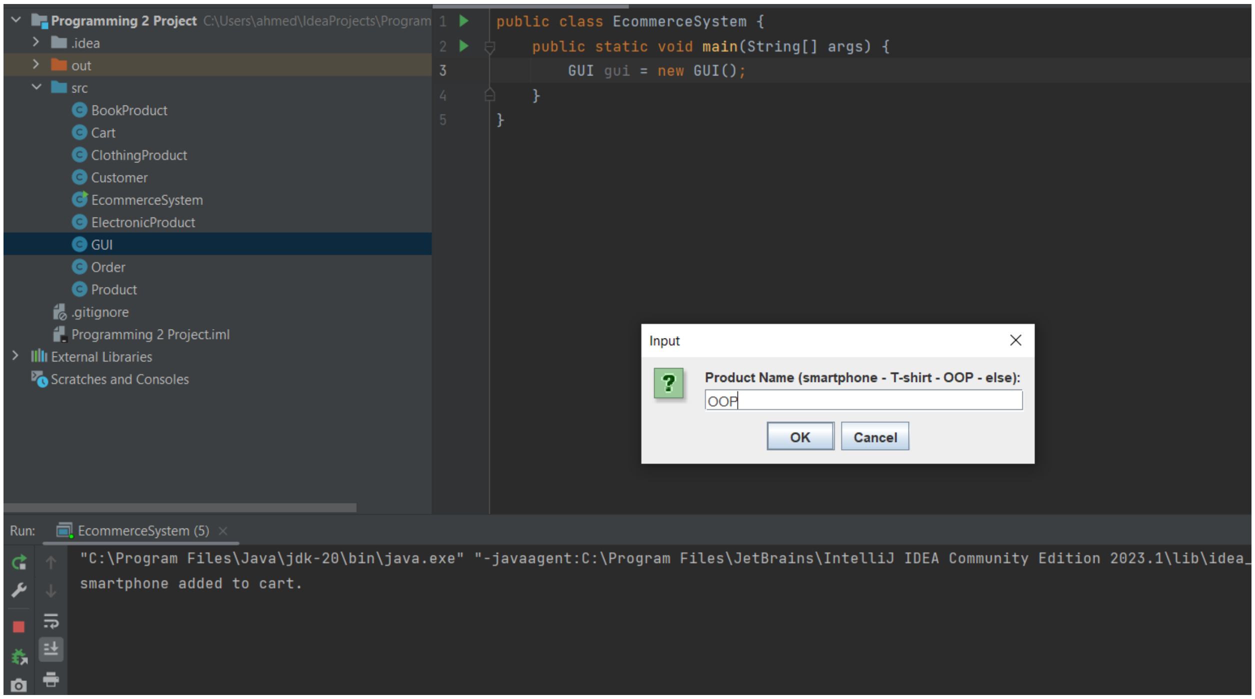


Input

Product Name (smartphone - T-shirt - OOP - else): smartphone



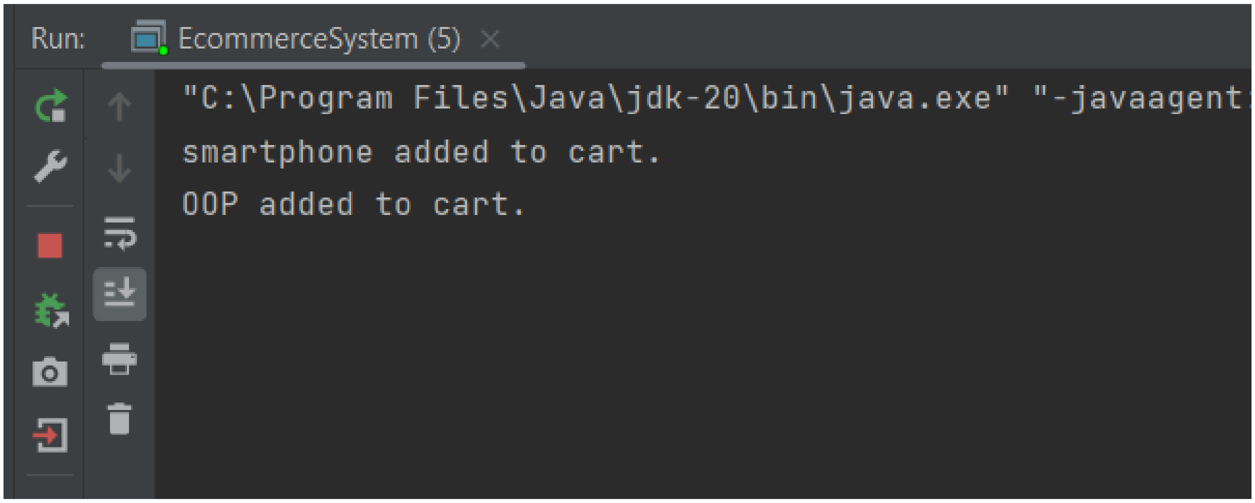
```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Pro
smartphone added to cart.
```



