

```

package e_commercesystem;
import java.util.Scanner;
import javax.swing.SwingUtilities;
public class E_CommerceSystem {
public static void main(String[] args) {
    Scanner in=new Scanner(System.in);
    SwingUtilities.invokeLater(EcommerceGUI::new);
    ElectronicProduct electronic=new ElectronicProduct
        (nm: "Smartphone",id: 1,pce:599.99f,brand: "Samsung",wp: 1);
    ClothingProduct Cl=new ClothingProduct
        (nm: "T-shirt",id: 2,pce:19.99f,s: "Medium",f: "Cotton");
    BookProduct bl=new BookProduct
        (nm: "OOP",id: 3,pce:39.99f,a: "O'Reilly",p: "X Publications");
    System.out.println(x: "Welcome to the E-Commerce System!");
    System.out.println(x: "Please enter your ID ");
    int id =Math.abs(a: in.nextInt());
    System.out.println(x: "Please enter your name ");
    String name=in.next();
    System.out.println(x: "Please enter your address");
    String add=in.next();
    Customer cl=new Customer(cid:id,nm: name,add);
    System.out.println(x: "How many products you want to add to your cart");
    int num=in.nextInt();
    Cart cart=new Cart( cid:id, n: num);
    for(int i=0;i<num;i++){
        System.out.println("Enter details for product"+(i+1));
        System.out.println
            (x: "Which product would you like to add \n 1-Smartphone \n 2-T-shirt\n 3-OOP");
        int producttype=in.nextInt();
        switch(producttype){
            case 1:
                cart.addproduct(product:electronic);
                break;
            case 2:
                cart.addproduct(product:Cl);
                break;
            case 3:
                cart.addproduct(product:bl);
                break;
            default:
                System.out.println(x: "invalid !");
        }
    }
    System.out.println("your total is $" +cart.calculatePrice()+
        ". would you like to place order? (1=yes 2=no)");
    int ans=in.nextInt();
    if(ans==1){
        Order order=new Order(oid:1);
        cart.placeOrder(order);
        System.out.println(x: "Order placed successfully!");
        System.out.println(x: "Here's your order's summary");
        order.printOrderInfo();
    }else{
        System.out.println(x: "Order not placed.");
    }
}
}
}

```

```

package e_commercesystem;
import javax.swing.*;
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
public class EcommerceGUI extends JFrame
    implements ActionListener {
    private JTextField productNameField, productPriceField;
    private JButton addButton, placeOrderButton;
    private JTextArea cartTextArea;
    private double totalPrice;
    public EcommerceGUI() {
        setTitle(title: "E-commerce System");
        setDefaultCloseOperation(operation: JFrame.EXIT_ON_CLOSE);
        setLayout(new GridLayout(rows: 4, cols: 2));
        add(new JLabel(text: "Product Name:"));
        productNameField = new JTextField();
        add(comp: productNameField);
        add(new JLabel(text: "Product Price:"));
        productPriceField = new JTextField();
        add(comp: productPriceField);
        addButton = new JButton(text: "Add to Cart");
        addButton.addActionListener(l: this);
        add(comp: addButton);
        placeOrderButton = new JButton(text: "Place Order");
        placeOrderButton.addActionListener(l: this);
        add(comp: placeOrderButton);
        cartTextArea = new JTextArea();
        add(new JScrollPane(view: cartTextArea));
        totalPrice = 0;
        pack();
        setVisible(b: true);
    }
    @Override
    public void actionPerformed(ActionEvent e) {
        if (e.getSource() == addButton) {
            String productName =
                productNameField.getText();
            double productPrice =
                Double.parseDouble(s: productPriceField.getText());
            cartTextArea.append
                (productName + " - $" + productPrice + "\n");
            totalPrice += productPrice;
            productNameField.setText(t: "");
            productPriceField.setText(t: "");
        } else if (e.getSource() == placeOrderButton) {
            JOptionPane.showMessageDialog
                (parentComponent: this, "Total Price: $" + totalPrice);
            cartTextArea.setText(t: "");
            totalPrice = 0;
        }
    }
}

```

```

package e_commercesystem;

public class Cart {
    int customerId;
    int nProducts;
    private Product[] products;
    public Cart() {}
    public Cart(int cid,int n){
        customerId=cid;
        nProducts=n;
        products =new Product[nProducts];
    }
    public void setcustomerId(int cid){
        customerId=Math.abs(a: cid);
    }
    public void setnProducts(int n){
        nProducts=Math.abs(a: n);
    }
    public void setprouducts(Product[]products){
        this.products=products;
    }
    public int getcustomerId(){
        return customerId;
    }
    public int getnProducts(){
        return nProducts;
    }

    public Product[] getProducts(){
        return products;
    }
    public void addproduct(Product product){
        for(int i=0;i<products.length;i++){
            if(products[i]==null){
                products[i]=product;
                return;
            }
        }
    }
    public void removeProduct(int i){
        if(i>0 && i < nProducts)
            products[i]=null;
        else{
            System.out.println(x: "invalid");
        }
    }
    public float calculatePrice(){
        float totalPrice=0;
        for(int i=0;i<products.length;i++){
            totalPrice+=products[i].getprice();
        }
        return totalPrice;
    }
    public void placeOrder(Order order){
        order.setcustomerId(cid:customerId);
        order.setprouducts(products);
        order.setTotalPrice(totalp: calculatePrice());
        System.out.println(x: "Order placed successfully!");
    }
}

