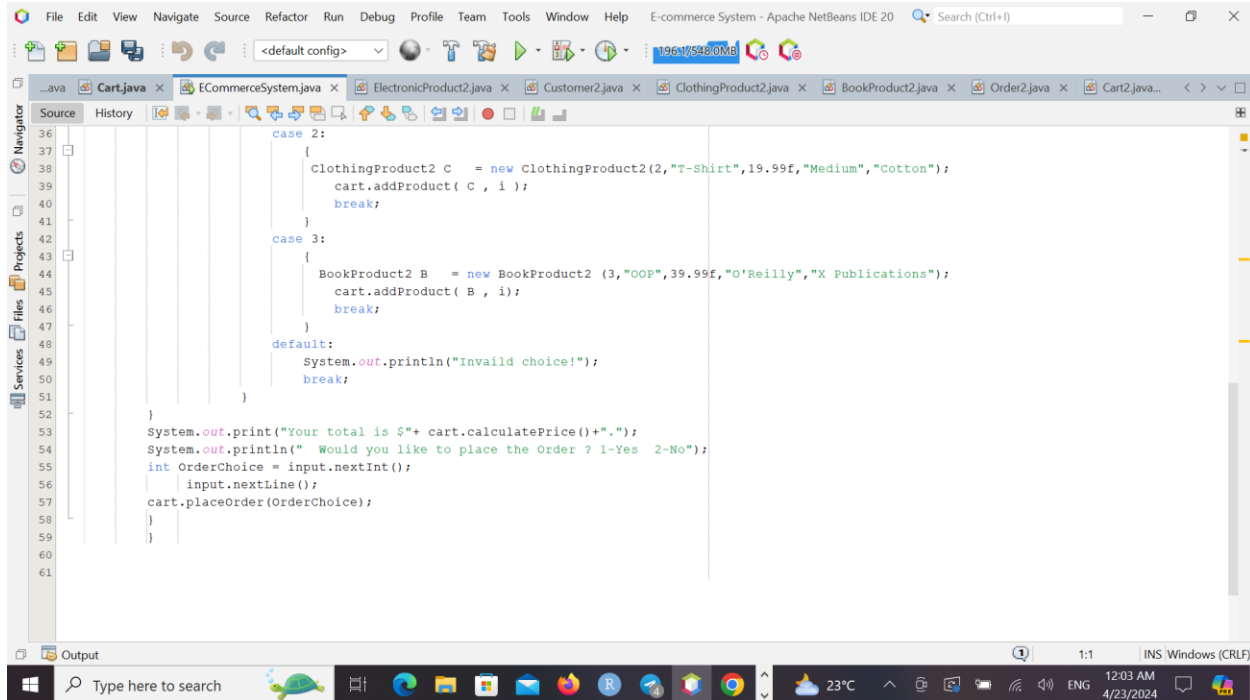


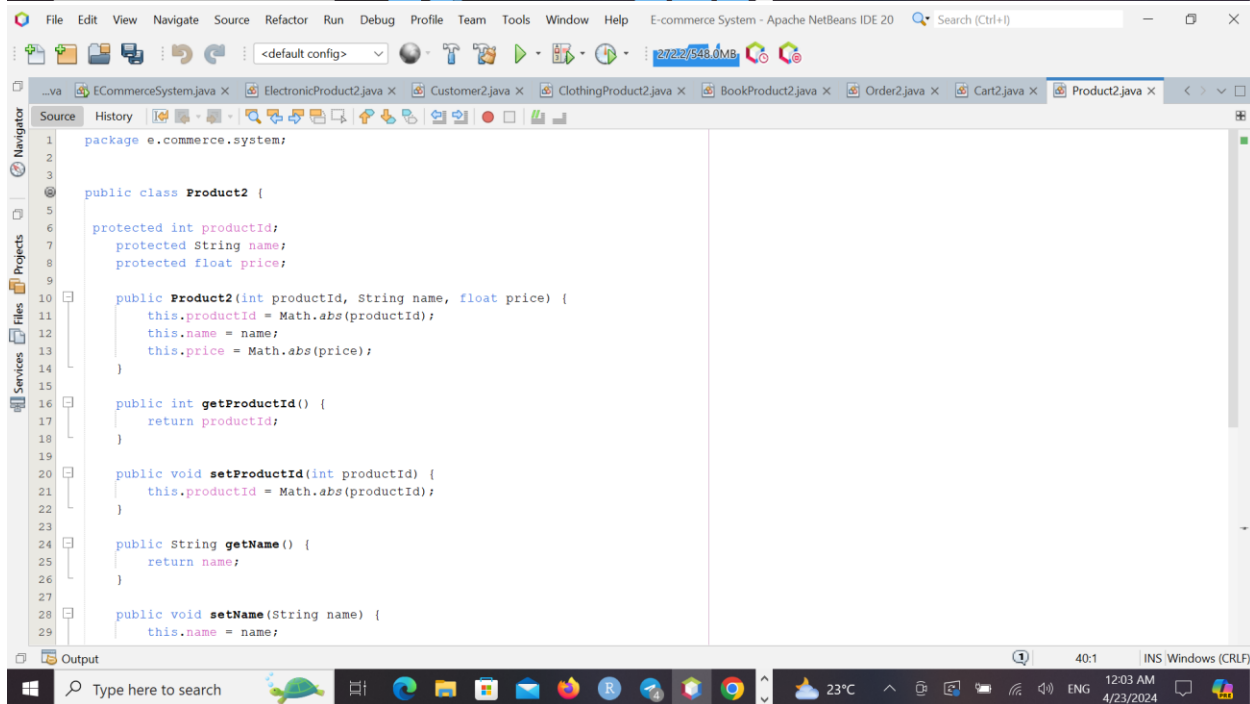
```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help E-commerce System - Apache NetBeans IDE 20 Search (Ctrl+I)
<default config> 2422/5480MB
Source History
package e.commerce.system;
import java.util.Scanner;
public class ECommerceSystem {
    public static void main (String[] args){
        Scanner input = new Scanner(System.in);
        System.out.println("Welcome to the E-Commerce System!");
        System.out.println("Please enter your id: ");
        int customerId= Math.abs(input.nextInt());
    }
    input.nextLine();
    System.out.println("Please enter your name:");
    String name = input.nextLine();
    System.out.println("Please enter your address:");
    String address=input.nextLine();
    Customer2 customer = new Customer2(customerId,name,address);
    System.out.println("How many products do you want to add to your cart ?");
    int nProducts = Math.abs(input.nextInt());
    input.nextLine();
    Cart2 cart= new Cart2(customerId,nProducts);
    for(int i = 0; i < nProducts ; i++){
        System.out.print("Which product would you like to add?");
        System.out.print("1- SmartPhone");
        System.out.print("2- T-Shirt");
        System.out.println("3- OOP");
    }
    int choice = input.nextInt();
    input.nextLine();
    switch (choice) {
        case 1:
            ElectronicProduct2 E = new ElectronicProduct2(1,"SmartPhone",599.99f,"Samsung",1);
            cart.addProduct( E , i);
            break;
        case 2:
            ClothingProduct2 C = new ClothingProduct2(2,"T-Shirt",19.99f,"Medium","Cotton");
            cart.addProduct( C , i );
            break;
        case 3:
            BookProduct2 B = new BookProduct2 (3,"OOP",39.99f,"O'Reilly","X Publications");
            cart.addProduct( B , i);
            break;
        default:
            System.out.println("Invalid choice!");
            break;
    }
    System.out.print("Your total is $" + cart.calculatePrice()+".");
    System.out.println(" Would you like to place the Order ? 1-Yes 2-No");
