

dome@DFDesktop: ~/java-pr

Order.javaCustomer.javaClothingProduc..ElectronicProd..Product.javaBookProduct.java

```
1 package classes;
2 public class BookProduct extends Product{
3     String author;
4     String publisher;
5     public void setAuthor(String author) {
6         this.author = author;
7     }
8     public void setPublisher(String publisher) {
9         this.publisher = publisher;
10    }
11    public String getAuthor() {
12        return author;
13    }
14    public String getPublisher() {
15        return publisher;
16    }
17    public BookProduct(String name, int id, float price, String author, String publisher) {
18        setName(name);
19        setProductId(id);
20        setPrice(price);
21        setAuthor(author);
22        setPublisher(publisher);
23    }
24 }
25
```

NORMAL

BookProduct.java

main

LSP ~ jdtls

java-project

Top

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(dome@DFDesktop) - [~/java-project]

\$ java EcommerceSystem.java

Enter your name

Seif El Deen Khaled Othman Ahmed

Enter your customer id

23010101

Enter address

address

How many products do you want?

3

Which product would you like to add? 1- Smartphone 2- T-Shirt 3- OOP

1

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

Your total is 659.97, Would you like to place order? 1- Yes 2- No

1

Here's your order's summary:

Order ID: 1

Customer ID: 23010101

Products:

Smartphone - 599.99

T-shirt - 19.99

OOP - 39.99

Total price: 659.97

(dome@DFDesktop) - [~/java-project]

\$

```
dome@DFDesktop: ~/java-pr x + v
<EcommerceSystem.. x Cart.java x Order.java x Customer.java x ClothingProduc.. x ElectronicProd.. x
1 import classes.*;
2 import java.lang.Math;
3 import java.util.Scanner;
4 public class EcommerceSystem{
5     public static void main(String[] args) {
6         Scanner scanner = new Scanner(System.in);
7         System.out.println("Enter your name");
8         String name = scanner.nextLine();
9         System.out.println("Enter your customer id");
10        int customerId = Math.abs(Integer.valueOf(scanner.nextLine()));
11        System.out.println("Enter address");
12        String address = scanner.nextLine();
13        Customer customer = new Customer(name, address, customerId);
14        Product smartphone = new ElectronicProduct("Smartphone", 42, 599.99f, "Samsung", 1);
15        Product bookOOP = new BookProduct("OOP", 3, 39.99f, "O'Reilly", "X publications");
16        Product cottonShirt = new ClothingProduct("T-shirt", 2, 19.99f, "Medium", "Cotton");
17        System.out.println("How many products do you want?");
18        int nProducts = Math.abs(Integer.valueOf(scanner.nextLine()));
19        Cart cart = new Cart(customer.getCustomerId(), nProducts);
20        //-----
21        for (int i = 0; i < nProducts; i++) {
22            System.out.println("Which product would you like to add? 1- Smartphone 2- T-Shirt 3- OOP");
23            int choice = Math.abs(Integer.valueOf(scanner.nextLine()));
24            if (choice == 1) {
25                cart.addProduct(i, smartphone);
26            }
27            else if (choice == 2) {
28                cart.addProduct(i, cottonShirt);
29            }
30            else if (choice == 3) {
31                cart.addProduct(i, bookOOP);
32            }
33            else {
34                System.out.println("Invalid product");
35                i--;
36            }
37        }
38        while(true){
39            System.out.println("Your total is " + cart.calculatePrice() + ", Would you like to place order? 1- Yes 2- No");
40            int choice = Math.abs(Integer.valueOf(scanner.nextLine()));
41            if (choice == 1) {
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100
}
```

