

```
10  L  */
11
12  @  public class Product {
13      protected int productId ;
14      protected String name ;
15      protected double price ;
16
17
18  [-] public Product(){}
19
20
21  [-] public Product(int productId, String name, double price){
22      if(productId >0)
23          this.productId = productId ;
24      else
25          this.productId = Math.abs(productId) ;
26      this.name = name ;
27      if(price >0)
28          this.price = price ;
29      else
30          this.price = Math.abs(price) ;}
31
32
33  [-] public void setproductId(int id){
34      if(id >0)
35          productId = id ;
36      else
37          productId = Math.abs(id); }
38
39  [-] public void setName(String n){
40      name = n ;}
41
42  [-] public void setPrice(double p){
43      if(p >0)
44          price = p ;
45      else
46          price = Math.abs(p); }
```

```
42  
43 [-] public int getproductId() {  
44     return productId ; }  
45  
46 [-] public String getName() {  
47     return name ; }  
48 [-] public double getPrice() {  
49     return price ; }  
50
```

```
/*
public class ElectronicProduct extends Product {
    private String brand ;
    private int WarrantyPeriod ;

    public ElectronicProduct() {}

    public ElectronicProduct(int productId, String name, double price, String brand, int WarrantyPeriod) {
        super(productId, name, price) ;
        this.brand = brand ;
        this.WarrantyPeriod = WarrantyPeriod ; }

    public void setbrand(String b) {
        brand = b ; }

    public void setWarrantyPeriod(int w) {
        if(w >0)
            WarrantyPeriod = w ;
        else
            WarrantyPeriod = Math.abs(w) ; }

    public String getbrand() {
        return brand ; }

    public int getWarrantyPeriod() {
        return WarrantyPeriod; }

}
```

```
package e.commerce_system;

/*
 *
 * @author LOL
 */
public class ClothingProduct extends Product {
    private String size ;
    private String fabric ;

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

    public void setsize(String s){
        size = s ;}

    public void setfabric(String f){
        fabric = f ; }

    public String getfabric(){
        return fabric ; }

    public String getsize(){
        return size ; }
```

```
public class BookProduct extends Product {  
    private String author ;  
    private String publisher ;  
  
    public BookProduct() {}  
  
    public BookProduct(int productId, String name, double price, String author, String publisher){  
        super(productId, name, price) ;  
        this.author = author ;  
        this.publisher = publisher ;  
    }  
  
    public void setauthor(String a){  
        author = a ;}  
  
    public void setpublisher(String p){  
        publisher = p ; }  
  
    public String getauthor(){  
        return author ;}  
  
    public String getpublisher(){  
        return publisher ;}  
}
```

```
10  */
11  public class Customer {
12      private int customerId ;
13      private String name ;
14      private String address ;
15
16  [-] public Customer() {}
17
18  [-] public Customer(int customerId, String name, String address) {
19      this.customerId = Math.abs(customerId) ;
20      this.name = name ;
21      this.address = address ; }
22
23  [-] public void setcustomerId(int id){
24      if(id >0)
25          customerId = id ;
26      else
27          customerId = Math.abs(id); }
28
29  [-] public void setname(String n){
30      name = n ; }
31
32  [-] public void setaddress(String a){
33      address = a ; }
34
35  [-] public int getcustomerId(){
36      return customerId ; }
37
38  [-] public String getname(){
39      return name ; }
40
41  [-] public String getaddress(){
42      return address ; }
43
44
```