}
```

```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help E-commerce System - Apache NetBeans IDE 20 Search (Ctrl+I)
<default config> 4813/5480MB
Source History
package e.commerce.system;
import java.util.Scanner;
public class ECommerceSystem {
    public static void main (String[] args){
        Scanner input = new Scanner(System.in);
        System.out.println("Welcome to the E-Commerce System!");
        System.out.println("Please enter your id: ");
        int customerId= Math.abs(input.nextInt());
    }
    input.nextLine();
    System.out.println("Please enter your name:");
    String name = input.nextLine();
    System.out.println("Please enter your address:");
    String address=input.nextLine();
    Customer2 customer = new Customer2(customerId,name,address);
    System.out.println("How many products do you want to add to your cart ?");
    int nProducts = Math.abs(input.nextInt());
    input.nextLine();
    Cart2 cart= new Cart2(customerId,nProducts);
    for(int i = 0; i < nProducts ; i++){
        System.out.print("Which product would you like to add?");
        System.out.print("1- SmartPhone");
        System.out.print("2- T-Shirt");
        System.out.println("3- OOP");
    }
    int choice = input.nextInt();
    input.nextLine();
    switch (choice) {
        case 1:
            ElectronicProduct2 E = new ElectronicProduct2(1,"SmartPhone",599.99f,"Samsung",1);
            cart.addProduct( E , i);
            break;
        case 2:
            ClothingProduct2 C = new ClothingProduct2(2,"T-Shirt",19.99f,"Medium","Cotton");
            cart.addProduct( C , i );
            break;
        case 3:
            BookProduct2 B = new BookProduct2 (3,"OOP",39.99f,"O'Reilly","X Publications");
            cart.addProduct( B , i);
            break;
        default:
            System.out.println("Invalid choice!");
            break;
    }
    System.out.print("Your total is $" + cart.calculatePrice()+".");
    System.out.println(" Would you like to place the Order ? 1-Yes 2-No");
}
```



