

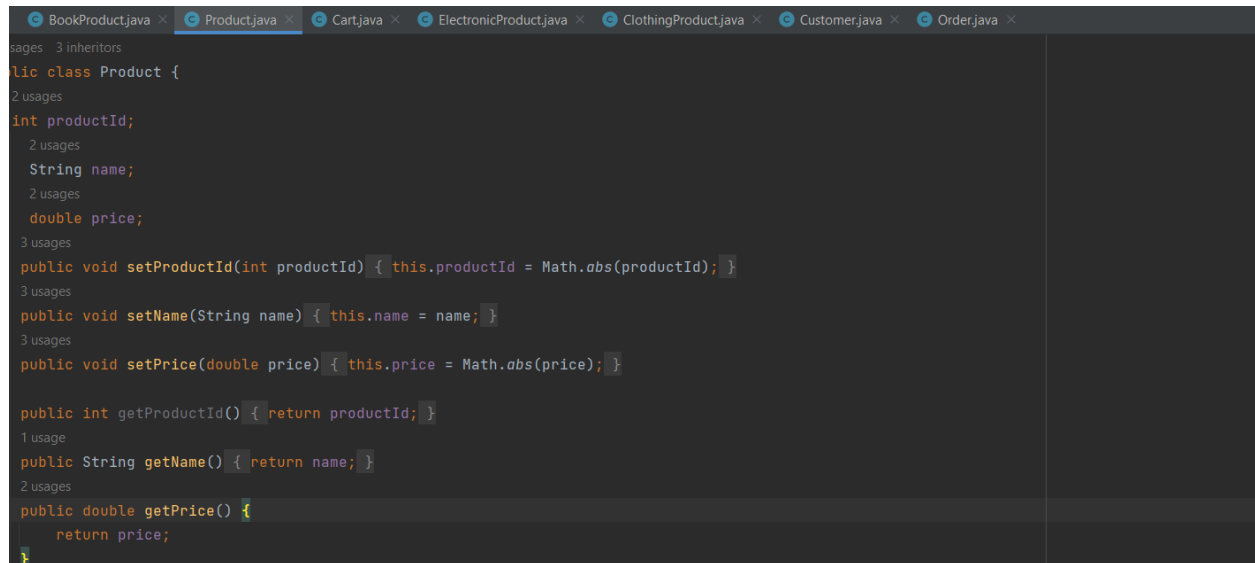
بسم الله الرحمن الرحيم

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First Class product

ده اول كلاس خالص ده اللي هنعمله انه ريت للكلاسيك الثانية زي الالكترونيك برودكت و البوك برودكت و كلو ثينج برودكت



```
BookProduct.java × Product.java × Cart.java × ElectronicProduct.java × ClothingProduct.java × Customer.java × Order.java ×
sages 3 inheritors
public class Product {
    2 usages
    int productId;
    2 usages
    String name;
    2 usages
    double price;
    3 usages
    public void setProductId(int productId) { this.productId = Math.abs(productId); }
    3 usages
    public void setName(String name) { this.name = name; }
    3 usages
    public void setPrice(double price) { this.price = Math.abs(price); }

    public int getProductId() { return productId; }
    1 usage
    public String getName() { return name; }
    2 usages
    public double getPrice() {
        return price;
    }
}
```

Class ElectronicProduct

```
src > ElectronicProduct / warrantyPeriod
java × BookProduct.java × Product.java × Cart.java × ElectronicProduct.java × ClothingProduct.java × Customer.java × Order.java ×
2 usages
public class ElectronicProduct extends Product{
    2 usages
    String brand;