```

```
package e_commercesystem;

public class Customer {
    int customerId;
    String name;
    String address;
    public Customer() {}
    public Customer(int cid,String nm,String add){

        customerId=Math.abs(a: cid);
        name=nm;
        address=add;
    }
    public void setcustomerId(int cid){
        customerId=Math.abs(a: cid);
    }
    public void setname(String nm){
        name=nm;
    }
    public void setaddress(String add){
        address=add;
    }
    public int getcustomerId(){
        return customerId;
    }
    public String getname(){
        return name;
    }
    public String getaddress(){
        return address;
    }
}
```

```

package e_commercesystem;

public class Order{
    int customerId;
    int orderId ;
    Product[]products;
    float totalPrice;
    public Order(int oid){
        orderId=oid;
    }
    public void setcustomerId(int cid){
        customerId=cid;
    }
    public void setOrderId(int oid){
        if(oid>0)
            orderId=oid;
        else
            orderId=Math.abs(a: oid);
    }
    public void setTotalPrice(float totalp){
        totalPrice=Math.abs(a: totalp);
    }
    public void setproudets(Product[]products){
        this.products=products;
    }
    public int getCustomerId(){
        return customerId;
    }
    public int getOrderId(){
        return orderId;
    }
    public float getTotalPrice(){
        return totalPrice;
    }
    public Product[]products(){
        return products;
    }
    public void printOrderInfo(){
        System.out.println("Order ID: " + orderId);
        System.out.println("Customer ID: " + customerId);
        System.out.println(a: "Products:");
        if (products != null) {
            for(int i=0;i<products.length;i++){
                if(products[i]!=null){
                    System.out.println("-"+products[i].getname()+":$"+products[i].getprice());
                }
            }
        }
        System.out.println("Total Price:$"+totalPrice);
    } else {
        System.out.println(a: "No products in the order.");
        System.out.println("Total Price:$"+totalPrice);
    }
}
}
}

```

```
package e_commercesystem;
public class BookProduct extends Product {
    String author;
    String publisher;
    public BookProduct(){}
    public BookProduct(String nm,int id,float pce,String a,String p){
        super(nm,id,pce);
        author=a;
        publisher=p;
    }
    public void setauthor(String a){
        author=a;
    }
    public void setpublisher(String p){
        publisher=p;
    }
    public String getauthor(){
        return author;
    }
    public String getpublisher(){
        return publisher;
    }
}
```

```
package e_commercesystem;
public class ClothingProduct extends Product {
    String size;
    String fabric;
    public ClothingProduct(){}
    public ClothingProduct(String nm,int id,float pce,String s,String f){
        super(nm,id,pce);
        size=s;
        fabric=f;
    }

    public void setsize(String s){
        size=s;
    }
    public void setfabric(String f){
        fabric=f;
    }
    public String getsize(){
        return size;
    }
    public String getfabric(){
        return fabric;
    }
}
```

```
package e_commercesystem;
public class ElectronicProduct extends Product {
    String brand;
    int warrantyPeriod;
    public ElectronicProduct(){}
    public ElectronicProduct(String nm,int id,float pce,String brand,int wp){
        super(nm,id,pce);
        this.brand=brand;
        if(wp>0)
            warrantyPeriod=wp;
    else
        warrantyPeriod=Math.abs(wp);
    }
    public void setbrand(String brand){
        this.brand=brand;
    }
    public void setwarrantyPeriod(int wp){
        if(wp>0)
            warrantyPeriod=wp;
        else
            warrantyPeriod=Math.abs(wp);
    }
    public String getbrand(){
        return brand;
    }
    public int getwarrantyPeriod(){
        return warrantyPeriod;
    }
}
```



```
package e_commercesystem;

public class Product {
    int productId;
    String name;
    float price;
    public Product(){}
    public Product(String nm,int id,float pce){
        if(id>0)
            productId=id;
        else
            productId=Math.abs(id);
        name=nm;
        if(pce>0)
            price=pce;
        else
            price=Math.abs(pce);
    }
    public void setproductId(int id){
        if(id>0)
            productId=id;
        else
            productId=Math.abs(id);
    }
    public void setname(String nm){
        name=nm;
    }
    public void setprice(float pce){
        if(pce>0)
            price=pce;
        else
            price=Math.abs(pce);
    }
    public int getproductId(){
        return productId;
    }
    public String getname(){
        return name;
    }
    public float getprice(){
        return price;
    }
}
```

```
run:
Welcome to the E-Commerce System!
Please enter your ID
23012086
Please enter your name
Rokaya
Please enter your address
address
How many prouducts you want to add to your cart
4
Enter details for product1
Which product would you like to add
1-Smartphone
2-T-shirt
3-OOP
2
Enter details for product2
Which product would you like to add
1-Smartphone
2-T-shirt
3-OOP
3
Enter details for product3
Which product would you like to add
1-Smartphone
2-T-shirt
3-OOP
2
Enter details for product4
Which product would you like to add
1-Smartphone
2-T-shirt
3-OOP
1
your total is $679.95996. would you like to place order? (1=yes 2=no)
1
Order placed successfully!
Order placed successfully!
Here♦s your order♦s summary
Order ID: 1
Customer ID: 23012086
Products:
-T-shirt:$19.99
-OOP:$39.99
-T-shirt:$19.99
-Smartphone:$599.99
Total Price:$679.95996
BUILD SUCCESSFUL (total time: 29 seconds)
```

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