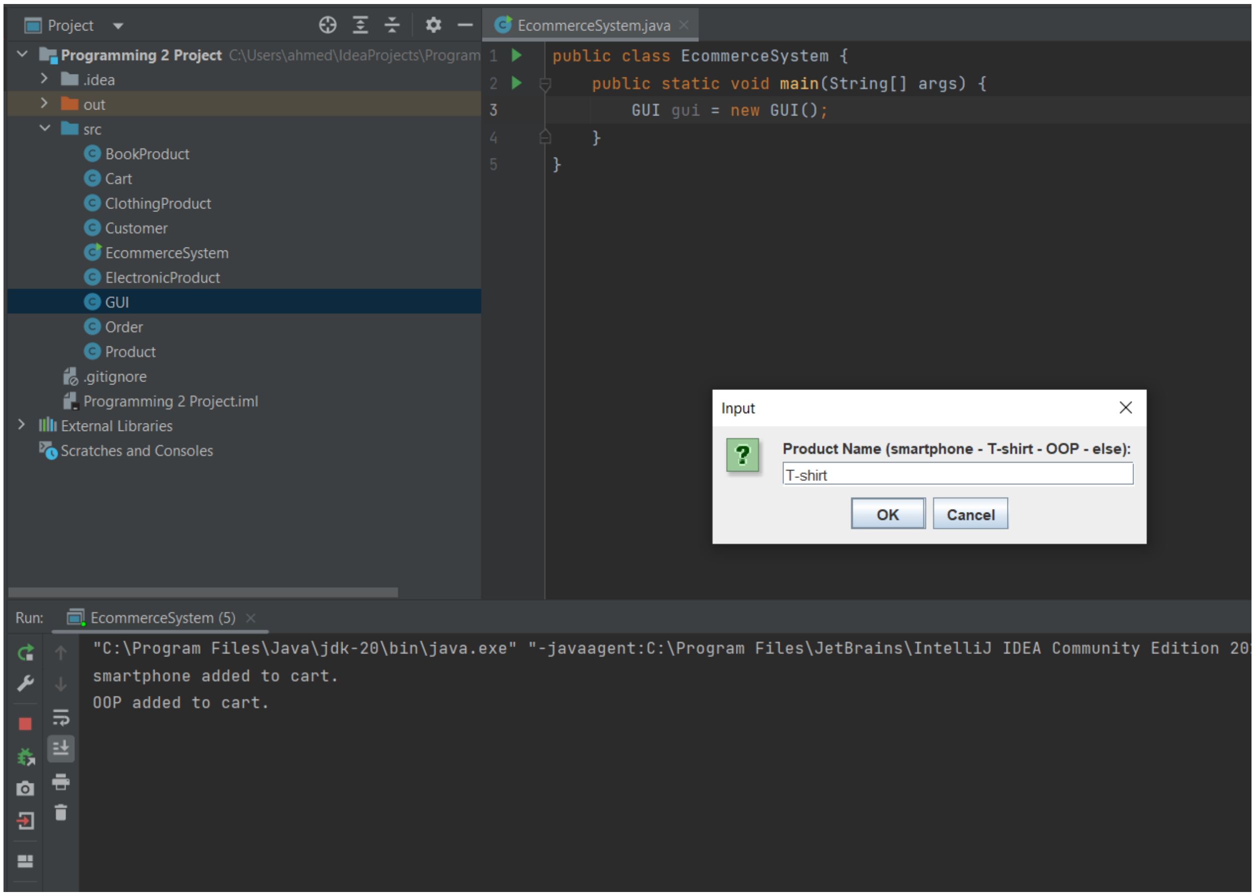
```java
public class EcommerceSystem {
    public static void main(String[] args) {
        GUI gui = new GUI();
    }
}
```