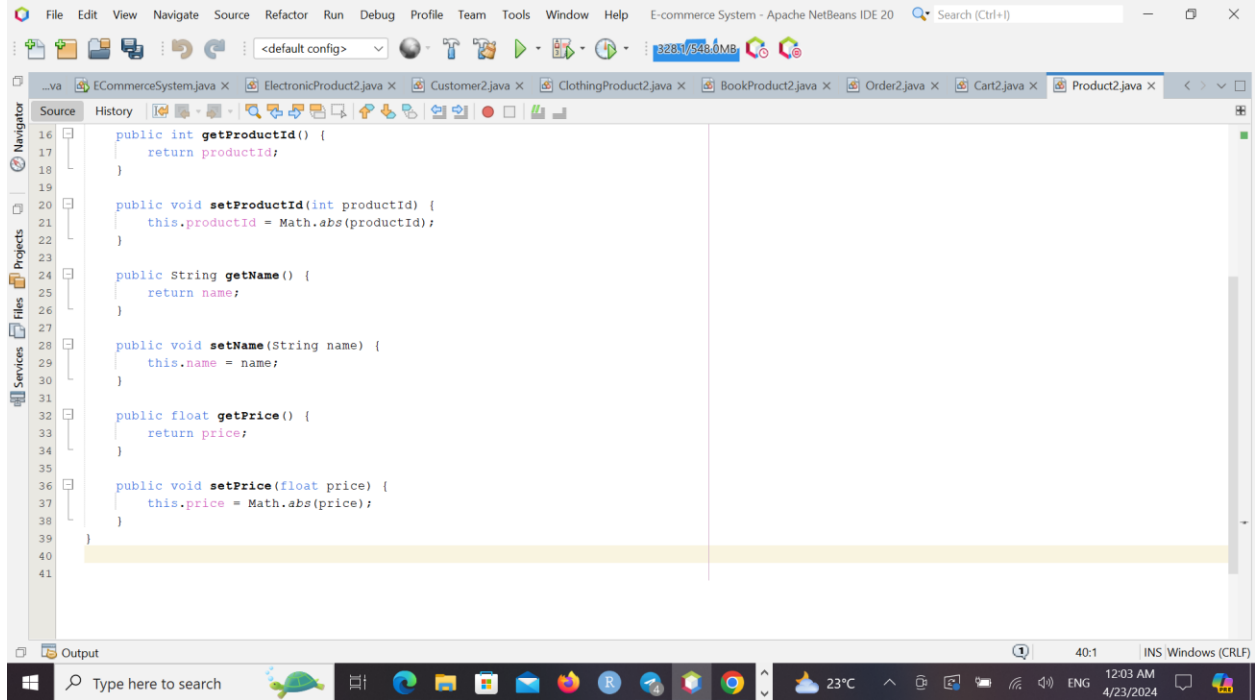
This screenshot shows the NetBeans IDE with the `ECommerceSystem.java` file open. The code implements a shopping cart system with a switch statement for product selection. The switch statement has three cases: Case 2 for clothing products and Case 3 for book products. A default case prints an invalid choice message. After the switch, the total price is calculated and displayed, followed by a prompt for the user to place the order.

```
36
37
38         case 2:
39             ClothingProduct2 C = new ClothingProduct2(2, "T-Shirt", 19.99f, "Medium", "Cotton");
40             cart.addProduct(C, 1);
41             break;
42
43         case 3:
44             BookProduct2 B = new BookProduct2(3, "OOP", 39.99f, "O'Reilly", "X Publications");
45             cart.addProduct(B, 1);
46             break;
47
48         default:
49             System.out.println("Invalid choice!");
50             break;
51
52     }
53
54     system.out.print("Your total is $" + cart.calculatePrice() + ".");
55     system.out.println(" Would you like to place the order ? 1-Yes 2-No");
56     int OrderChoice = input.nextInt();
57     input.nextLine();
58     cart.placeOrder(OrderChoice);
59
60
61
```

