Ecommerce project:

```java
package ecommercesystem;
public class Product {
protected int productId;
protected String name;
protected float price;
public Product (int pId, String n, float p) {
productId = Math.abs(pId);
name = n;
price = Math.abs(p);
}
public int getProductId() {
return productId;
}
public void setProductId(int productId) {
if(productId>0)
this.productId = productId;
else
this.productId =Math.abs(productId);
}
public String getName() {
return name;
```

```java
}
public void setName(String name) {
this.name = name;
}
public float getPrice() {
return price;
}
public void setPrice(float price) {
if(price>0)
this.price = price;
else
this.price =Math.abs(price);
}
}
public class ElectronicProduct extends Product{
private String brand;
private int warrantyPeriod;
public ElectronicProduct(int pId, String n, float p, String b,int wP) {
super(pId, n, p);
brand = b;
warrantyPeriod = wP;
```

```java
}
public String getBrand() {
return brand;
}
public void setBrand(String brand) {
this.brand = brand;
}
public int getWarrantyPeriod() {
return warrantyPeriod;
}
public void setWarrantyPeriod(int warrantyPeriod) {
if(warrantyPeriod>0)
this.warrantyPeriod = warrantyPeriod;
else
this.warrantyPeriod =Math.abs(productId);
}
}
```

```java
public class ClothingProduct extends Product {
private String fabric;
private String size;
public ClothingProduct(int pId, String n, float p, String s,String f) {
super(pId, n, p);
size = s;
fabric = f;
}
public String getFabric() {
return fabric;
}
public void setFiber(String fabric) {
this.fabric = fabric;
}
public String getSize() {
return size;
}
public void setSize(String size) {
this.size = size;
}
```

```java
}
public class BookProduct extends Product{
private String author;
private String publisher;
public BookProduct (int pId, String n, float p, String a, String pub) {
super(pId, n, p);
author = a;
publisher = pub;}
public String getAuthor() {
return author;
}
public void setAuthor(String author) {
this.author = author;
}
public String getPublisher() {
return publisher;
}
public void setPublisher(String publisher) {
this.publisher = publisher;
```

```java
    }
}
public class Customer {
private int customerId;
private String name;
private String address;
public Customer(int cId, String n, String a) {
customerId = cId;
name = n;
address = a;
}
public int getCustomerId() {
return customerId;
}
public void setCustomerId(int customorId) {
this.customerId = customorId;
}
public String getName() {
return name;
```

```java
}
public void setName(String name) {
this.name = name;
}
public String getAddress() {
return address;
}
public void setAddress(String address) {
this.address = address;
}
}
public class Cart {
private int customorId;
private int nProducts;
private Product[]products ;
int length;
public int getCustomorId() {
return customorId;
}
```

```java
public void setCustomorId(int customorId) {
this.customorId = customorId;
}
public int getnProducts() {
return nProducts;
}
public Product[] getProducts() {
return products;
}
public void setProducts(Product[] products) {
this.products = products;
}
public void setnProducts(int nProducts) {
this.nProducts = nProducts;
products = new Product[nProducts];
length=nProducts;
}
public void addProducts(Product p,int i){
products[i]=p;
```

```java
}
public void removeProduct(int i){
products[i]=null;
length--;
}
public float calculatePrice(Product products[]){
float total=0;
for(int i=0;i<nProducts;i++){
if(products[i]==null)
continue;
else
total+=products[i].getPrice();
}
return total;
}
public void placeOrder(int customorId){
Scanner input=new Scanner(System.in);
Order o=new Order();
System.out.println("would you like to place order? 1_yes 2_no");
int place =input.nextInt();
int order=1;
if(place==1){
o.printOrderInfo(customorId, order, calculatePrice(products), length,
products,nProducts);
```

```java
}
else{
System.out.println("do you want to remove an item? 1-yes 2-no");
int x=input.nextInt();
if(x==1){
System.out.println("wich item you wish to remove?");
int index=input.nextInt();
index--;
removeProduct(index);
o.printOrderInfo(customorId, order, calculatePrice(products), length,
products,nProducts);
}
System.out.println("wish you a happy day :)");
}
}
}
public class Order {
private int customorId;
private int orderId;
private float totalPrice;
private int nProducts;
private Product[]products=new Product[nProducts];
```

```java
public int getCustomorId() {
return customorId;
}
public void setCustomorId(int customorId) {
if(customorId>0)
this.customorId = customorId;
else
this.customorId = Math.abs(orderId);
}
public int getOrderId() {
return orderId;
}
public void setOrderId(int orderId) {
if(orderId>0)
this.orderId = orderId;
else
this.orderId = orderId;
}
public float getTotalPrice() {
```

```java
        return totalPrice;
    }
    public int getnProducts() {
        return nProducts;
    }
    public void setnProducts(int nProducts) {
        this.nProducts = nProducts;
    }
    public Product[] getProducts() {
        return products;
    }
    public void setProducts(Product[] products) {
        this.products = products;
    }
    public void setTotalPrice(float totalPrice) {
        if(totalPrice>0)
            this.totalPrice = totalPrice;
        else
            this.totalPrice = Math.abs(totalPrice);
```

```java
}
public void printOrderInfo(int customorId , int orderId, float totalPrice, int
length,Product products[],int nProducts){
System.out.println("Here is your order summary: ");
System.out.println("Order id: "+orderId+"\ncustomor id:
"+customorId+"\nnumber of products: "+length);
System.out.println("products: ");
for(int i=0;i<nProducts;i++){
if(products[i]==null)
continue;
else{
System.out.println(products[i].getName()+" -$"+products[i].getPrice());
}
}
System.out.println("tatal price :&"+totalPrice);
}
}
public class EcommerceSystem {
public static void main(String[] args) {
ElectronicProduct e=new ElectronicProduct(1,"Smartphone", 599.9f, "Samsung",
1);
ClothingProduct c1=new ClothingProduct(2, "T-shirt",19.99f, "Medium",
"Cotton");
```

```java
BookProduct b=new BookProduct(3, "OOP", 39.99f,"O'Reilly", "X Publications");
Scanner input =new Scanner(System.in);
System.out.println("Welcome to the E-commerce System!");
System.out.println("Please enter your id");
int id=input.nextInt();
System.out.println("Please Enter your name");
String name=input.nextLine();
input.nextLine();
System.out.println("Please enter your address");
String address=input.nextLine();
input.nextLine();
Customer cu=new Customer(id,name,address);
System.out.println("How many products you want to add to the cart?");
Cart c=new Cart();
int x=input.nextInt();
c.setnProducts( x);
int i;
for(i=0;i<x;i++){
```

```java
System.out.println("wich product would you like to add? '1' for Samsung
Smartphone -'2' for T-shirt -'3' for OOP book by O'Reilly");
int choice=input.nextInt();
switch (choice){
case 1:
c.addProducts(e, i);
break;
case 2:
c.addProducts(c1, i);
break;
case 3:
c.addProducts(b, i);
break;
default:
{System.out.println("please enter a valid choice");
i--;
}
}
}
System.out.println("your total is $"+c.calculatePrice(c.getProducts()));
c.placeOrder(cu.getCustomerId());
}
}
```