Product Name (smartphone - T-shirt - OOP - else): OOP

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023.1\lib\idea_
smartphone added to cart.
```



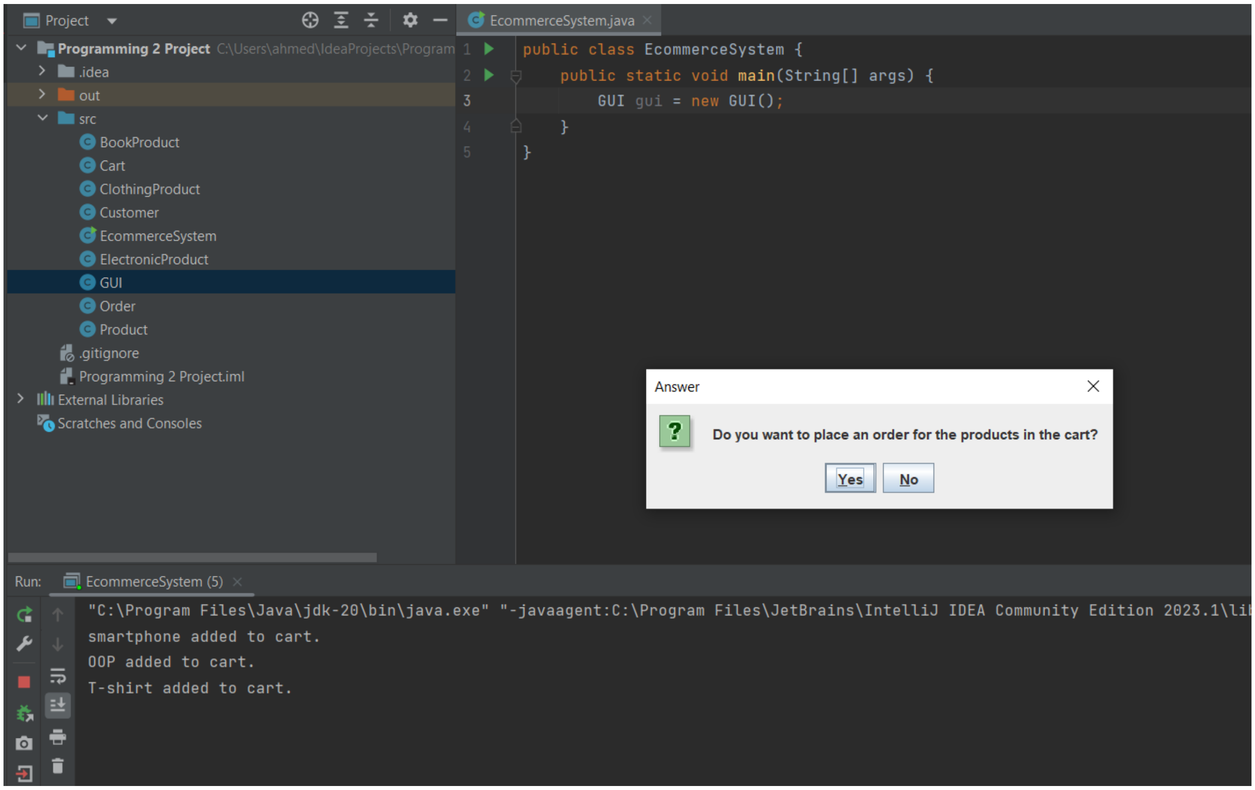
```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:
smartphone added to cart.
OOP added to cart.
```