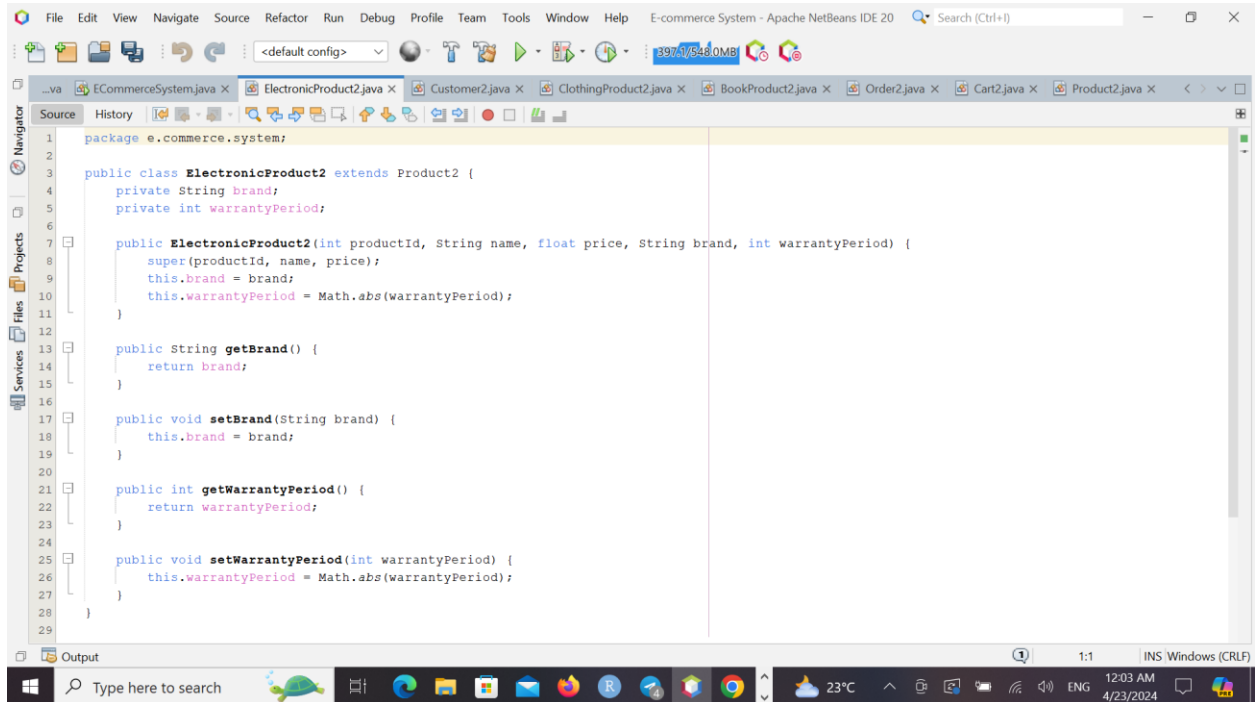


This screenshot shows the NetBeans IDE with the `Product2.java` file open. The code defines a `Product2` class with protected attributes for product ID, name, and price. It includes a constructor that initializes these attributes using `Math.abs` to ensure non-negative values. The class also has getter and setter methods for each attribute.

```
1 package e.commerce.system;
2
3
4
5 public class Product2 {
6     protected int productId;
7     protected String name;
8     protected float price;
9
10    public Product2(int productId, String name, float price) {
11        this.productId = Math.abs(productId);
12        this.name = name;
13        this.price = Math.abs(price);
14    }
15
16    public int getProductId() {
17        return productId;
18    }
19
20    public void setProductId(int productId) {
21        this.productId = Math.abs(productId);
22    }
23
24    public String getName() {
25        return name;
26    }
27
28    public void setName(String name) {
29        this.name = name;
30    }
31
32 }
```



```
16 public int getProductId() {
17     return productId;
18 }
19
20 public void setProductId(int productId) {
21     this.productId = Math.abs(productId);
22 }
23
24 public String getName() {
25     return name;
26 }
27
28 public void setName(String name) {
29     this.name = name;
30 }
31
32 public float getPrice() {
33     return price;
34 }
35
36 public void setPrice(float price) {
37     this.price = Math.abs(price);
38 }
39
40
41
```



```
1 package e.commerce.system;
2
3 public class ElectronicProduct2 extends Product2 {
4     private String brand;
5     private int warrantyPeriod;
6
7     public ElectronicProduct2(int productId, String name, float price, String brand, int warrantyPeriod) {
8         super(productId, name, price);
9         this.brand = brand;
10        this.warrantyPeriod = Math.abs(warrantyPeriod);
11    }
12
13    public String getBrand() {
14        return brand;
15    }
16
17    public void setBrand(String brand) {
18        this.brand = brand;
19    }
20
21    public int getWarrantyPeriod() {
22        return warrantyPeriod;
23    }
24
25    public void setWarrantyPeriod(int warrantyPeriod) {
26        this.warrantyPeriod = Math.abs(warrantyPeriod);
27    }
28
29 }
```

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help E-commerce System - Apache NetBeans IDE 20 Search (Ctrl+I)

<default config> 448.7/548.0MB

Source History

```
1 package e.commerce.system;
2
3 public class Customer2 {
4     private int customerId;
5     private String name;
6     private String address;
7
8     public Customer2(int customerId, String name, String address) {
9         this.customerId = Math.abs(customerId);
10        this.name = name;
11        this.address = address;
12    }
13
14    public int getCustomerId() {
15        return customerId;
16    }
17
18    public void setCustomerId(int customerId) {
19        this.customerId = Math.abs(customerId);
20    }
21
