```java
/*
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Templates
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 */
package programming;



/**
 *
 * @author Zaki
 */
import java.util.Scanner;


public class Programming {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.println("please enter your
id");
        int x = input.nextInt();
        System.out.println("please enter your
name");
        String y = input.next();
        System.out.println("please enter your
address");
        String z = input.next();
        customer c1 = new customer();
        c1.setName(y);
        c1.setCustomerid(x);
        c1.setAddress(z);
        System.out.println("How many products do
you want to add");
        int q=input.nextInt();
        cart c=new cart(q);
        for(int i=0;i<q;i++){
        System.out.println("which product do you
want to add \n 1.clothes category \n
2.Electronics category \n 3.books category");
        int s=input.nextInt();
        switch (s) {
            case 1:
                clothingproduct b = new
clothingproduct();
                b.setProductid(1);
                System.out.println("Enter
product in this category do you want to add");
                String a=input.next();
                b.setproductName(a);

c.addproduct(b.getproductName());
                System.out.println("Enter price
of this product");
                int w=input.nextInt();
                b.setPrice(w);
                c.calculateprice(b.getPrice());
                break;
            case 2:
                Electronicproduct e = new
Electronicproduct();
                e.setProductid(2);
                System.out.println("Enter
product in this category do you want to add");
                a=input.next();
                e.setproductName(a);
                System.out.println("Enter price
of this product");
                w=input.nextInt();
                e.setPrice(w);

c.addproduct(e.getproductName());
                c.calculateprice(e.getPrice());

                break;
            case 3:
                bookproduct b1 = new
bookproduct();
                b1.setProductid(3);
                System.out.println("Enter
product in this category do you want to add");
                a=input.next();
                System.out.println("Enter price
of this product");
                w=input.nextInt();
                b1.setPrice(w);
                b1.setproductName(a);

c.addproduct(b1.getproductName());

c.calculateprice(b1.getPrice());
                break;
        }
        }
        order v=new order();
        v.setOrderid(1);
        v.printinfo(x,
c.calculateprice(0),c.addproduct(""));

    }
    }


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/**
 *
 * @author Zaki
 */
public abstract class product {
    protected int productid;
    protected float price;
    protected String productname;

    public void setProductid(int productid) {