```java
public class EcommerceSystem {
    public static void main(String[] args) {
        GUI gui = new GUI();
    }
}
```

Product Name (smartphone - T-shirt - OOP - else): T-shirt

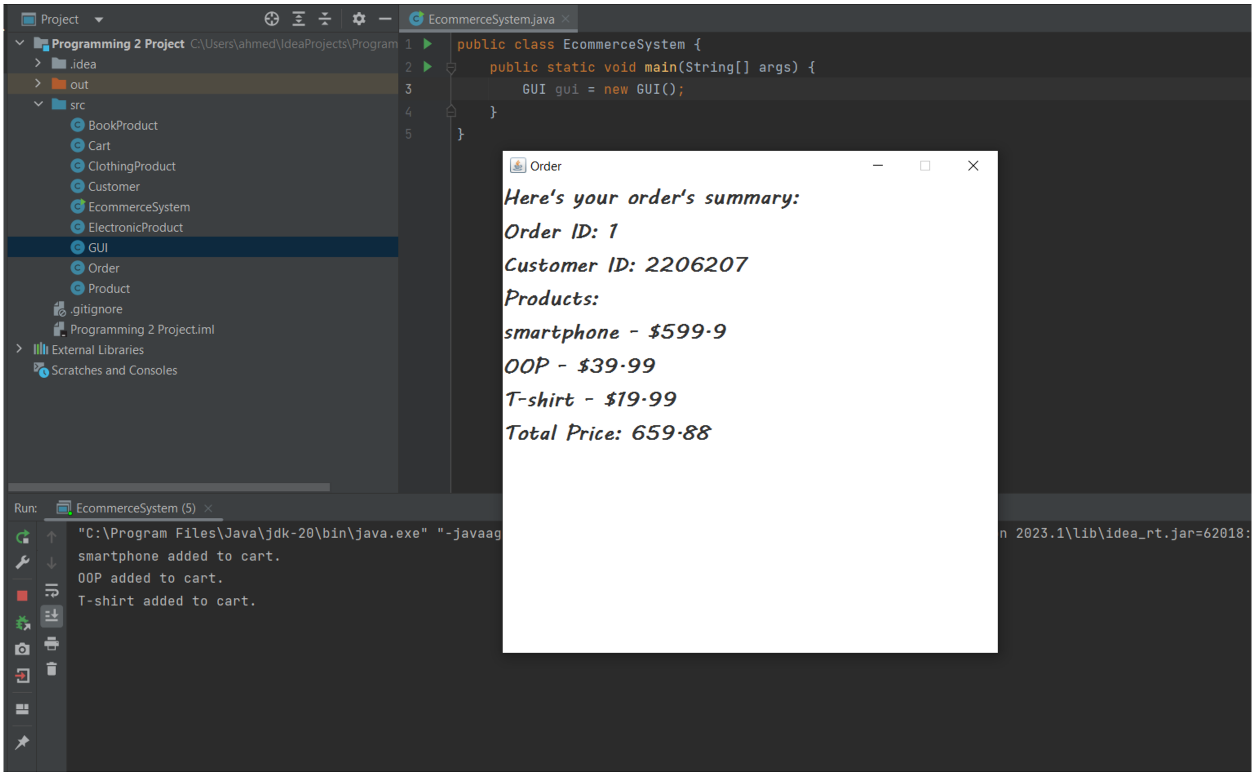
```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 20
smartphone added to cart.
OOP added to cart.
```



```java
public class EcommerceSystem {
    public static void main(String[] args) {
        GUI gui = new GUI();
    }
}
```

Do you want to place an order for the products in the cart?

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023.1\li
smartphone added to cart.
OOP added to cart.
T-shirt added to cart.
```



```
public class EcommerceSystem {
    public static void main(String[] args) {
        GUI gui = new GUI();
    }
}
```

Order

Here's your order's summary:

Order ID: 1

Customer ID: 2206207

Products:

smartphone - $599.9

OOP - $39.99

T-shirt - $19.99

Total Price: 659.88

```
"C:\Program Files\Java\jdk-20\bin\java.exe" "-javaag                                      n 2023.1\lib\idea_rt.jar=62018:
smartphone added to cart.
OOP added to cart.
T-shirt added to cart.
```