22    public String getName() {
23        return name;
24    }
25
26    public void setName(String name) {
27        this.name = name;
28    }
29 }
```

Output 1:1 INS Windows (CRLF)

Type here to search 23°C 12:04 AM 4/23/2024

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help E-commerce System - Apache NetBeans IDE 20 Search (Ctrl+I)

<default config> 193.7/548.0MB

Source History

```
12 }
13
14 public int getCustomerId() {
15     return customerId;
16 }
17
18 public void setCustomerId(int customerId) {
19     this.customerId = Math.abs(customerId);
20 }
21
22 public String getName() {
23     return name;
24 }
25
26 public void setName(String name) {
27     this.name = name;
28 }
29
30 public String getAddress() {
31     return address;
32 }
33
34 public void setAddress(String address) {
35     this.address = address;
36 }
37 }
38 }
```

Output 1:1 INS Windows (CRLF)

Type here to search 23°C 12:04 AM 4/23/2024

The screenshot shows the NetBeans IDE interface with the 'ClothingProduct2.java' file open. The code defines a class that extends 'Product2' and includes attributes for size and fabric, along with their respective getters and setters.

```
1 package e.commerce.system;
2
3 public class ClothingProduct2 extends Product2 {
4     private String size;
5     private String fabric;
6
7     public ClothingProduct2(int productId, String name, float price, String size, String fabric) {
8         super(productId, name, price);
9         this.size = size;
10        this.fabric = fabric;
11    }
12
13    public String getSize() {
14        return size;
15    }
16
17    public void setSize(String size) {
18        this.size = size;
19    }
20
21    public String getFabric() {
22        return fabric;
23    }
24
25    public void setFabric(String fabric) {
26        this.fabric = fabric;
27    }
28
29 }
```

The bottom of the window shows the Windows taskbar with the system clock at 12:04 AM on 4/23/2024.

The screenshot shows the NetBeans IDE interface with the 'BookProduct2.java' file open. The code defines a class that extends 'Product2' and includes attributes for author and publisher, along with their respective getters and setters.

```
1 package e.commerce.system;
2
3 public class BookProduct2 extends Product2 {
4     private String author;
5     private String publisher;
6
7     public BookProduct2(int productId, String name, float price, String author, String publisher) {
8         super(productId, name, price);
9         this.author = author;
10        this.publisher = publisher;
11    }
12
13    public String getAuthor() {
14        return author;
15    }
16
17    public void setAuthor(String author) {
18        this.author = author;
19    }
20
21    public String getPublisher() {
22        return publisher;
23    }
24
25    public void setPublisher(String publisher) {
26        this.publisher = publisher;
27    }
28
29 }
```

The bottom of the window shows the Windows taskbar with the system clock at 12:04 AM on 4/23/2024.