NORMAL EcommerceSystem.java main 1 29 more lines; before #1 1 second ago

1 LSP ~ jdtls java-project 52%

```
dome@DFDesktop: ~/java-pr x + v
<EcommerceSyste.. x Cart.java x Order.java x Customer.java x ClothingProduc.. x ElectronicProd.. x
25     cart.addProduct(i,smartphone);
26 }
27 else if (choice == 2) {
28     cart.addProduct(i, cottonShirt);
29 }
30 else if (choice ==3) {
31     cart.addProduct(i, bookOOP);
32 }
33 else {
34     System.out.println("Invlid product");
35     i--;
36 }
37 }
38 while(true){
39     System.out.println("Your total is " + cart.calculatePrice() + ", Would you like to place order? 1- Yes 2- No");
40     int choice = Math.abs(Integer.valueOf(scanner.nextLine()));
41     if (choice == 1) {
42         cart.placeOrder();
43         break;
44     }
45     }else {
46         // in the project example this case was not talked about, but there is a fully working remove function just in case.
47         System.out.println("Would you like to remove a product? 1- remove 2- add a product -else exit");
48         choice = Math.abs(Integer.valueOf(scanner.nextLine()));
49         if (choice == 2) {
50
51         }
52         if (choice == 1) {
53             if(cart.products.length == 0) {
54                 System.out.println("Cart is empty, exiting.");
55                 break;}
56             System.out.println("Enter the product you would like to remove, relative to the order of entry");
57
58             cart.removeProduct(Math.abs(Integer.valueOf(scanner.nextLine())) + 1);
59         }
60         else {break;}
61     }
62 }
63 }
64 }
65 }
NORMAL EcommerceSystem.java main 1
29 more lines; before #1 1 second ago
```


dome@DFDesktop: ~/java-pr

<EcommerceSystem... X

Cart.java X

Order.java X

Customer.java X

ClothingProduct... X

ElectronicProd... X

☐ X

```
1 package classes;
2 import classes.Order;
3 public class Cart {
4     public int nProducts;
5     public Product[] products;
6     public int customerId;
7
8     public Cart(int customerId, int nProducts) {
9         setCustomerId(customerId);
10        setnProducts(nProducts );
11        products= new Product[nProducts];
12    }
13
14
15    public void addProduct(int index, Product addAProduct) {
16        products[index] = addAProduct;
17    }
18
19    public float calculatePrice () {
20        float total = 0f;
21        for (int i = 0; i < products.length; i++) {
22            total = total + products[i].getPrice();
23        }
24        return total;
25    }
26
27    public void removeProduct(int index) {
28        Product newProducts[] = new Product[(products.length - 1)];
29        for (int i = index ; i < (products.length - 1); i++) {
30            products[i] = products[i+1];
31        }
32        products[products.length - 1] = null;
33        for (int i = 0; i < products.length - 1; i++) {
34            newProducts[i] = products[i];
35        }
36        products = newProducts;
37    }
38
39
40    public void placeOrder() {
41
```

NORMAL

Cart.java

main

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dome@DFDesktop: ~/java-pr

EcommerceSyste.. X

Cart.java X

Order.java X

Customer.java X

ClothingProduc.. X

ElectronicProd.. X

```
27 public void removeProduct(int index) {
28     Product newProducts[] = new Product[(products.length - 1)];
29     for (int i = index ; i < (products.length - 1); i++) {
30         products[i] = products[i+1];
31     }
32     products[products.length - 1] = null;
33     for (int i = 0; i < products.length - 1; i++) {
34         newProducts[i] = products[i];
35     }
36     products = newProducts;
37 }
38
39
40 public void placeOrder() {
41
42
43     Order order1 = new Order(getCustomerId(), 1 , products, calculatePrice());
44     order1.printOrderInfo();
45 }
46 //setters and getters
47 public void setCustomerId(int customerId) {
48     this.customerId = customerId;
49 }
50 public void setnProducts(int nProducts) {
51     this.nProducts = nProducts;
52 }
53 public void setProducts(Product[] products) {
54     this.products = products;
55 }
56 public Product[] getProducts() {
57     return products;
58 }
59
60 public int getCustomerId() {
61     return customerId;
62 }
63 public int getnProducts() {
64     return nProducts;
65 }
66 }
67
```

