#EcommerceSystem Project

#Classes

1.Product

```
public class Product {
  protected int productId;
  protected String name;
  protected float price;

  public int getProductId() {
    return productId;
  }

  public void setProductId(int productId) {
    if (productId > 0)
      this.productId = productId;
    else
      this.productId = Math.abs(productId);
  }

  public String getName() {
    return name;
  }

  public void setName(String name) {
    this.name = name;
  }

  public float getPrice() {
    return price;
  }

  public void setPrice(float price) {
    if (price > 0)
      this.price = price;
    else
      this.price = Math.abs(price);
  }

}
```

2.ElectonicProduct

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

    public String getBrand() {
        return brand;
    }

    public void setBrand(String brand) {
        this.brand = brand;
    }

    public int getWarrantyPeriod() {
        return warrantyPeriod;
    }

    public void setWarrantyPeriod(int warrantyPeriod) {
        if (warrantyPeriod > 0)
            this.warrantyPeriod = warrantyPeriod;
        else
            this.warrantyPeriod = Math.abs(warrantyPeriod);
    }
}
```

3.ClothingPoduct

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

    public String getSize() {
        return size;
    }

    public void setSize(String size) {
        this.size = size;
    }

    public String getFabric() {
        return fabric;
    }

    public void setFabric(String fabric) {
        this.fabric = fabric;
    }
}
```

4.BookProduct

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

    public String getAuthor() {
        return author;
    }

    public void setAuthor(String author) {
        this.author = author;
    }

    public String getPublisher() {
        return publisher;
    }

    public void setPublisher(String publisher) {
        this.publisher = publisher;
    }

}
```

5.Costumer

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

    public int getCustomerId() {
        return customerId;
    }

    public void setCustomerId(int customerId) {
        if (customerId > 0)
            this.customerId = customerId;
        else
            this.customerId = Math.abs(customerId);
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String getAddress() {
        return address;
    }

    public void setAddress(String address) {
        this.address = address;
    }

}
```

6.Cart

```
public class Cart {
    private int customerId;
    private int nProducts;
    private Product[] products;

    public int getCustomerId() {
        return customerId;
    }

    public void setCustomerId(int customerId) {
        if (customerId > 0)
            this.customerId = customerId;
        else
            this.customerId = Math.abs(customerId);
    }

    public int getnProducts() {
        return nProducts;
    }

    public void setnProducts(int nProducts) {
        if (nProducts > 0) {
            this.nProducts = nProducts;
            this.products = new Product[nProducts];

        } else
            this.nProducts = Math.abs(nProducts);
        this.products = new Product[nProducts];

    }

    public void addProduct(Product product, int current) {
        if (current >= 0 && current < nProducts) {
            products[current] = product;
        } else {
            System.out.println("Invalid index.");
        }
    }

    public void removeProduct(int current) {
        if (current >= 0 && current < nProducts) {
            for (int i = current; i < nProducts - 1; i++) {
                products[i] = products[i + 1];
```

```
            }
            products[nProducts - 1] = null;
            nProducts--;
        } else {
            System.out.println("Invalid index.");
        }
    }

    public float calculateTotalPrice() {
        float totalPrice = 0;
        for (Product product : products) {
            if (product != null) {
                totalPrice += product.getPrice();
            }
        }
        return totalPrice;
    }

    public Order placeOrder(int orderId) {
        Order order = new Order();
        order.setCustomerId(customerId);
        order.setOrderId(orderId);
        order.setProducts(products);
        order.setTotalPrice(calculateTotalPrice());
        return order;

    }
}
```