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help E-commerce System - Apache NetBeans IDE 20 Search (Ctrl+I)

Source History

```
1 package e.commerce.system;
2
3 public class Order2 {
4     private int customerId;
5     private int orderId;
6     private Product2[] products;
7     private float totalPrice;
8
9     public Order2(int customerId, int orderId, Product2[] products, float totalPrice) {
10         this.customerId = Math.abs(customerId);
11         this.orderId = Math.abs(orderId);
12         this.products = products;
13         this.totalPrice = totalPrice;
14     }
15
16
17     public int getCustomerId() {
18         return customerId;
19     }
20
21     public void setCustomerId(int customerId) {
22         this.customerId = Math.abs(customerId);
23     }
24
25     public int getOrderId() {
26         return orderId;
27     }
28
29     public void setOrderId(int orderId) {
```

Output

1:1 INS Windows (CRLF)

Type here to search

23°C 12:04 AM 4/23/2024

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help E-commerce System - Apache NetBeans IDE 20 Search (Ctrl+I)

Source History

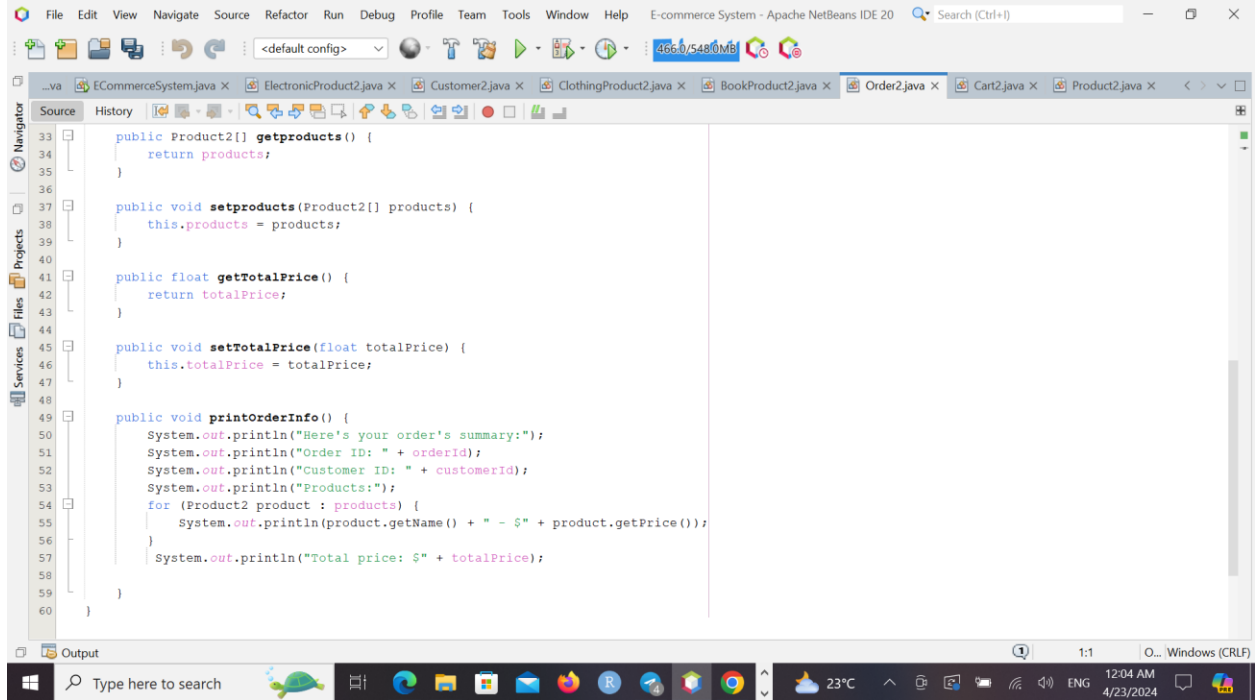
```
25     public int getOrderId() {
26         return orderId;
27     }
28
29     public void setOrderId(int orderId) {
30         this.orderId = Math.abs(orderId);
31     }
32
33     public Product2[] getproducts() {
34         return products;
35     }
36
37     public void setproducts(Product2[] products) {
38         this.products = products;
39     }
40
41     public float getTotalPrice() {
42         return totalPrice;
43     }
44
45     public void setTotalPrice(float totalPrice) {
46         this.totalPrice = totalPrice;
47     }
48
49     public void printOrderInfo() {
50         System.out.println("Here's your order's summary:");
51         System.out.println("Order ID: " + orderId);
52         System.out.println("Customer ID: " + customerId);
53         System.out.println("Products:");
```

