"Assiginment programming"

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```java
/*
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 */
package mmmmmmm;

/**
 *
 * @author Delta
 */import java.util.Scanner;
  public class Mmmmmmm {

  /**
   * @param args the command line arguments
   */
  public static void main(String[] args) {
    Scanner input =new Scanner(System.in);
    Electronicproduct S= new Electronicproduct(1,"smartphone", 599.9f, "samsung",1);
    clothingproduct C= new clothingproduct (2,"T-shirt",19.99f ,"medium","cotton");
    bookproduct b=new bookproduct(3,"oop",39.99f,"o'Reilly","x publications");
    System.out.println("welcome to the E-commerce system!");
    System.out.println("  please Enter your  ID: ");
    int customerId =input.nextInt();
    System.out.println(" please Enter your  name");
    String customerName = input .next();
    System.out.println("please enter your address");
    String address =input .next();
    customer customer=new customer (customerId , customerName ,address);
    System.out.println("How many products do you like to add to your cart");
    int nproducts =input.nextInt();
    cart cart=new cart (customerId , customerName,nproducts);
    for(int i=0;i< nproducts ;i++){
      System.out.println("which product would you like to add? 1- smartphone 2-T-shirt 3-oop");
      int choice=input.nextInt();
      switch (choice){
        case 1 :
          cart.addproduct(new Electronicproduct(1,"smartphone",599.9f,"samsung",1));
          break;
        case 2 :
          cart.addproduct(new clothingproduct (2,"T-shirt",19.99f ,"medium","cotton"));
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            break;
         case 3 :
             cart.addproduct(new bookproduct(3,"oop",39.99f,"o'Reilly","x publications"));
             break;
     }
    }
      cart.calculateprice();
      System.out.println("your total is $"+cart.calculateprice());
     System.out.println("would you like to place order? 1-yes 2-no");
     int choice =input.nextInt();
     if (choice==1){
         cart.placeOrder();
     }
     else{
         input.close();
     }
     cart.printOrderInfo();
    }
}
  class product{
    private int productId;
    private String name;
    private double price;
    public product(){

    }
    public product(int id,String n,double p ){
        productId=id;
        name=n;
        price=p;
    }
    public void setproductId(int id){
        productId=id;
    }
    public void setname(String n){
        name=n;
    }
    public void setprice(double p){
        price=p;
    }
    public int getproductId(){
        return productId;
    }
    public String getname(){
        return name;
    }
    public double getprice(){
        return price;
```

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    }
  }
class Electronicproduct extends product{
  private String brand;
  private int warrantyperiod;
  public Electronicproduct (){

  }
  public Electronicproduct(int id,String n ,double p, String b ,int wp) {
    super(id,n,p);
    brand=b;
    warrantyperiod=wp;
  }
  public void setbrand(String b){
      brand=b;
  }
  public void setwarrantyperiod(int wp){
      warrantyperiod=wp;
  }
  public String getbrand(){
      return brand;
  }
  public int getwarrantyperiod(){
      return warrantyperiod;
  }
  @Override
  public String getname(){
      return super.getname()+"(brand :"+brand +")";
  }

}
class clothingproduct extends product{
    private String size;
    private String fabric;
    public clothingproduct(){

    }
    public clothingproduct(int id ,String n,double p,String s,String f){
        super (id ,n,p);
        size=s;
        fabric=f;
    }
    public void getsize(String s){
        size=s;
    }
    public void getfabric (String f){
        fabric=f;
    }
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        public String setsize(){
            return size;
        }
        public String setfabric(){
            return fabric;
        }
        @Override
        public String getname(){
            return super.getname()+"(size:"+size +", fabric"+fabric+")";
        }
    }
    class bookproduct extends product{
        private String author ;
        private String publisher;
        public bookproduct(){

        }
        public bookproduct (int id , String n, double p, String aut , String pub){
            super(id ,n,p);
            author=aut;
            publisher=pub;
        }
        public void setauthor(String aut){
            author=aut;
        }
        public void setpublisher(String pub){
            publisher=pub;
        }
        public String getauthor(){
            return author;
        }
        public String getpublisher(){
            return publisher;
        }
        @Override
        public String getname(){
            return super.getname()+"(author :"+author +",publisher :"+publisher+")";
        }
    }
    class customer {
        private int  customerId;
        private String  customerName;
        private String address;
        public customer(int c, String cn,String add){
            customerId=c;
            customerName=cn;
            address=add;
        }
```

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        public void setcustomerId(int c){
            customerId=c;
        }
        public void setcustomerName(String cn){
            customerName=cn;
        }
        public void setaddress(String add){
          address=add;
        }
        public int getcustomerId(){
            return customerId;
        }
        public String getcustomerName(){
            return customerName;
        }
        public String getaddress() {
            return address;
        }
    }
class cart{
 private  int customerId ;
 private String customerName;
 private  int nproducts;
 private  product[]products;
 private int orderId =1;
  public cart(){

  }
  public cart( int c , String cn ,int np){
     customerId =c;
     customerName=cn;
     nproducts=np;
     this.products=new product[nproducts];
  }
        public void setcustomerId(int c){
            customerId=c;
        }
        public void setnproducts(int np){
            nproducts=np;
        }
        public int getcustomerId(){
            return customerId;
        }
     public int getnproducts(){
        return nproducts;
     }
     public product[] getproducts(){
        return products;
```

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  }
    public void addproduct (product product ){
        for(int i=0; i< nproducts ;i++){
            if(products[i]==null){
                products[i]=product;
                break;
            }
        }

    }
    public void removeproduct (int index){
        products[index]=null;
    }
    public double calculateprice(){
        double totalprice=0;
        for(product product :products ){
            if (product != null){
                totalprice+=product.getprice();
            }
        }
     return totalprice;
    }
    public boolean placeOrder(){
        return true;
    }
    public void placeorder(){
        System.out.println("order placed successfully");
    }
    public void printOrderInfo(){
        System.out.println("Here's your order's summary");
        System.out.println("order Id :"+ orderId ++);
        System.out.println("Customer Id :"+customerId);
        System.out.println("customerName: "+customerName);
        System.out.println("products:");
        for(product product :products){
            if (product !=null){
        System.out.println( product.getname() + " "+product.getprice() +"$");
            }
        }
         System.out.println("Total price :$ "+calculateprice());
    }
}
class order{
    private int orderId;
    private int customerId;
    private product[]products;
    private double totalprice;
    public order(int customerId ,int orderId, product []products,double totalprice){
```

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        this.customerId=customerId;
        this.orderId=orderId;
        this.products=products;
        this.totalprice=calculateprice();
    }
    private double calculateprice(){
        double totalprice=0;
        for(product product :products ){
            if (product != null){
                totalprice+=product.getprice();
            }
        }
    return totalprice;
    }
    public void printOrderInfo(){
        System.out.println("Here's your order's summary");
        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()+"$");


        }


    }
        System.out.println("Total price :$ "+totalprice) ;
}
}
```

output: