```java
package ecommercesystem;
import java.util.Scanner;

public class EcommerceSystem {

    public static void main(String[] args) {
        Scanner input=new Scanner(source:System.in);
        System.out.println(x: "Welcome to E-Commerce System!");
        System.out.println(x: "please enter your id:");
        int customerid=input.nextInt();
        input.nextLine();
        System.out.println(x: "please enter your name:");
        String customername=input.nextLine();
        System.out.println(x: "please enter your address:");
        String customeraddress=input.nextLine();
        Customer customer =new Customer(customerid, name: customername, address: customeraddress);
        System.out.println(x: "How many products would you like to add to the cart?");
    int nproducts=input.nextInt();
    input.nextLine();
    Cart cart=new Cart(customerId: customerid, nProducts:nproducts);
    for(int i=0;i<nproducts;i++){
        System.out.println(x: "Which product would you like to add? 1- Smartphone 2- T-shirt 3- OOP");
        int choice=input.nextInt();
        input.nextLine();
        switch(choice){
            case 1:
                cart.addproduct(new ElectronicProduct(productid:1, name: "Smartphone", price: 599.99f, brand: "Samsung", warranty_period: 1));
                break;
            case 2:
                cart.addproduct(new ClothingProduct(size: "Medium", fabric: "Cotton", productid:2, name: "T-Shirt", price: 19.99f));
                break;
            case 3:
                cart.addproduct(new BookProduct(author: "O'Reilly", publisher: "X Publications", productid:3, name: "OOP", price: 39.99f));
                break;
            default:
                System.out.println(x: "invalid choice ;/");
        }
    }
```

```java
    double totalprice=cart.calculatePrice();
        System.out.println("Your total is $"+totalprice+". Would you like to place the order 1-Yes 2-No");
        int placeorderchoice=input.nextInt();
        System.out.println();
        cart.placeorder(a: placeorderchoice);
}
}
```

```java
package ecommercesystem;
public class Product {
    protected int productid;
    protected String name;
    protected float price;

    public Product(int productid, String name, float price) {
        this.productid =Math.abs(a: productid);
        this.name =name;
        this.price = Math.abs(a: price);
    }
    public int getProductid() {
        return productid;
    }

    public void setProductid(int productid) {

            this.productid=Math.abs(a: productid); }
    public String getName() {
        return name;
    }

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

    public float getPrice() {
        return price;
    }

    public void setPrice(float price) {

            this.price=Math.abs(a: price);
        }}
```

```java
package ecommercesystem;

public class ElectronicProduct extends Product {
    private String brand;
    private int warranty_period;

    public ElectronicProduct(int productid, String name, float price,String brand, int warranty_period) {
        super(productid,name,price);
        this.brand = brand;
        this.warranty_period =Math.abs(a: warranty_period);
    }


    public String getBrand() {
        return brand;
    }

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

    public int getWarranty period() {
        return warranty_period;
    }

    public void setWarranty period(int warranty_period) {

        this.warranty_period=Math.abs(a: warranty_period);
    }
}
```

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

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

    }
```

```java
package ecommercesystem;
public class BookProduct extends Product{
    private String author;
    private String publisher;
    public BookProduct(String author, String publisher, int productid, String name, float price) {
        super(productid, name, price);
        this.author = author;
        this.publisher = 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;
    }


}
```

```java
package ecommercesystem;
public class Cart {
    private int customerId;
    private int nProducts;
    private Product[]products;
    public Cart(){}

    public Cart(int customerId, int nProducts) {
        this.customerId = Math.abs(a: customerId);
        this.nProducts = Math.abs(a: nProducts);
        this.products=new Product[nProducts];
    }
    public int getCustomerId() {
        return customerId;
    }

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

    public int getnProducts() {
        return nProducts;
    }

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

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

    public void setProduct(Product[] product) {
        this.products = product;
    }
    public float calculatePrice(){
        float totalprice=0;
```

```java
public float calculatePrice(){
    float totalprice=0;
    for(int i=0;i<products.length;i++){
    totalprice+=products[i].getPrice();
}
    return totalprice;
}
public void addproduct(Product product){
    for(int i=0;i<products.length;i++){
    if(products[i]==null){
        products[i]=product;
        nProducts++;
        break;
    }
  }}
public void removeproduct(Product product){
    for(int i=0;i<products.length;i++){
        if(products[i]==product){
            products[i]=null;
            this.nProducts--;
            break;
        }
    }
}
public void placeorder(int a){
    Order order=new Order(customerid: customerId,orderid: 1,products,totalprice: calculatePrice());
    switch(a){
        case 1:
            System.out.println(x: "here is your order sumary:");
            order.printOrderinfo();
             break;
        case 2:
            System.out.println(x: "okay you'll buy next time :)");
        default:
            System.out.println(x: "invalid value");
            break;
```

```java
public void placeorder(int a){
    Order order=new Order(customerid: customerId, orderid: 1, products, totalprice: calculatePrice());
    switch(a){
        case 1:
            System.out.println(x: "here is your order sumary:");
            order.printOrderinfo();
            break;
        case 2:
            System.out.println(x: "okay you'll buy next time :)");
        default:
            System.out.println(x: "invalid value");
            break;
    }
}
}
```

```java
package ecommercesystem;
public class Customer {
    private int customerid;
    private String name;
    private String address;
public Customer(){

}

    public Customer(int customerid, String name, String address) {
        this.customerid = customerid;
        this.name = name;
        this.address = address;
    }

    public int getCustomerid() {
        return customerid;
    }

    public void setCustomerid(int customerid) {
        if (customerid>0){
            this.customerid=customerid;
        }
        else{
            Math.abs(a: customerid);
            this.customerid=customerid;
        }
    }

    public String getName() {
        return name;
    }

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

```java
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;
}


}
```

```java
package ecommercesystem;
public class Order {
    private int customerid;
    private int orderid;
    private Product [] products;
    private float totalprice;
    public Order(){}
    public Order(int customerid, int orderid, Product[] products, float totalprice) {
        this.customerid = Math.abs(a: customerid);
        this.orderid = Math.abs(a: orderid);
        this.products = products;
        this.totalprice = Math.abs(a: totalprice);
    }

    public int getCustomerid() {
        return customerid;
    }

    public void setCustomerid(int customerid) {
        this.customerid = customerid;
    }

    public int getOrderid() {
        return orderid;
    }

    public void setOrderid(int orderid) {
        this.orderid = orderid;
    }

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

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

```java
    }

    public float getTotalprice() {
        return totalprice;
    }

    public void setTotalprice(float totalprice) {
        this.totalprice = totalprice;
    }
    public void printOrderinfo(){
        System.out.println("Order Id:"+orderid);
        System.out.println("Customer Id:"+customerid);
        System.out.println(x: "products:");
        for(Product product:products){
        System.out.println("- "+product.getName()+"- "+product.getPrice());
    }

        System.out.println("Total Price:"+totalprice);

    }
}
```

```
EcommerceSystem (run) ×        EcommerceSystem (run) #2 ×

run:
Welcome to E-Commerce System!
please enter your id:
23010157
please enter your name:
hady sherif mohamed nagaty
please enter your address:
victoria
How many products would you like to add to the 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
3
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
Your total is $679.9599609375. Would you like to place the order 1-Yes 2-No
1

here is your order sumary:
Order Id:1
Customer Id:23010157
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)
```