NORMAL

Cart.java

main

1

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dome@DFDesktop: ~/java-pr

<EcommerceSystem.java

Cart.java

Order.java

Customer.java

ClothingProduct.java

ElectronicProduct.java

```
1 package classes;
2 public class Order {
3     int customerId;
4     int orderId;
5     Product[] products;
6     float totalPrice;
7     public Order(int customerId, int orderId, Product[] products, float totalPrice) {
8         this.customerId = customerId;
9         this.orderId = orderId;
10        this.products = products;
11        this.totalPrice = totalPrice;
12    }
13
14    public void printOrderInfo() {
15        System.out.println("Here's your order's summary: ");
16        System.out.println("Order ID: " + orderId);
17        System.out.println("Customer ID: " + customerId);
18        System.out.println("Products: ");
19        for (int i = 0; i < products.length; i++) {
20            System.out.println(products[i].name + " - " + products[i].price);
21        }
22        System.out.println("Total price: " + totalPrice);
23    }
24 }
25
26
27
28 }
```

NORMAL

Order.java

main

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dome@DFDesktop: ~/java-pr

EcommerceSystem.java Cart.java Order.java Customer.java ClothingProduct.java ElectronicProduct.java

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

NORMAL Customer.java main

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dome@DFDesktop: ~/java-pr

EcommerceSyste.. X Cart.java X Order.java X Customer.java X ClothingProduc.. X ElectronicProd.. X

```
1 package classes;
2 public class ClothingProduct extends Product{
3
4     String size;
5     String fabric;
6
7     public void setSize(String size) {
8         this.size = size;
9     }
10    public void setFabric(String fabric) {
11        this.fabric = fabric;
12    }
13    public String getSize() {
14        return size;
15    }
16    public String getFabric() {
17        return fabric;
18    }
19    public ClothingProduct(String name, int id, float price, String size, String fabric) {
20        setName(name);
21        setPrice(price);
22        setProductId(id);
23        setSize(size);
24        setFabric(fabric);
25    }
26 }
```

NORMAL

ClothingProduct.java

main

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dome@DFDesktop: ~/java-pr

EcommerceSyste.. X Cart.java X Order.java X Customer.java X ClothingProduc.. X ElectronicProd.. X

```
1 package classes;
2 public class ElectronicProduct extends Product{
3     String brand;
4     int warrantyPeriod;
5     public void setBrand(String brand) {
6         this.brand = brand;
7     }
8     public void setWarrantyPeriod(int warrantyPeriod) {
9         this.warrantyPeriod = warrantyPeriod;
10    }
11    public String getBrand() {
12        return brand;
13    }
14    public int getWarrantyPeriod() {
15        return warrantyPeriod;
16    }
17
18    public ElectronicProduct(String name, int id, float price, String brand, int warrantyPeriod) {
19        setName(name);
20        setProductId(id);
21        setPrice(price);
22        setBrand(brand);
23        setWarrantyPeriod(warrantyPeriod);
24    }
25 }
26 }
```

NORMAL

ElectronicProduct.java

main

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dome@DFDesktop: ~/java-pr

Cart.javaOrder.javaCustomer.javaClothingProduc..ElectronicProd..Product.java

```
1 package classes;
2 public class Product {
3     int productId;
4     float price;
5     String name;
6
7     public void setName(String name) {
8         this.name = name;
9     }
10    public void setPrice(float price) {
11        this.price = price;
12    }
13    public void setProductId(int productId) {
14        this.productId = productId;
15    }
16    public String getName() {
17        return name;
18    }
19    public float getPrice() {
20        return price;
21    }
22    public int getProductId() {
23        return productId;
24    }
25 }
```

NORMAL

Product.java

main

LSP ~ jdts

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