```java
package oob.project;

public class product {

   protected int productId;
    protected String name;
    protected float price;

    public product() {
    }

    public product(int productId, String name, float price) {
        setProductId(productId);
        setName(name);
        setPrice(price);
    }

    public int getProductId() {
        return productId;
    }

    public void setProductId(int productId) {
        this.productId = Math.abs(a: productId);

    }

     public String getName() {
         return name;
     }

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

     public float getPrice() {
         return price;
     }

     public void setPrice(float price) {
         this.price = Math.abs(a: price);
     }
}
```

```java
package oob.project;

public class ElectronicProduct extends product {

 private   String brand;
  private  int warrantyPeriod;

    public ElectronicProduct() {
    }

    public ElectronicProduct(String brand, int warrantyPeriod, int productId, String name, float price) {
        super(productId, name, price);
        setBrand(brand);
        setWarrantyPeriod(warrantyPeriod);
    }

    public String getBrand() {
        return brand;
    }

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

    public int getWarrantyPeriod() {
        return warrantyPeriod;
    }

    public void setWarrantyPeriod(int warrantyPeriod) {
        this.warrantyPeriod = Math.abs(a: warrantyPeriod);
    }

}
```

```java
package oob.project;

public class ClothingProduct extends product {

 private String size, fabric;

    public ClothingProduct() {
    }

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

    public String getSize() {
        return size;
    }

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

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

```
27
28      public void setFabric(String fabric) {
29          this.fabric = fabric;
30      }
31
32  }
33
```

```
1   package oob.project;
2
3   public class BookProduct extends product {
4
5      private String author, publisher;
6
7       public BookProduct() {
8       }
9
10      public BookProduct(String author, String publisher, int productId, String name, float price) {
11          super(productId, name, price);
12          this.author = author;
13          this.publisher = publisher;
14      }
15
16      public String getAuthor() {
17          return author;
18      }
19
20      public void setAuthor(String author) {
21          this.author = author;
22      }
23
24      public String getPublisher() {
25          return publisher;
26      }
```

```
27
28      public void setPublisher(String publisher) {
29          this.publisher = publisher;
30      }
31
32  }
33
```

```java
package oob.project;

public class Customer {

    private int customerId;
    private String name, address;

    public Customer() {
    }

    public Customer(int customerId, String name, String address) {
        setCustomerId(customerId);
        this.name = name;
        this.address = address;
    }

    public int getCustomerId() {
        return customerId;
    }

    public void setCustomerId(int customerId) {
        this.customerId = Math.abs(a: customerId);
    }

    public String getName() {
        return name;
    }

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

    public String getAddress() {
        return address;
    }

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

}
```

```java
package oob.project;

public class Cart {

    private int customerId, nProducts;
    private float totalPrice = 0;
    product[] products ;

    public int getCustomerId() {
        return customerId;
    }

    public void setCustomerId(int customerId) {
        this.customerId = Math.abs( a: customerId);
    }

    public int getnProducts() {
        return nProducts;
    }

    public void setnProducts(int nProducts) {
        this.nProducts = Math.abs( a: nProducts);
            products = new product[nProducts];

    }

}
```

```
27      public product[] getProducts() {
28          return products;
29      }
30
31      public void setProducts(product[] products) {
32          this.products = products;
33      }
34
35      public void addProduct(product a, int i) {
36          if (i >= 0 && i < nProducts) {
37              products[i] = a;
38              calculatePrice(a);
39          } else {
40              System.out.println(x: "invalid index");
41          }
42      }
43
44      public void removeProduct(product a, int i) {
45          if (i >= 0 && i < nProducts) {
46              products[i] = null;
47          } else {
48              System.out.println(x: "invalid index");
49          }
50      }
51
52      public void calculatePrice(product a) {

53          totalPrice = totalPrice + a.getPrice();
54      }
55
56      public float getTotalPrice() {
57          return totalPrice;
58      }
59
60      public boolean placeOrder(int verify) {
            if (verify == 1) {
62              return true;
63          } else {
64              return false;
65          }
66      }
67
68  }
69
```