7.Order

```
public class Order {
    private int customerId;
    private int orderId;
    private Product[] products;
    private float totalPrice;

    public int getCustomerId() {
        return customerId;
    }

    public void setCustomerId(int customerId) {
        if (customerId > 0)
            this.customerId = customerId;
        else
            this.customerId = Math.abs(customerId);
    }

    public int getOrderId() {
        return orderId;
    }

    public void setOrderId(int orderId) {
        if (orderId > 0)
            this.orderId = orderId;
        else
            this.orderId = Math.abs(orderId);
    }

    public Product[] getProducts() {
        return products;
    }

    public void setProducts(Product[] products) {
        this.products = products;
    }

    public float getTotalPrice() {
        return totalPrice;
    }

    public void setTotalPrice(float totalPrice) {
        if (totalPrice > 0)
            this.totalPrice = totalPrice;
```

```
        else
            this.totalPrice = Math.abs(totalPrice);
    }

    public void printOrderInfo() {
        System.out.println("Here is your order summary : ");
        System.out.println("Order ID: " + orderId);
        System.out.println("Customer ID: " + customerId);
        System.out.println("Products:");
        for (Product product : products) {
            System.out.println(" - " + product.getName() + ": $" +
product.getPrice());
        }
        System.out.println("Total Price: $" + totalPrice);

    }

}
```

#Main

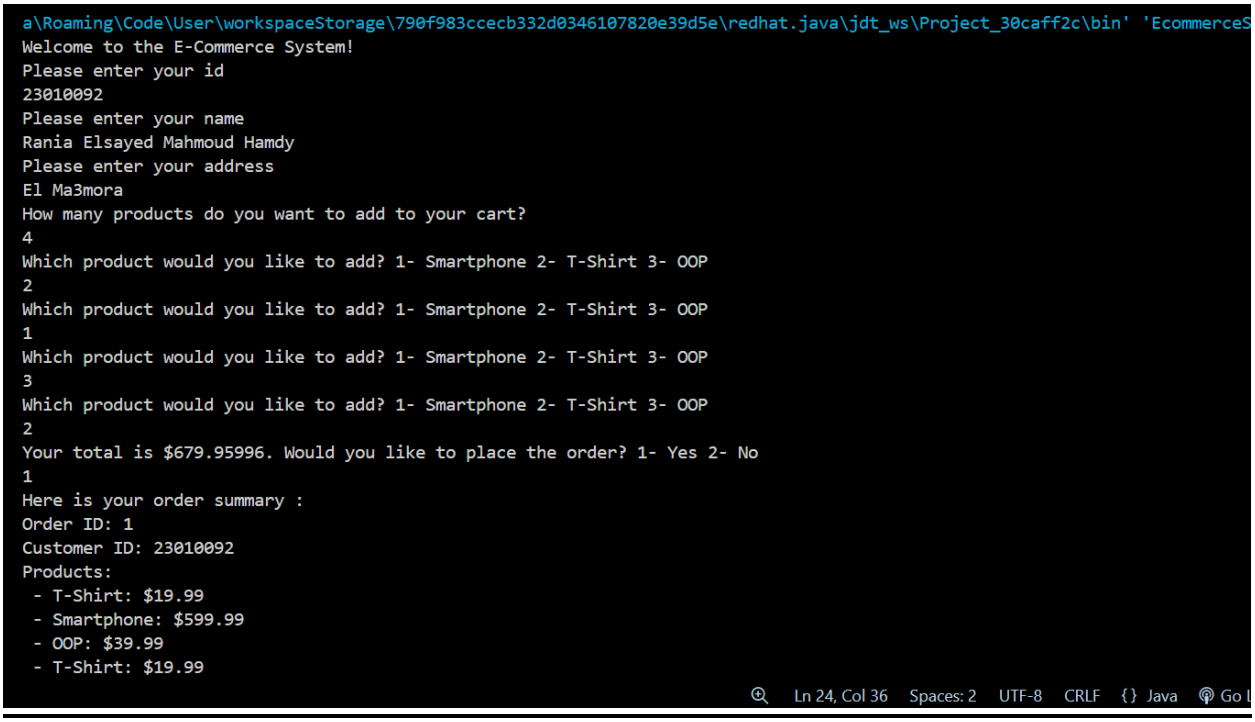
8.EcommerceSystem

```
import java.util.Scanner;

public class EcommerceSystem {
  public static void main(String[] args) {
    try (Scanner input = new Scanner(System.in)) {

      ElectronicProduct electronicProduct = new ElectronicProduct();
      electronicProduct.setName("smartphone");
      electronicProduct.setProductId(1);
      electronicProduct.setPrice(599.9f);
      electronicProduct.setBrand("Samsung");
      electronicProduct.setWarrantyPeriod(1);

      ClothingProduct clothingProduct = new ClothingProduct();
      clothingProduct.setName("T-shirt");
      clothingProduct.setProductId(2);
      clothingProduct.setPrice(19.99f);
      clothingProduct.setSize("Medium");
      clothingProduct.setFabric("Cotton");
```

```
      BookProduct bookProduct = new BookProduct();
      bookProduct.setName("OOP");
      bookProduct.setProductId(3);
      bookProduct.setPrice(39.99f);
      bookProduct.setAuthor("O'Reilly");
      bookProduct.setPublisher("X Publications");

      Customer customer = new Customer();
      System.out.println("Welcome to the E-Commerce System!");
      System.out.println("Please enter your id");
      int customerId = input.nextInt();
      input.nextLine();
      System.out.println("Please enter your name");
