EcommerceSystem.java | ⓒ Product.java × | ⓒ ElectronicProduct.java | ⓒ ClothingProduct.java | ⓒ BookProduct.java | ⓒ Customer.java | ⓒ Cart.java | ⓒ Order.java

```java
13 usages   3 inheritors
public class Product {
    2 usages
    private int productId;
    2 usages
    private String name;
    2 usages
    private float price;

    3 usages
    public void setProductId(int productId) { this.productId = Math.abs(productId); }

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

    3 usages
    public void setPrice(float price) { this.price = Math.abs(price); }

    no usages
    public int getProductId() { return productId; }

    1 usage
    public String getName() { return name; }

    3 usages
    public float getPrice() { return price; }
}
```

EcommerceSystem.java | ⓒ Product.java | ⓒ ElectronicProduct.java × | ⓒ ClothingProduct.java | ⓒ BookProduct.java | ⓒ Customer.java | ⓒ Cart.java | ⓒ Order.java

```java
3 usages
public class ElectronicProduct extends Product{
    2 usages
    private String brand;
    2 usages
    private int warrantyPeriod;

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

    1 usage
    public void setWarrantyPeriod(int warrantyPeriod) { this.warrantyPeriod = Math.abs(warrantyPeriod); }

    no usages
    public String getBrand() { return brand; }

    no usages
    public int getWarrantyPeriod() { return warrantyPeriod; }
}
```

Screenshot 1 — ClothingProduct.java

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

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

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

    public String getSize() {
        return size;
    }

    public String getFabric() {
        return fabric;
    }
}
```

Screenshot 2 — BookProduct.java

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

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

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

    public String getAuthor() { return author; }

    public String getPublisher() { return publisher; }
}
```

EcommerceSystem.java   Product.java   ElectronicProduct.java   ClothingProduct.java   BookProduct.java   Customer.java ✕   Cart.java   Order.java

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


    1 usage
    public void setCustomerId(int customerId) {
        this.customerId = Math.abs(customerId);
    }

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

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

    no usages
    public int getCustomerId() { return customerId; }

    no usages
    public String getName() { return name; }

    no usages
    public String getAddress() { return address; }
}
```

EcommerceSystem.java   Product.java   ElectronicProduct.java   ClothingProduct.java   BookProduct.java   Customer.java   Cart.java ✕   Order.java

```java
public class Cart {
    2 usages
    private int customerId, nProducts;
    5 usages
    private Product[] products;
    1 usage
    public void setCustomerId(int customerId) { this.customerId = Math.abs(customerId); }
    1 usage
    public void setNProducts(int nProducts) {
        this.nProducts = Math.abs(nProducts);
        this.products = new Product[nProducts];
    }
    no usages
    public int getCustomerId() {
        return customerId;
    }
    no usages
    public int getNProducts() { return nProducts; }
    1 usage
    public Product[] getProducts() { return products; }
    1 usage
    public void addProduct(int index, Product product) { products[index] = product; }
    no usages
    public void removeProduct(int index) { products[index] = null; }
    1 usage
    public float calculatePrice() {
        float totalPrice = 0;
        for (Product product : products) {
            if (product != null) {
                totalPrice += product.getPrice();
            }
        }
        return totalPrice;
    }
    no usages
    public void placeOrder() {}
}
```

```java
public class Order {
    3 usages
    private int customerId;
    3 usages
    private int orderId;
    3 usages
    private Product[] products;
    2 usages
    private float totalPrice;
    1 usage
    public void setCustomerId(int customerId) { this.customerId = Math.abs(customerId); }

    1 usage
    public void setOrderId(int orderId) { this.orderId = Math.abs(orderId); }