Projects

```
4    */
5    package e.commerce_system;
6
7    /**
8     *
9     * @author LOL
10    */
11   public class Order {
12       private int customerId ;
13       private int orderId = 1 ;
14       private Product products[] ;
15       private double totalPrice ;
16
17   public Order(){
18   }
19
20  public Order(int customerId, double totalPrice, Product products[]){
21      this.customerId = customerId ;
22      this.totalPrice = totalPrice ;
23      this.products = products ; }
24
25  public void printOrderInfo(){
26      System.out.println("Here is your order's summary:");
27      System.out.println("Order ID: "+orderId);
28      System.out.println("Customer ID: "+customerId);
29      System.out.println("Products: ");
30      for(int i=0;i<products.length;i++){
31          System.out.println(products[i].name+" - "+products[i].price); }
32      System.out.println("Total Price: $"+totalPrice); }
33
34
35 }
```

```
public class Cart {  
    private int customerId ;  
    private int nProducts ;  
    Product [] products ;  
  
    public Cart(){  
    }  
  
    public Cart(int customerId, int nProducts){  
        this.customerId = Math.abs(customerId);  
        this.nProducts = Math.abs(nProducts) ;  
        this.products = new Product[nProducts] ; }  
  
    public void setnProducts(int n){  
        if(n >0)  
            nProducts = n ;  
        else  
            nProducts = Math.abs(n); }  
  
    public int getnproducts(){  
        return nProducts ; }  
  
    public double calculatePrice(){  
        double totalPrice = 0 ;  
        for(int i=0;i<products.length;i++){  
            totalPrice += products[i].price ; }  
        return totalPrice ; }  
  
    public void addProduct(Product product){  
        for(int i=0;i<products.length;i++){  
            if(products[i]==null){  
                products[i] = product ;  
                break ;}}}
```

```
- public void removeProduct(int index) {  
    products[index] = null ; }  
  
- public void placeOrder(Order order, int n){  
    if(n==1){  
        order.printOrderInfo(); }  
    else  
        for(int i=0;i<products.length;i++){  
            products[i] = null ;  
        }  
}
```

```
public class ECommerce_system {  
    /**  
     * @param args the command line arguments  
     */  
    public static void main(String[] args) {  
        Scanner input = new Scanner (System.in);  
  
        ElectronicProduct elc ;  
        elc = new ElectronicProduct(1, "smartphone", 599.9, "Samsung", 1);  
        ClothingProduct clo ;  
        clo = new ClothingProduct(2, "T-shirt", 19.99, "Medium", "Cotton");  
        BookProduct book ;  
        book = new BookProduct(3, "OOP", 39.99, "O'Reilly", "X Publications") ;  
        System.out.println("Welcome to the E-Commerce System!");  
  
        Customer c = new Customer() ;  
        System.out.println("Please enter your id");  
        int id = input.nextInt();  
        input.nextLine() ;  
        c.setcustomerId(id);  
        System.out.println("Please enter your name");  
        String name = input.nextLine();  
        c.setname(name);  
        System.out.println("Enter your address");  
        String address = input.nextLine() ;  
        c.setaddress(address);  
        System.out.println("How many products you want to add to your cart?");  
        int n = input.nextInt() ;  
        Cart cart = new Cart(id, n) ;  
        for(int i =0;i<n;i++){  
            System.out.print("Which product would you like to add?");  
            System.out.print(" 1- smartphone 2- T-shirt 3- OOP");  
            System.out.println();  
            int choice = input.nextInt() ;  
            if(choice == 1){  
                cart.addProduct(elc);  
            }else if(choice == 2){  
                cart.addProduct(clo);  
            }else if(choice == 3){  
                cart.addProduct(book);  
            }  
        }  
        System.out.println("Your total bill is "+cart.getTotal());  
    }  
}
```

```
int choice = input.nextInt();
switch(choice) {
    case 1:
        cart.addProduct(elc);
        break;
    case 2 :
        cart.addProduct(clo);
        break;
    case 3 :
        cart.addProduct(book);
        break; }
System.out.println("Your total price is $" + cart.calculatePrice() + " would you like to place the order? 1- Yes 2- No");
int confirm_order = input.nextInt();
if(confirm_order==1){
    Order order = new Order(id, cart.calculatePrice(), cart.products);
    cart.placeOrder(order, confirm_order);
}
```

run:

Welcome to E-commerce System

please enter your name

youssef ehab ashour

Please enter your address:

21 street

Please enter your id:

23011186

How many products you want to add to your cart?

4

Which product would you like to add? 1-smartphone 2-T-shirt 3-oop

2

T-shirt added to cart.

Which product would you like to add? 1-smartphone 2-T-shirt 3-oop

3

oop added to cart.

Which product would you like to add? 1-smartphone 2-T-shirt 3-oop

2

T-shirt added to cart.

Which product would you like to add? 1-smartphone 2-T-shirt 3-oop

1

smartphone added to cart.

Your Total is : 679.8700256347656 Would you like to place the order? 1-yes 2-no

1

Here's your order's summary:

Order ID: 1

Customer ID: 23011186

Products:

- T-shirt (price: 19.989999771118164)
- oop (price: 39.9900016784668)
- T-shirt (price: 19.989999771118164)
- smartphone (price: 599.9000244140625)

The total price should be: \$679.8700256347656

BUILD SUCCESSFUL (total time: 1 minute 13 seconds)