    2 usages
    int warrantyPeriod;
    1 usage
    public void setBrand(String brand) {
        this.brand = brand;
    }
    1 usage
    public void setWarrantyPeriod(int warrantyPeriod) {
        this.warrantyPeriod = Math.abs(warrantyPeriod);
    }
    public String getBrand() {
        return brand;
    }
    public int getWarrantyPeriod() {
        return warrantyPeriod;
    }
}
```

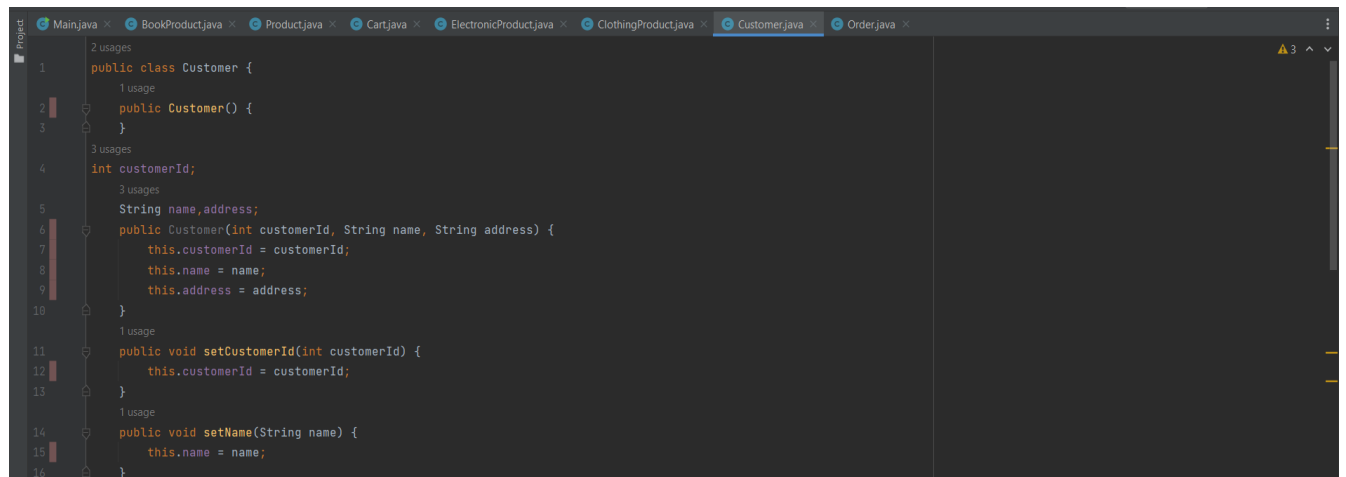
Class ClothingProduct

```
Main.java × BookProduct.java × Product.java × Cart.java × ElectronicProduct.java × ClothingProduct.java × Customer.java × Order.java ×
1 2 usages
public class ClothingProduct extends Product{
    2 usages
    String size,fabric;
    1 usage
    3 public void setSize(String size) {
    4     this.size = size;
    5 }
    1 usage
    6 public void setFabric(String fabric) {
    7     this.fabric = fabric;
    8 }
    9
    10 public String getSize() {
    11     return size;
    12 }
    13
    14 public String getFabric() {
    15     return fabric;
    16 }
    17 }
```

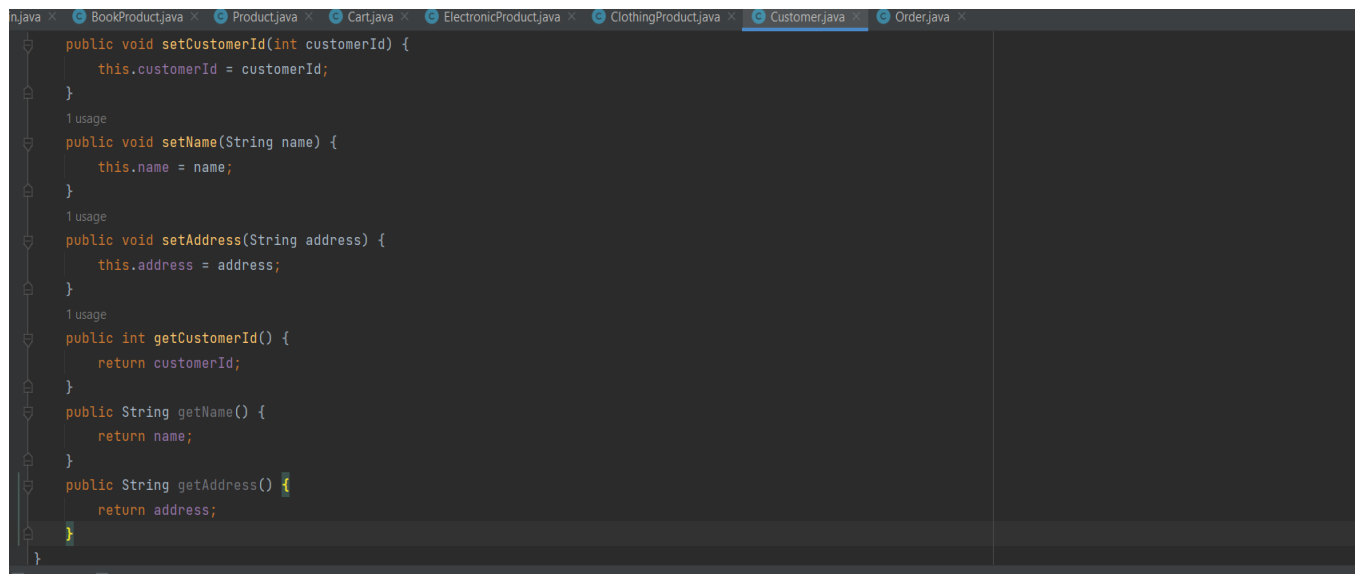
Class BookProduct

```
java × BookProduct.java × Product.java × Cart.java × ElectronicProduct.java × ClothingProduct.java × Customer.java × Order.java ×