```java
package oob.project;

public class Order {

    private int customerId, nProducts;
    private static int orderId = 0;
    private product[] products = new product[nProducts];
    private float totalPrice;

     public void setCustomerId(int customerId) {
         this.customerId = customerId;
     }

     public void setnProducts(int nProducts) {
         this.nProducts = nProducts;
     }

     public void setTotalPrice(float totalPrice) {
         this.totalPrice = totalPrice;
     }

     public int getCustomerId() {
         return customerId;
     }

     public int getnProducts() {
         return nProducts;
     }

     public float getTotalPrice() {
         return totalPrice;
     }

     public Order(Cart a) {
         orderId++;
         products=a.getProducts();
     }

     public void printOrderInfo(Cart a){
         System.out.println(x: "Here's your order's summary : ");
         System.out.println("Order Id : " + orderId);
         System.out.println("Customer Id : " + customerId);
         System.out.println(x: "Products ");
         for(int i = 0; i < a.products.length; i++) {
             System.out.println(a.products[i].name + " _$ " + products[i].getPrice());
         }
         System.out.println("Total price : $" + totalPrice);

     }

}

```

```java
package oob.project;

import java.util.Scanner;

public class EcommerceSystem {

    public static void main(String[] args) {
Scanner in = new Scanner(source: System.in);
System.out.println(x: "Welcome to the E-Commerce System!");
ElectronicProduct smartphone = new ElectronicProduct(brand: "Samsung", warrantyPeriod: 1, productId: 1, name: "Smart Phone", price: 599.99f);
ClothingProduct tshirt = new ClothingProduct(size: "Medium", fabric: "Cotton", productId: 2, name: "T_Shirt", price: 19.99f);
BookProduct OOP = new BookProduct(author: "O'Reilly", publisher: "X Publications", productId: 3, name: "OOP", price: 39.99f);
Customer youssef = new Customer();
System.out.println(x: "please Enter your Id ");
youssef.setCustomerId(customerId: in.nextInt());
System.out.println(x: "please Enter your Name ");
youssef.setName(name: in.next());
System.out.println(x: "please Enter your address ");
youssef.setAddress(address: in.next());
System.out.println(x: "How many products you want to add to your cart ? ");
Cart cl = new Cart();
cl.setnProducts(nProducts: in.nextInt());
cl.setCustomerId(customerId: youssef.getCustomerId());
int x = 0;
    for (int i = 1; i <= cl.getnProducts(); i++) {

System.out.println("Which product would you like to add ? 1_" + smartphone.getName() + " 2_" + tshirt.getName() + " 3_" + OOP.getName());
            int choose = in.nextInt();
            if (choose == 1) {
                cl.addProduct(a: smartphone, i: x);
                x++;
            } else if (choose == 2) {
                cl.addProduct(a: tshirt, i: x);
                x++;

            } else if (choose == 3) {
                cl.addProduct(a: OOP, i: x);
                x++;

            } else {
                System.out.println(x: "invalid! choose 1 or 2 or 3 only.");
                i--;
            }
        }
        Order youssefOrder = new Order(a: cl);
        youssefOrder.setCustomerId(customerId: cl.getCustomerId());
        youssefOrder.setnProducts(nProducts: cl.getnProducts());
        youssefOrder.setTotalPrice(totalPrice: cl.getTotalPrice());
        System.out.println("Your total is : $" + youssefOrder.getTotalPrice() + " Would you like to place the order? 1_yes  2-no ");
        int verify = in.nextInt();
        if (cl.placeOrder(verify)) {

            youssefOrder.printOrderInfo(a: cl);
        } else {
            System.out.println(x: "End of program");
        }

    }

}
```

```
run:
Welcome to the E-Commerce System!
please Enter your Id
23011639
please Enter your Name
يوسف-سامح-السيد-عبد الموجود
please Enter your address
address
How many products you want to add to your cart ?
4
Which product would you like to add ? 1_Smart Phone 2_T_Shirt 3_OOP
2
Which product would you like to add ? 1_Smart Phone 2_T_Shirt 3_OOP
3
Which product would you like to add ? 1_Smart Phone 2_T_Shirt 3_OOP
2
Which product would you like to add ? 1_Smart Phone 2_T_Shirt 3_OOP
1
Your total is : $679.95996 Would you like to place the order? 1_yes  2-no
1
Here's your order's summary :
Order Id : 1
Customer Id : 23011639
Products
T_Shirt _$ 19.99
OOP _$ 39.99
T_Shirt _$ 19.99
Smart Phone _$ 599.99
Total price : $679.95996
BUILD SUCCESSFUL (total time: 20 seconds)
```