      String name = input.next();
      input.nextLine();
      System.out.println("Please enter your address");
      String address = input.next();
      input.nextLine();
      customer.setCustomerId(customerId);
      customer.setName(name);
      customer.setAddress(address);

      System.out.println("How many products do you want to add to your cart?");
      int numProducts = input.nextInt();
      Cart cart = new Cart();
      cart.setCustomerId(customerId);
      cart.setnProducts(numProducts);

      for (int i = 0; i < numProducts; i++) {
        System.out.println("Which product would you like to add? 1- Smartphone 2-
T-Shirt 3- OOP");
        int choice = input.nextInt();
        switch (choice) {
          case 1:
            ElectronicProduct smartphone = new ElectronicProduct();
            smartphone.setName("Smartphone");
            smartphone.setProductId(1);
            smartphone.setPrice(599.99f);
            cart.addProduct(smartphone, i);
            break;
          case 2:
            ClothingProduct tShirt = new ClothingProduct();
            tShirt.setName("T-Shirt");
            tShirt.setProductId(2);
```

```
            tShirt.setPrice(19.99f);
            cart.addProduct(tShirt, i);
            break;
          case 3:
            BookProduct book = new BookProduct();
            book.setName("OOP");
            book.setProductId(3);
            book.setPrice(39.99f);
            cart.addProduct(book, i);
            break;
          default:
            System.out.println("Invalid choice.");
            break;
        }
      }

      float totalPrice = cart.calculateTotalPrice();
      System.out.println("Your total is $" + totalPrice + ". Would you like to
place the order? 1- Yes 2- No");
      int orderChoice = input.nextInt();
      if (orderChoice == 1) {

        Order order = cart.placeOrder(1);

        order.printOrderInfo();
      }

    }

  }
}
```

#Output


a\Roaming\Code\User\workspaceStorage\790f983ccecb332d0346107820e39d5e\redhat.java\jdt_ws\Project_30caff2c\bin' 'EcommerceS
Welcome to the E-Commerce System!
Please enter your id
23010092
Please enter your name
Rania Elsayed Mahmoud Hamdy
Please enter your address
El Ma3mora
How many products do you want to add to your cart?
4
Which product would you like to add? 1- Smartphone 2- T-Shirt 3- OOP
2
Which product would you like to add? 1- Smartphone 2- T-Shirt 3- OOP
1
Which product would you like to add? 1- Smartphone 2- T-Shirt 3- OOP
3
Which product would you like to add? 1- Smartphone 2- T-Shirt 3- OOP
2
Your total is $679.95996. Would you like to place the order? 1- Yes 2- No
1
Here is your order summary :
Order ID: 1
Customer ID: 23010092
Products:
- T-Shirt: $19.99
- Smartphone: $599.99
- OOP: $39.99
- T-Shirt: $19.99
Ln 24, Col 36
Spaces: 2
UTF-8
CRLF
{} Java