2 usages
public class ClothingProduct extends Product{
    2 usages
    String size,fabric;
    1 usage
    public void setSize(String size) {
        this.size = size;
    }
    1 usage
    public void setFabric(String fabric) {
        this.fabric = fabric;
    }
    public String getSize() {
        return size;
    }
    public String getFabric() {
        return fabric;
    }
}
```

Class Customer



```
1 2 usages
2 public class Customer {
3     1 usage
4     public Customer() {
5     }
6     3 usages
7     int customerId;
8     3 usages
9     String name, address;
10    public Customer(int customerId, String name, String address) {
11        this.customerId = customerId;
12        this.name = name;
13        this.address = address;
14    }
15    1 usage
16    public void setCustomerId(int customerId) {
17        this.customerId = customerId;
18    }
19    1 usage
20    public void setName(String name) {
21        this.name = name;
22    }
23 }
```



```
in.java × BookProduct.java × Product.java × Cart.java × ElectronicProduct.java × ClothingProduct.java × Customer.java × Order.java ×
1 public void setCustomerId(int customerId) {
2     this.customerId = customerId;
3 }
4 1 usage
5 public void setName(String name) {
6     this.name = name;
7 }
8 1 usage
9 public void setAddress(String address) {
10    this.address = address;
11 }
12 1 usage
13 public int getCustomerId() {
14    return customerId;
15 }
16 public String getName() {
17    return name;
18 }
19 public String getAddress() {
20    return address;
21 }
22 }
```

Class Cart

```
public class Cart {
    2 usages
    int customerId;
    3 usages
    int nProducts;
    8 usages
    Product[] products;
    public void setCustomerId(int customerId) {
        this.customerId = Math.abs(customerId);
    }
    public int getCustomerId() {
        return customerId;
    }
    1 usage
    public void setNProducts(int nProducts) {
        this.nProducts = Math.abs(nProducts);
        this.products = new Product[this.nProducts];
    }
    public int getNProducts() {
        return nProducts;
    }
}
```

```

    public void setProducts(Product[] products) {
        this.products = products;
    }
    1 usage
    public Product[] getProducts() {
        return products;
    }
    3 usages
    public void AddProduct(Product product,int index){
        if(index>=0 && index<products.length ){
            products[index] = product;
        }
        else{
            System.out.println("Invalid Index");
