

---

# Evaluation Task

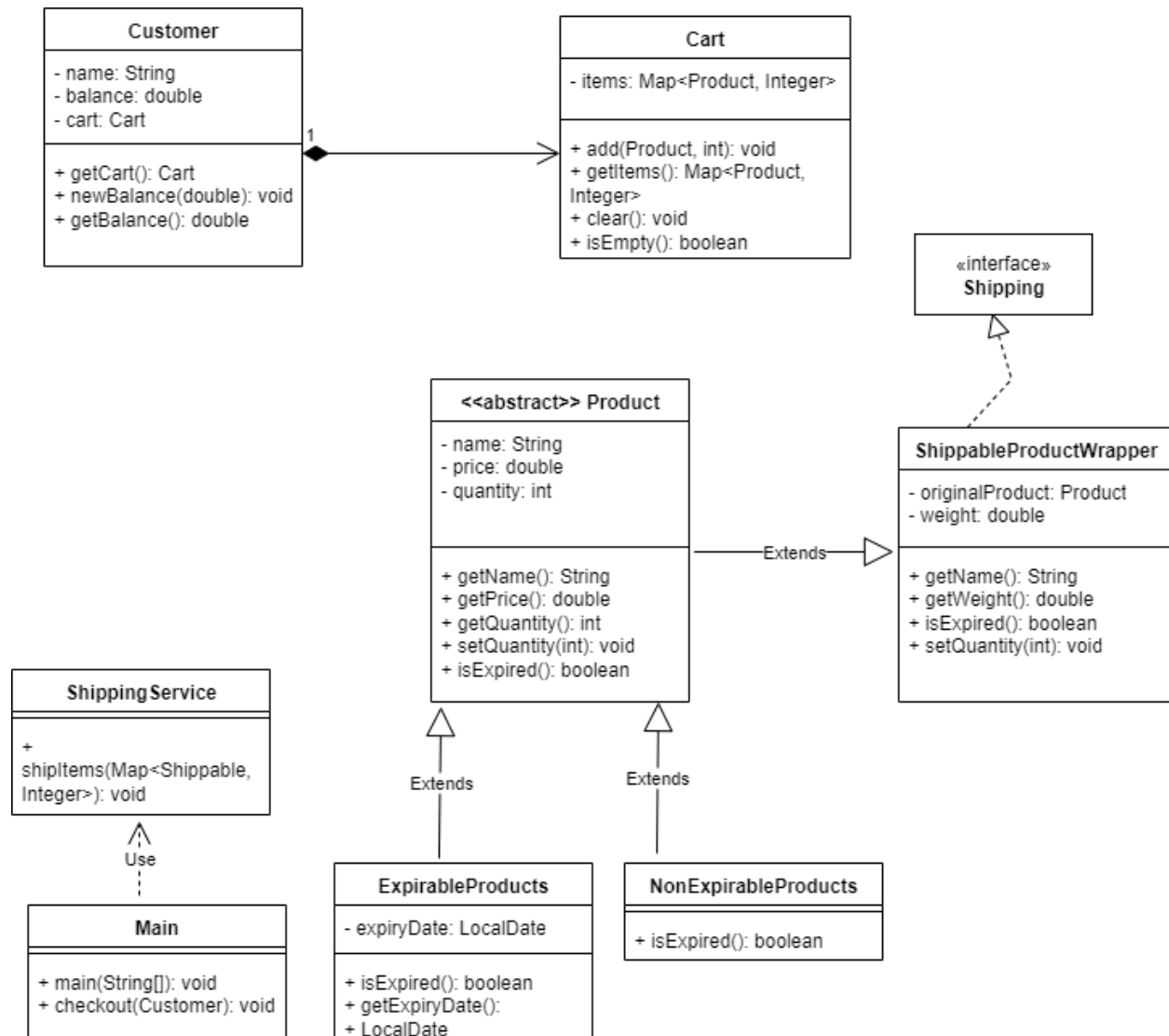
## Console-Based E-Commerce System

---



## 1- UML Diagram

This Diagram is drawn using [draw.io](https://draw.io)



## 2- Test Cases

---

### #Case 01

#### User Input

Name: Passant

Balance: 6000

→Cheese ×1, TV ×1

```
Enter your name: Passant
Enter your balance: 6000

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): Invalid choice.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 1
Enter quantity: 2
2x Cheese added to cart.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 3
Enter quantity: 1
1x TV added to cart.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 0
```

#### System Output

```
** Checkout receipt **
1x TV          3000
1x Cheese      100
-----
Subtotal       3100.0
Shipping       30.0
Amount        3130.0
Remaining Balance: 2870.0
```

## #Case 02

### User Input

Name: Basma

Balance: 1000

→ Cheese (2), Biscuits (1), Scratch Card (1)

```
<terminated> Main [Java Application] C:\Users\20115\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86
Enter your name: Basma
Enter your balance: 1000

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): Invalid choice.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 1
Enter quantity: 2
2x Cheese added to cart.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 2
Enter quantity: 1
1x Biscuits added to cart.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 4
Enter quantity: 1
1x Scratch Card added to cart.
<
```

### System Output

```
** Checkout receipt **
1x Biscuits      150
2x Cheese        200
1x Scratch Card  50
-----
Subtotal         400.0
Shipping         30.0
Amount          430.0
Remaining Balance: 570.0
```

## #Case 03

### User Input

Name: Ahmed

Balance: 10000

Empty Cart.

```
Enter your name: Ahmed
Enter your balance: 10000

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): Invalid choice.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 0
Cannot checkout: Cart is empty.
```

## #Case 04

### User I/P

Name: Tota

Balance: 300

→ TV (1).

```
Enter your name: Tota
Enter your balance: 300

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): Invalid choice.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 3
Enter quantity: 1
1x TV added to cart.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 0
Cannot checkout: Insufficient balance.
```

## #Case 05

For expired products after modifying the date in the products section.

## #Case 06

No shipping fees for Scratch Card

```
Enter your name: Aya
Enter your balance: 200

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): Invalid choice.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 4
Enter quantity: 2
2x Scratch Card added to cart.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 0

** Checkout receipt **
2x Scratch Card 100
-----
Subtotal          100.0
Shipping           0.0
Amount            100.0
Remaining Balance: 100.0
```

## #Case 07

Large Quantity input even when customer has sufficient balance.

```
Enter your name: H
Enter your balance: 700000

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): Invalid choice.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 3
Enter quantity: 200
Not enough stock for: TV
...
```

## #Case 08

Pass when balance = Total

```
Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): Invalid choice.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 1
Enter quantity: 1
1x Cheese added to cart.

Available Products:
1 - Cheese (100 EGP)
2 - Biscuits (150 EGP)
3 - TV (3000 EGP)
4 - Scratch Card (50 EGP)
Enter product number to add to cart (or 0 to checkout): 0
** Shipment notice **
1x Cheese      200g
Total package weight 0.2kg

** Checkout receipt **
1x Cheese      100
-----
Subtotal       100.0
Shipping       30.0
Amount        130.0
Remaining Balance: 0.0
```

### 3- Issues and Solutions:

---

- Shipping fees weren't added to the total amount; The problem was that menu items weren't added as instance of Shipping (Items that are shippable).
- There were some typographical errors which I resolved.
- ShippableProductWrapper class to **add shipping behavior only to specific products** without modifying the original Product class.