        if(productid>0){
        this.productid = productid;
        }else throw new invalidinput("productid
should be greater than 0");
        }

    public void setPrice(float price) {
        if(price>0){
        this.price = price;
        }else throw new invalidinput("price
should be greater than 0");
        }

    public void setproductName(String
productname) {
        this.productname = productname;
    }

    public int getProductid() {
        return productid;
    }

    public float getPrice() {
        return price;
    }

    public String getproductName() {
        return productname;
    }
    }


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/**
 *
 * @author Zaki
 */
public class Electronicproduct extends product
{private String brand;
    private int warrantyPeriod;

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

    public void setWarrantyPeriod(int
warrantyPeriod) {
        if(warrantyPeriod>0){
        this.warrantyPeriod = warrantyPeriod;
        }else throw new invalidinput("
warrantyPeriod should be greater than 0");
        }

    public String getBrand() {
        return brand;
    }

    public int getWarrantyPeriod() {
        return warrantyPeriod;
    }
}


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/**
 *
 * @author Zaki
 */
public class clothingproduct extends product
{private String size;
    private String fabric;

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

    public void setFabric(String fabric) {
        this.fabric = fabric;
    }

    public String getSize() {
        return size;
    }

    public String getFabric() {
        return fabric;
    }
}


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/**
 *
 * @author Zaki
 */
public class bookproduct extends product
{private String author;
    private String publisher;

    public void setAuthor(String author) {
        this.author = author;
    }

    public void setPublisher(String publisher) {
        this.publisher = publisher;
    }

    public String getAuthor() {
        return author;
    }

    public String getPublisher() {
        return publisher;
    }
}


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```
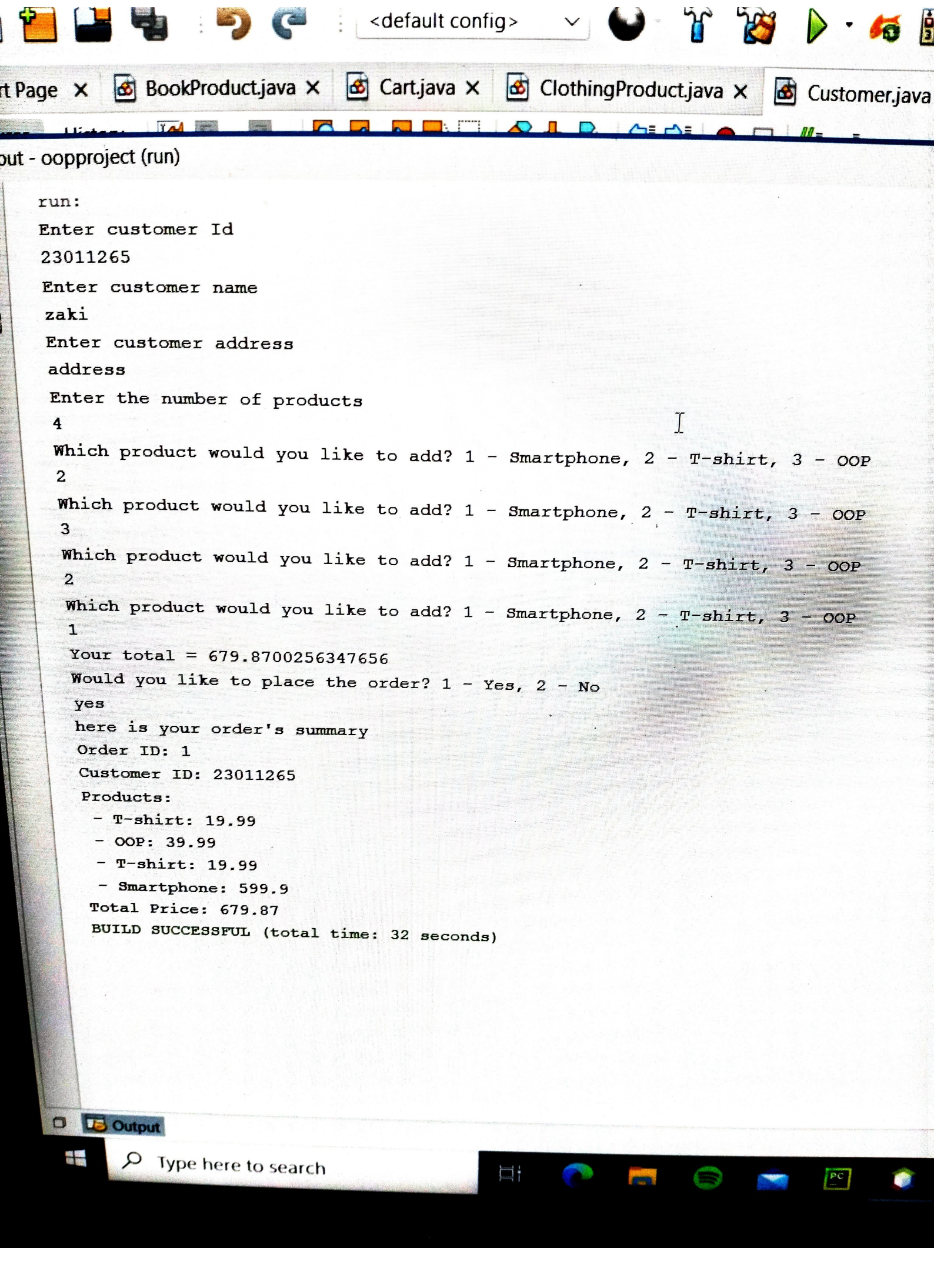
```java
*/
public class invalidinput extends
RuntimeException {
    public invalidinput() {
    }

    public invalidinput(String message) {
        super(message);
    }
}
```

```
run:
Enter customer Id
23011265
Enter customer name
zaki
Enter customer address
address
Enter the number of products
4
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
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
1
Your total = 679.8700256347656
Would you like to place the order? 1 - Yes, 2 - No
yes
here is your order's summary
Order ID: 1
Customer ID: 23011265
Products:
  - T-shirt: 19.99
  - OOP: 39.99
  - T-shirt: 19.99
  - Smartphone: 599.9
Total Price: 679.87
BUILD SUCCESSFUL (total time: 32 seconds)
```