        }
    }
    public void removeProduct(int index) {
        if (index >= 0 && index < products.length) {
            products[index] = null;
        }
    }
}
```

```

    }
    public void removeProduct(int index) {
        if (index >= 0 && index < products.length) {
            products[index] = null;
        }
    }
    2 usages
    public double CalculatePrice(){
        double price = 0;
        for (Product product : products)
            if (product != null)
                price += product.getPrice();
        return price;
    }
    public void placeOrder() { System.out.println("Order placed successfully."); }
}
```

Class Order

```
import javax.swing.*;

2 usages
public class Order {
    2 usages
    int customerId;
    2 usages
    int orderId;
    4 usages
    Product[] products;
    2 usages
    double totalPrice;
    String orderDetails;
    1 usage
    public void setProducts(Product[] products) {
        this.products = products;
    }
    1 usage
    public Order(int customerId, int orderId, double totalPrice) {
        this.orderId = Math.abs(orderId);
        this.customerId = Math.abs(customerId);
        this.totalPrice = Math.abs(totalPrice);
    }
}
```

```
1 usage
public Order(int customerId, int orderId, double totalPrice) {
    this.orderId = Math.abs(orderId);
    this.customerId = Math.abs(customerId);
    this.totalPrice = Math.abs(totalPrice);
}

1 usage
public void OrderInfo() {
    String message = "Here's your order summary:\n" +
        "Order ID: " + orderId + "\n" +
        "Customer ID: " + customerId + "\n" +
        "Products:\n";
    For (int i = 0; i < products.length; i++) {
        message += products[i].getName() + " - $" + products[i].getPrice() + "\n";
    }
    message += "\nTotal Price: $" + totalPrice;
    JOptionPane.showMessageDialog( parentComponent: null, message);
}
}
```

With gui

Java Swing(JOptionPane)

Main Class

```
import javax.swing.*;
import java.util.Scanner;
public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        ElectronicProduct e1 = new ElectronicProduct();
        e1.setName("smartphone");
        e1.setProductId(1);
        e1.setPrice(599.99);
        e1.setBrand("Samsung");
        e1.setWarrantyPeriod(1);
        ClothingProduct c1 = new ClothingProduct();
        c1.setName("T-shirt");
        c1.setProductId(2);
        c1.setPrice(19.99);
        c1.setSize("Medium");
        c1.setFabric("Fabric");
        BookProduct b1 = new BookProduct();