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

    // Getters
    no usages
    public int getCustomerId() { return customerId; }

    no usages
    public int getOrderId() { return orderId; }

    no usages
    public Product[] getProducts() { return products; }

    1 usage
    public void printOrderInfo() {
        System.out.println("Order id: " + orderId);
        System.out.println("Customer id: " + customerId);
        System.out.println("Products: ");
        for (Product product : products) {
            if (product != null) {
                System.out.println(product.getName() + " - " + product.getPrice());
                totalPrice+=product.getPrice();
            }
        }
        System.out.println("Total price: " + totalPrice);
    }
}
```

```java
import java.util.Scanner;
public class EcommerceSystem {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.println("Welcome to the e-commerce system!");
        System.out.println("Please enter your id:");
        int customerId = Math.abs(scanner.nextInt());
        scanner.nextLine();

        System.out.println("Please enter your name:");
        String name = scanner.nextLine();

        System.out.println("Please enter your address:");
        String address = scanner.nextLine();

        Customer customer = new Customer();
        customer.setCustomerId(customerId);
        customer.setName(name);
        customer.setAddress(address);

        System.out.println("How many products would you like to add to your cart?");
        int nProducts = Math.abs(scanner.nextInt());
        scanner.nextLine();

        Cart cart = new Cart();
        cart.setCustomerId(customerId);
        cart.setNProducts(nProducts);

        for (int i = 0; i < nProducts; i++) {
            System.out.println("Which product would you like to add? ");
            System.out.println("1 - smartphone");
            System.out.println("2 - T-shirt");
            System.out.println("3 - OOP");
            int choice = scanner.nextInt();
            scanner.nextLine();

            Product product;
            switch (choice) {
                case 1:
                    product = new ElectronicProduct();
                    product.setProductId(1);
```

EcommerceSystem.java ×   Product.java   ElectronicProduct.java   ClothingProduct.java   BookProduct.java   Customer.java   Cart.java   Order.java

```java
                    product.setProductId(1);
                    product.setName("smartphone");
                    product.setPrice(599.9f);
                    ((ElectronicProduct) product).setBrand("Samsung");
                    ((ElectronicProduct) product).setWarrantyPeriod(1);
                    break;
                case 2:
                    product = new ClothingProduct();
                    product.setProductId(2);
                    product.setName("T-shirt");
                    product.setPrice(19.99f);
                    ((ClothingProduct) product).setSize("Medium");
                    ((ClothingProduct) product).setFabric("Cotton");
                    break;
                case 3:
                    product = new BookProduct();
                    product.setProductId(3);
                    product.setName("OOP");
                    product.setPrice(39.99f);
                    ((BookProduct) product).setAuthor("O'Reilly");
                    ((BookProduct) product).setPublisher("X Publications");
                    break;
                default:
                    System.out.println("Invalid choice. Please try again.");
                    i--;
                    continue;
            }
            cart.addProduct(i, product);
        }
        System.out.println("Your total is "+cart.calculatePrice()+ " would you like to place the order? yes or no");
        String confirmation=scanner.next();

        if(confirmation.equals("yes")){
            System.out.println("Here's Your order's summary:");
            Order order = new Order();
            order.setCustomerId(customerId);
            order.setOrderId(1);
            order.setProducts(cart.getProducts());
            order.printOrderInfo();}
    }
}
```

Run - EcommerceSystem.java

Run   EcommerceSystem ×

```
D:\Java\bin\java.exe "-javaagent:D:\IntelliJ IDEA Community Edition 2023.3.6\lib\idea_rt.jar=52223:D:\IntelliJ IDEA Community Edition 2023.3.6\bin" -Dfile.encoding=UTF-8 -classpath C:\Us
Welcome to the e-commerce system!
Please enter your id:
23012068
Please enter your name:
mina wahid
Please enter your address:
address
How many products would you like 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
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 679.87 would you like to place the order? yes or no
yes
```

```
Your total is 679.87 would you like to place the order? yes or no
yes
Here's Your order's summary:
Order id: 1
Customer id: 23012068
Products:
T-shirt - 19.99
OOP - 39.99
T-shirt - 19.99
smartphone - 599.9
Total price: 679.87

Process finished with exit code 0
```