Output

1:1 O... Windows (CRLF)

Type here to search

23°C 12:04 AM 4/23/2024

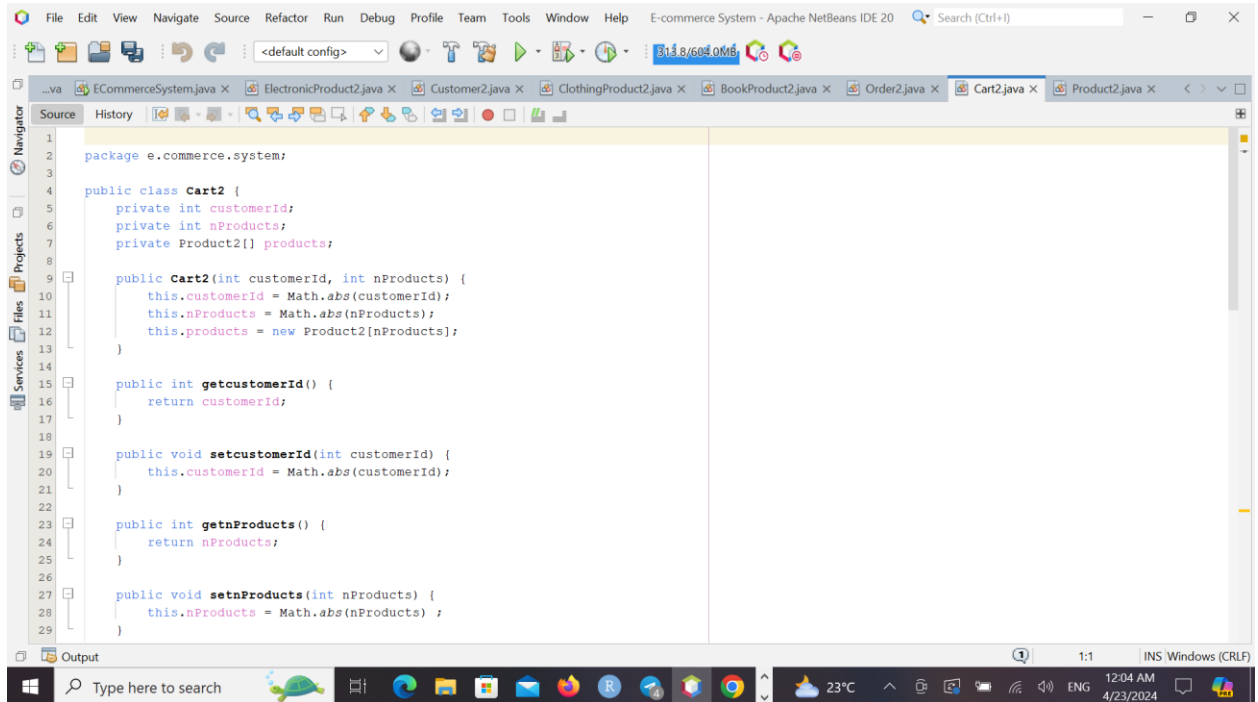


```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help E-commerce System - Apache NetBeans IDE 20 Search (Ctrl+I)
<default config> 4660/5480MB
Source History
Order2.java
33 public Product2[] getproducts() {
34     return products;
35 }
36
37 public void setproducts(Product2[] products) {
38     this.products = products;
39 }
40
41 public float getTotalPrice() {
42     return totalPrice;
43 }
44
45 public void setTotalPrice(float totalPrice) {
46     this.totalPrice = totalPrice;
47 }
48
49 public void printOrderInfo() {
50     System.out.println("Here's your order's summary:");
51     System.out.println("Order ID: " + orderId);
52     System.out.println("Customer ID: " + customerId);
53     System.out.println("Products:");
54     for (Product2 product : products) {
55         System.out.println(product.getName() + " - $" + product.getPrice());
56     }
57     System.out.println("Total price: $" + totalPrice);
58 }
59
60 }
```