        b1.setName("OOP");
        b1.setProductId(3);
        b1.setPrice(39.99);
```

```
        b1.setPrice(39.99);
        b1.setAuthor("O'Reilly");
        b1.setPublisher("X Publications");
        Customer c2 = new Customer();

        int id = Integer.parseInt(JOptionPane.showInputDialog("Enter Your ID: "));
        c2.setCustomerId(id);

        String name = JOptionPane.showInputDialog("Enter your Name:");
        c2.setName(name);

        String address = JOptionPane.showInputDialog("Enter your Address:");
        c2.setAddress(address);
        Cart cart1 = new Cart();

        int nproducts = Integer.parseInt(JOptionPane.showInputDialog("How many products you want to add to your cart?"));
        cart1.setNProducts(nproducts);
        int x;
        for(int i = 0; i < nproducts; i++){
            switch(x = Integer.parseInt(JOptionPane.showInputDialog("Which Product would you like to add ? 1- Smartphone 2- T-shirt 3- OOP"))){
                case 1:
```

```

switch(x = Integer.parseInt(JOptionPane.showInputDialog("Which Product would you like to add ? 1- Smartphone 2- T-shirt
    case 1:
        cart1.AddProduct(e1,1);
        break;
    case 2:

        cart1.AddProduct(c1,1);
        break;
    case 3:
