```java
import java.util.Scanner;
public class EcommerceSystem {
    static Scanner input = new Scanner(System.in);
    public static void main(String[] args) {
        ElectronicProduct EP = new ElectronicProduct("smart phone", 1,
599.9F, "Samsung", 1);
        ClothingProduct CP = new ClothingProduct("T-Shirt", 2, 19.99F,
"Medium", "Cotton");
        BookProduct BP = new BookProduct("OPP", 3, 39.99F, "O/'Reilly", "X
Publications");
        System.out.println("Welcome to the E-commerce System!");
        System.out.println("Enter your address:");
        String a = input.nextLine();
        System.out.println("Enter your name:");
        String n = input.nextLine();
        System.out.println("Enter your ID:");
        int id = input.nextInt();
        customer MEGA = new customer(id, n, a);
        System.out.println("How many products do you want to add to your
cart?");
        int numb = input.nextInt();
        Product[] products = new Product[numb];
        Cart shopping = new Cart(id, numb, products);
        for (int i = 0; i < numb; i++) {
            System.out.println("Which product would you like to add?");
            System.out.println("1.Electronic product " + "2.Clothing product
" + "3.Book Product");
            int choice = input.nextInt();
            switch (choice){
                case 1:
                    shopping.addproduct(EP, i);
                    break;
                case 2:
                    shopping.addproduct(CP, i);
                    break;
                case 3:
                    shopping.addproduct(BP, i);
                    break;
                default:
                    System.out.println("invalid");
                    break;
            }
        }
        System.out.println("Would you like to place order? 1- yes 2- NO");
        int x = input.nextInt();
        switch(x){
            case 1:
                shopping.PlaceOrder();
                break;

            case 2:
                System.out.println("The order is cancelled");
                break;
            default:
                System.out.println("invalid");
        }

    }
}
public class Product {
    protected int productId;
     protected String name;
     protected float price;
public Product(String name,int id,float price){
```
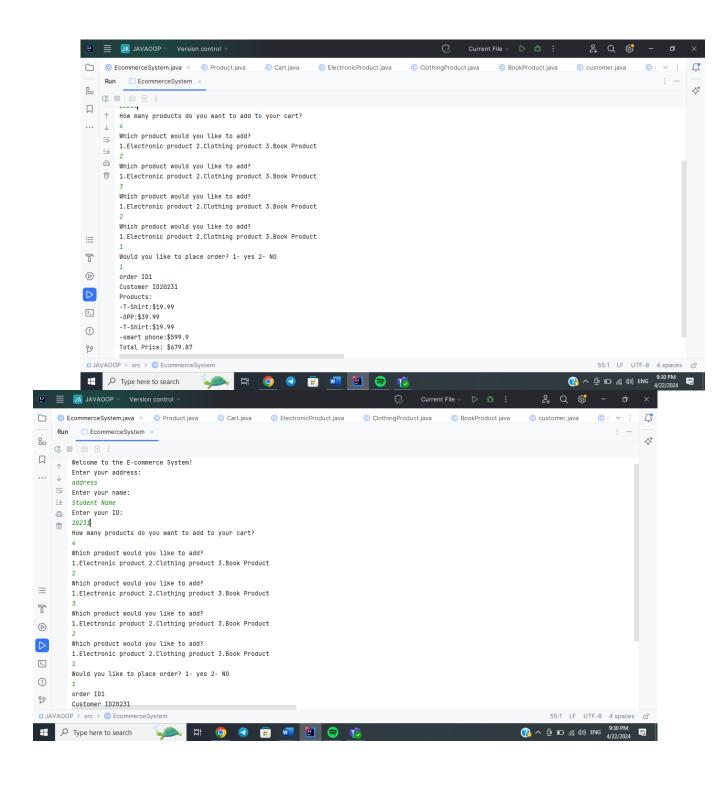
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        this.name=name;
        this.productId=id;
        this.price=price;
    }

    public void setProductId(int id) {
            this.productId=id;
        }

    public int getProductId() {
        if (productId > 0) ;
            else {
                Math.abs(productId);
            }
            return productId;
        }
    public void setNAME (String n) {
            this.name=n;
        }

    public String getNAME() {
            return name;
        }
    public void setPrice (float p) {
            this.price=p;
        }
    public float getPrice() {
            if (price > 0) ;
            else {
                Math.abs(price);
            }
            return price;
        }

}
public class ElectronicProduct extends Product {
    private String brand;
    private int warrantyPeriod;
    public ElectronicProduct(String name,int id,float price,String brand,int
warrantyPeriod){
            super( name , id, price);
            this.brand=brand;
            this.warrantyPeriod=warrantyPeriod;
        }
    public void setbrand (String b) {
            this.brand=b;
        }
    public String getBrand() {
            return brand;
        }
    public void setWarrantyPeriod(int warrantyPeriod) {
            this.warrantyPeriod = warrantyPeriod;
        }

    public int getWarrantyPeriod() {
            return warrantyPeriod;
        }
}
public class ClothingProduct extends Product{
    private String size;
    private String fabric;
public ClothingProduct(String name,int id,float price,String size,String
fabric){
    super( name, id, price);
```

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

    public String getSize() {
        return size;
    }

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

    public String getFabric() {
        return fabric;
    }
}
public class BookProduct extends Product {
    private String author;
    private String publisher;

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

    public String getAuthor() {
        return author;
    }

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

    public String getPublisher() {
        return publisher;
    }
}
public class customer {
    private int customerID;
    private String name;
    private String address;
    public customer(int customerID,String name,String address){
        this.customerID=customerID;
        this.name=name;
        this.address=address;
    }
    public void setCustomerID(int customerID) {
        this.customerID = customerID;
    }

    public int getCustomerID() {
        return customerID;
    }

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

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        }

        public String getName() {
            return name;
        }
    }
    public class Cart {
        private int customerId;
        private int nProducts;
        private Product[] products;

        public Cart(int id, int numb, Product[] products) {
            this.customerId = id;
            this.nProducts = numb;
            this.products = products;
        }

        public void setCustomerId(int CustomerId) {
            this.customerId = customerId;
        }

        public int getCustomerId() {
            return customerId;
        }

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

        public int getPublisher() {
            if (nProducts > 0) ;
            else {
                Math.abs(nProducts);
            }
            return nProducts;
        }

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

        public float calcPrice() {
            float sum = 0;
            for (int i = 0; i < nProducts; i++) {
                if(products[i] != null)
                    sum += products[i].getPrice();
            }
            return sum;
        }

        public void removeproduct(int index) {
            if(index >= 0 && index < nProducts)
                products[index] = null;
        }

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

        public void PlaceOrder(){
            Order order = new Order(customerId, 1, products, calcPrice());
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                order.printorderinfo();
        }
}
public class Order {
    private int CustomerID;
    private int orderID;
    private float totalprice;
    private Product [] products;
    public  Order(int CustomerID,int orderID,Product[]products,float
totalprice){
            this.CustomerID=CustomerID;
            this.orderID=orderID;
            this.products=products;
            this.totalprice=totalprice;
    }
    public void setOrderID(int orderID) {
            this.orderID = orderID;
    }

    public int getOrderID() {
            if (orderID > 0) ;
            else {
                 Math.abs(orderID);
            }
        return orderID;
    }

    public int getCustomerID() {
        if (CustomerID > 0) ;
        else {
            Math.abs(CustomerID);
            }
        return CustomerID;
    }
    public void setTotalprice(float totalprice){
        this.totalprice=totalprice;
    }
    public float getTotalprice(){
        return totalprice;
    }
    public void printorderinfo(){
        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);
    }
}
```

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