Output

Type here to search

23°C 12:04 AM 4/23/2024



```
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help E-commerce System - Apache NetBeans IDE 20 Search (Ctrl+I)
<default config> 5113/6040MB
Source History
Cart2.java
1 package e.commerce.system;
2
3
4 public class Cart2 {
5     private int customerId;
6     private int nProducts;
7     private Product2[] products;
8
9     public Cart2(int customerId, int nProducts) {
10         this.customerId = Math.abs(customerId);
11         this.nProducts = Math.abs(nProducts);
12         this.products = new Product2[nProducts];
13     }
14
15     public int getcustomerId() {
16         return customerId;
17     }
18
19     public void setcustomerId(int customerId) {
20         this.customerId = Math.abs(customerId);
21     }
22
23     public int getnProducts() {
24         return nProducts;
25     }
26
27     public void setnProducts(int nProducts) {
28         this.nProducts = Math.abs(nProducts);
29     }
30 }
```

Output

Type here to search

23°C 12:04 AM 4/23/2024

```
26 public void setnProducts(int nProducts) {
27     this.nProducts = Math.abs(nProducts);
28 }
29
30
31 public Product2[] getproducts() {
32     return products;
33 }
34
35 public void setproducts(Product2[] products) {
36     this.products = new Product2[nProducts];
37 }
38 public void addProduct (Product2 product , int index){
39     if ( index >=0 && index < nProducts ){
40         products[index]=product ;
41     } else {
42         System.out.println(" Invalid index.please enter vaid index!");
43     }
44 }
45 public void removeProduct ( int index ){
46     if (index >=0 && index < nProducts ){
47         products[index]=null ;
48     } else {
49         System.out.println(" Invalid index.please enter vaid index! ");
50     }
51 }
52
53 public float calculatePrice () {
54     float totalPrice = 0;
55     for (int i = 0; i < nProducts ; i++) {
```

```
56         totalPrice += products[i].getPrice();
57     }
58     return totalPrice;
59 }
60 public void placeOrder (int choice) {
61     Order2 order = new Order2(customerId,1,products,calculatePrice());
62     switch(choice)
63     {
64         case 1:
65             order.printOrderInfo();
66             break ;
67         case 2:
68             System.out.println("Order not placed.Thank you for using our E-Commerce System.");
69             break ;
70     }
71 }
72
73 }
```


The image displays two screenshots of the Apache NetBeans IDE interface, showing the execution of an E-commerce system. The top screenshot shows the initial run with user input, and the bottom screenshot shows the final output with a detailed order summary.

Top Screenshot: Initial Run

```
run:
Welcome to the E-Commerce System!
Please enter your id:
23011169
Please enter your name:
nada
Please enter your address:
alex
How many products do you want to add to your cart ?
4
Which product would you like to add?1- SmartPhone2- T-Shirt3- OOP
2
Which product would you like to add?1- SmartPhone2- T-Shirt3- OOP
3
Which product would you like to add?1- SmartPhone2- T-Shirt3- OOP
2
Which product would you like to add?1- SmartPhone2- T-Shirt3- OOP
1
Your total is $679.95996. Would you like to place the Order ? 1-Yes 2-No
1
Here's your order's summary:
```

Bottom Screenshot: Final Output

```
Which product would you like to add?1- SmartPhone2- T-Shirt3- OOP
2
Which product would you like to add?1- SmartPhone2- T-Shirt3- OOP
3
Which product would you like to add?1- SmartPhone2- T-Shirt3- OOP
2
Which product would you like to add?1- SmartPhone2- T-Shirt3- OOP
1
Your total is $679.95996. Would you like to place the Order ? 1-Yes 2-No
1
Here's your order's summary:
Order ID: 1
Customer ID: 23011169
Products:
T-Shirt - $19.99
OOP - $39.99
T-Shirt - $19.99
SmartPhone - $599.99
Total price: $679.95996
BUILD SUCCESSFUL (total time: 38 seconds)
```