        cart1.AddProduct(b1,1);
        break;
    default:
        JOptionPane.showMessageDialog( parentComponent: null, message: "Invalid");
        break;
}
}

```

```

Order o1 = new Order(c2.getCustomerId(), orderId: 1, cart1.CalculatePrice());
o1.setProducts(cart1.getProducts());

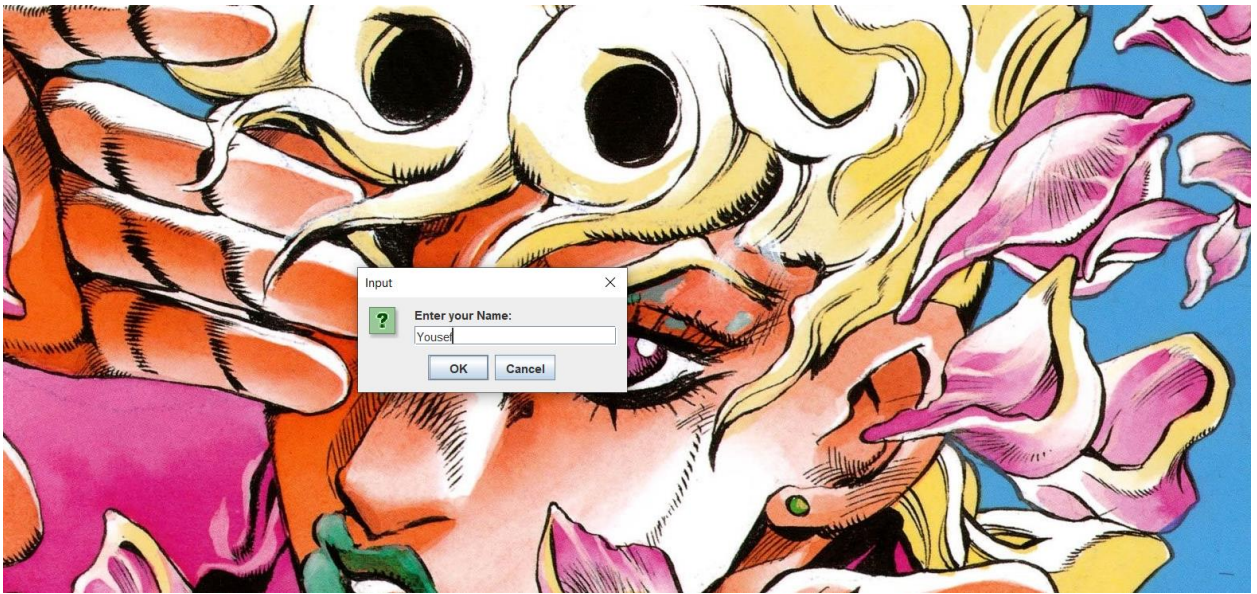
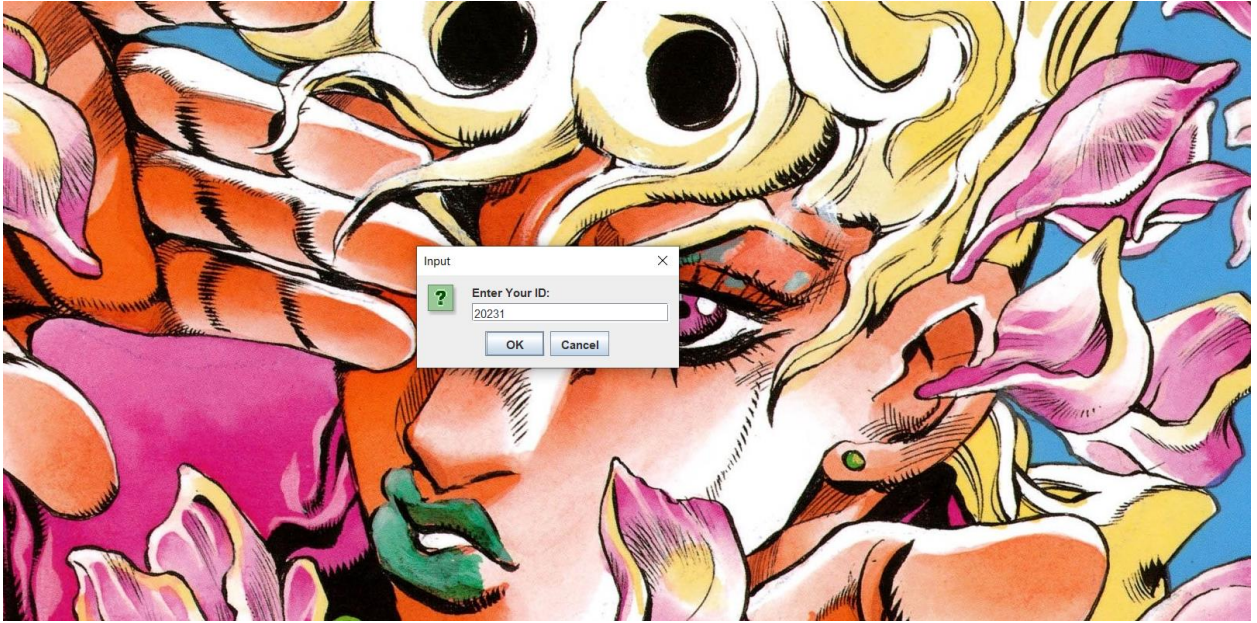
int accept = Integer.parseInt(JOptionPane.showInputDialog("Your order total is"+cart1.CalculatePrice()+"Would You like to place order ? 1-Yes 2- No"));
switch(accept){
    case 1:
        o1.OrderInfo();
        break;
    case 2:
        JOptionPane.showMessageDialog( parentComponent: null, message: "Thank you!!");
        break;
}

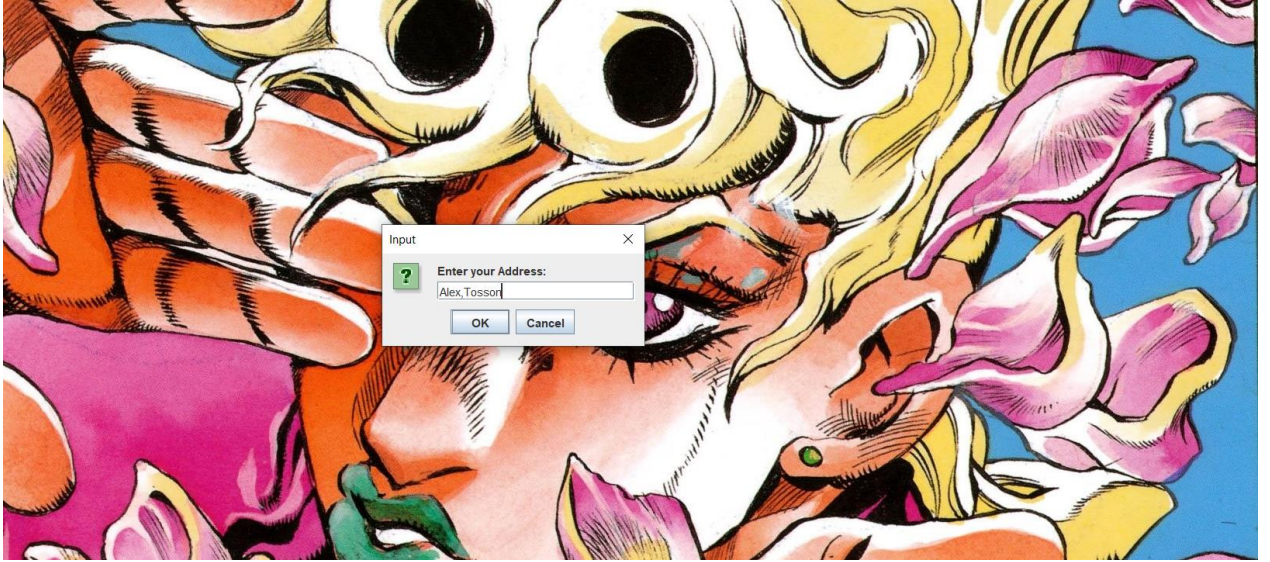
}

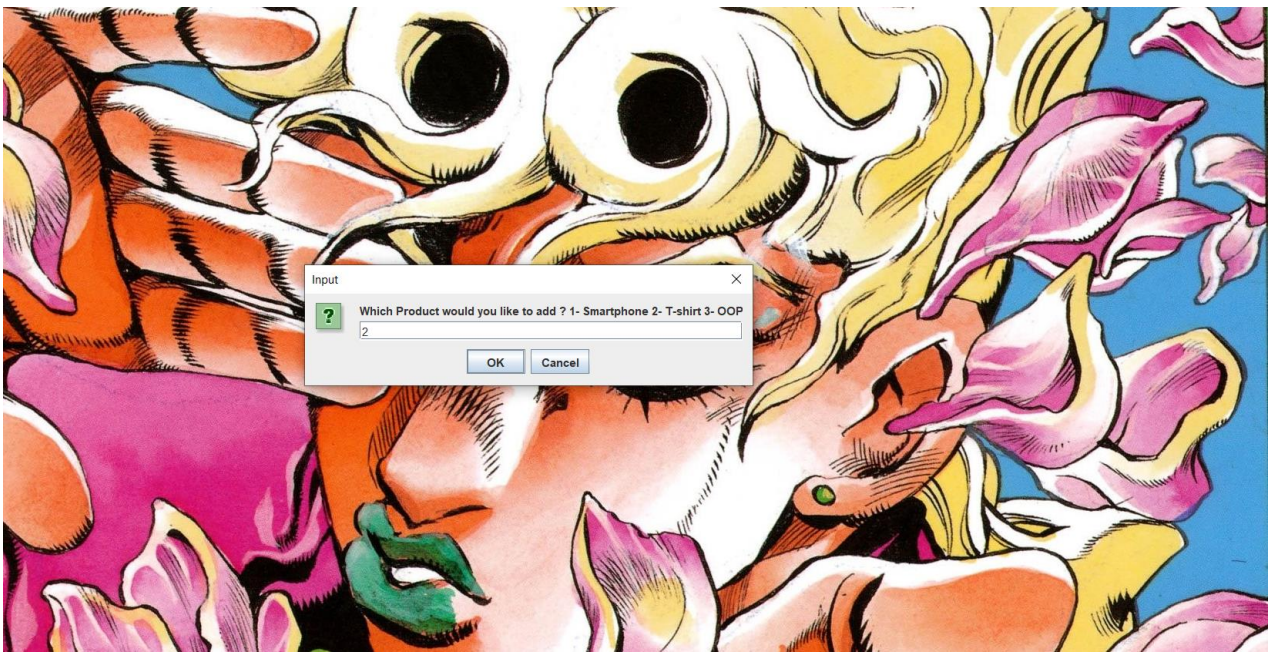
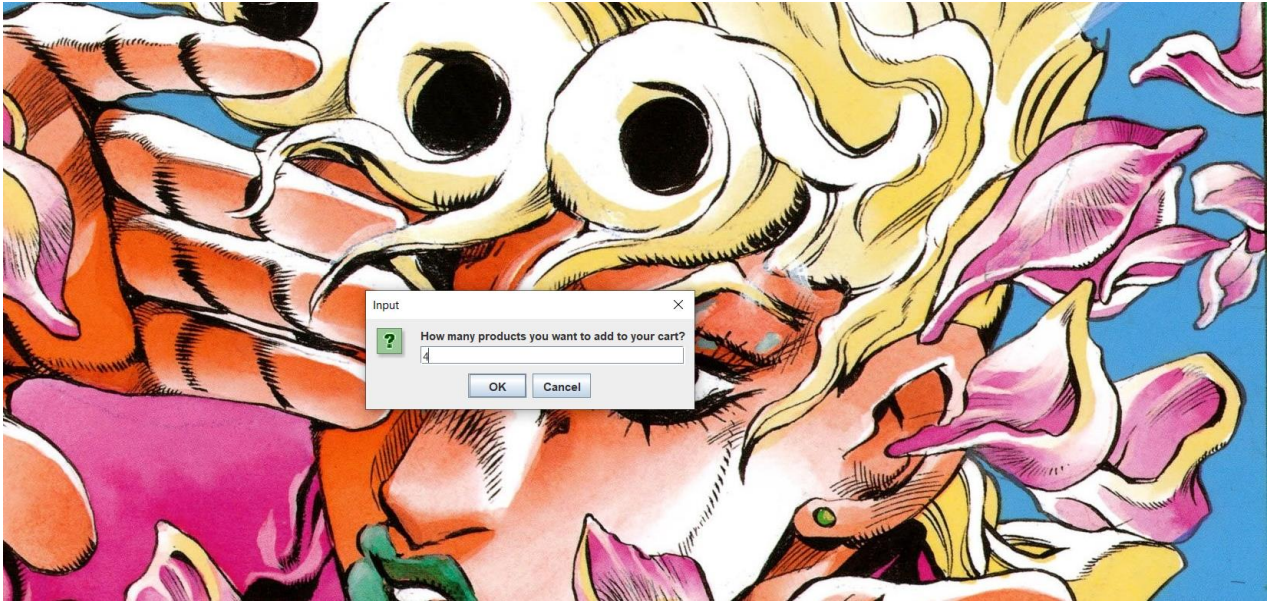
}

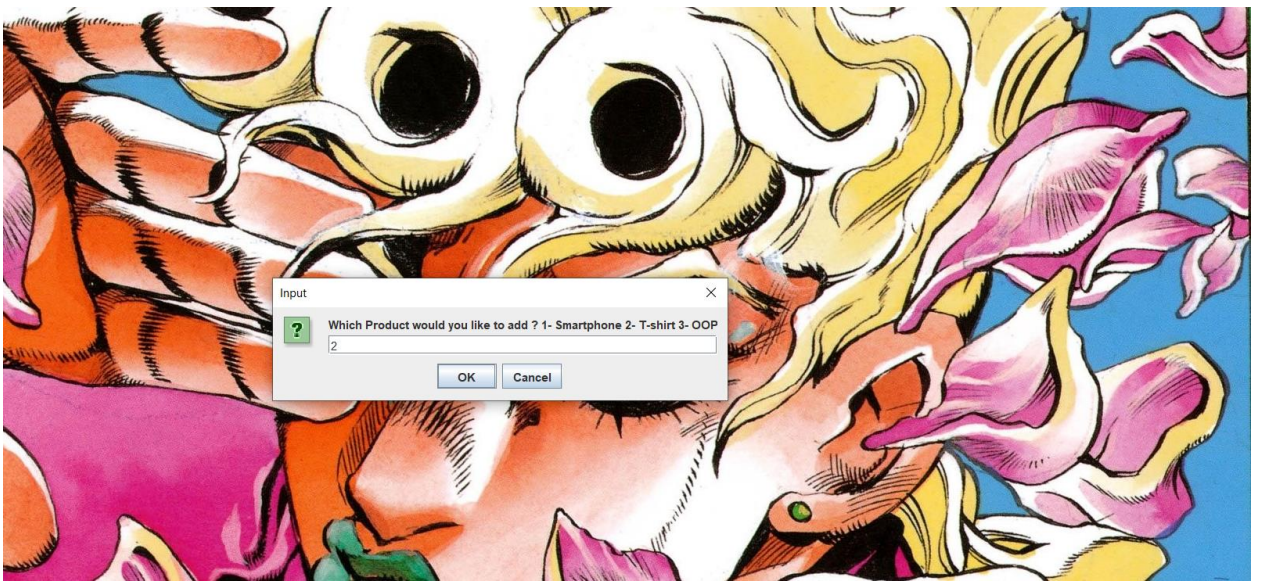
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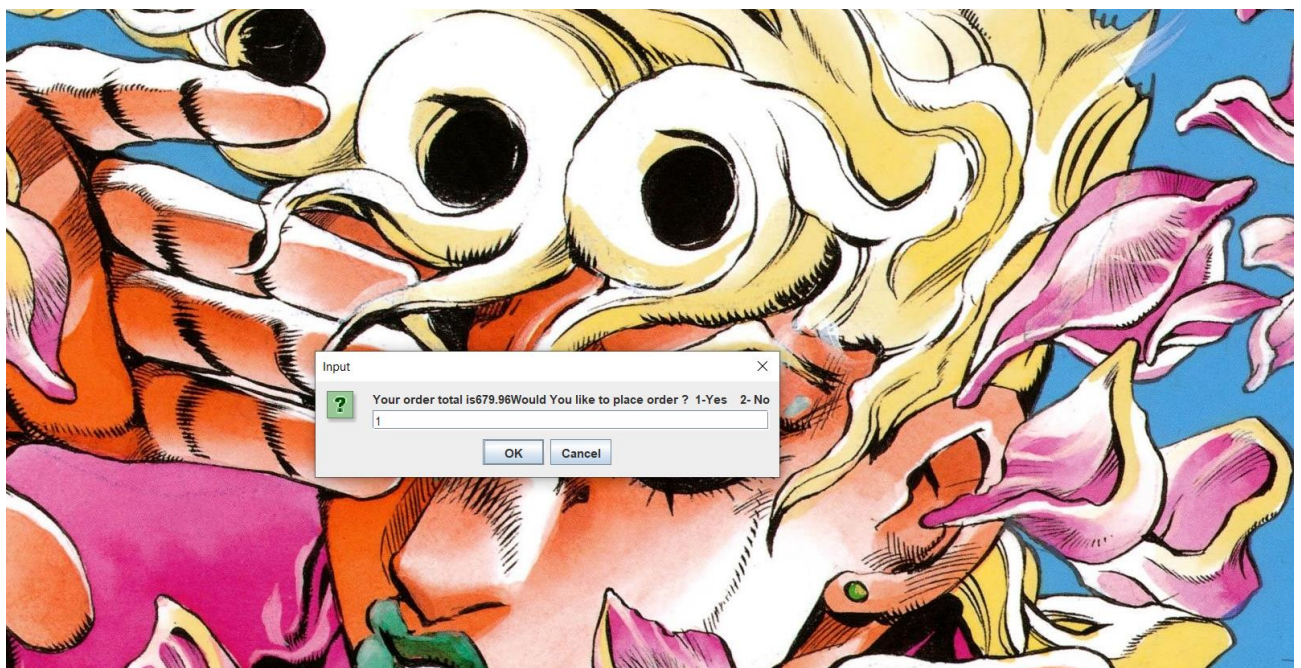
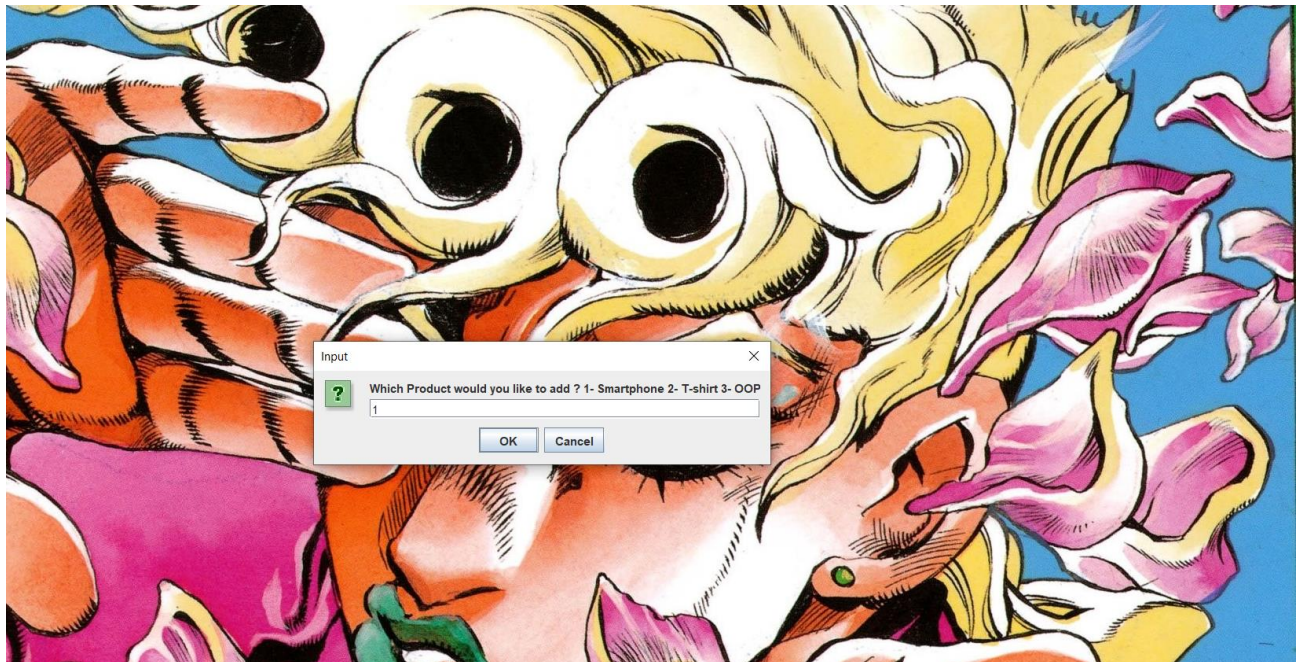
OUTPUT

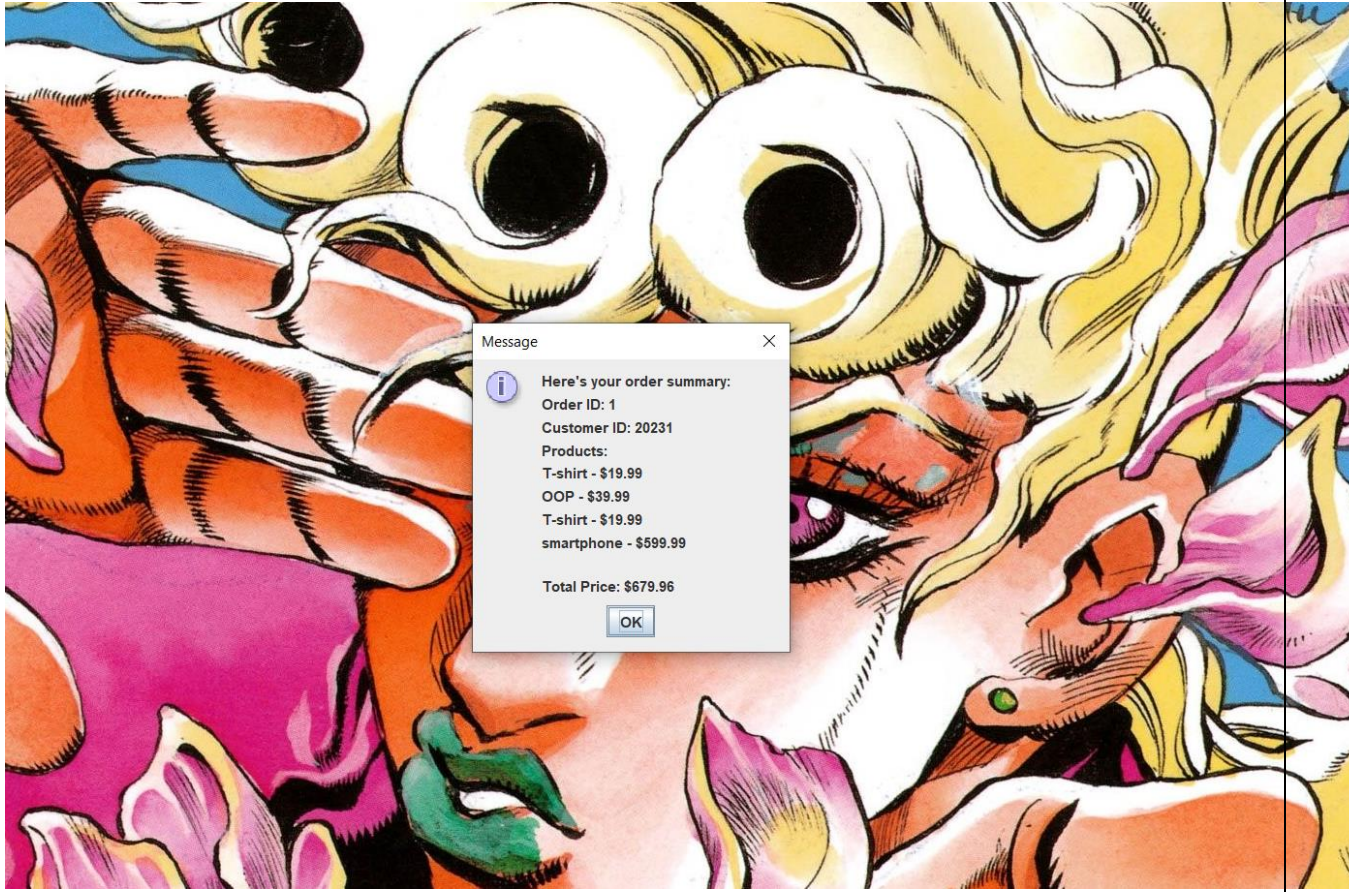












Message

i Here's your order summary:
Order ID: 1
Customer ID: 20231
Products:
T-shirt - \$19.99
OOP - \$39.99
T-shirt - \$19.99
smartphone - \$599.99

Total Price: \$679.96