

# **Mohamed Elkholy**

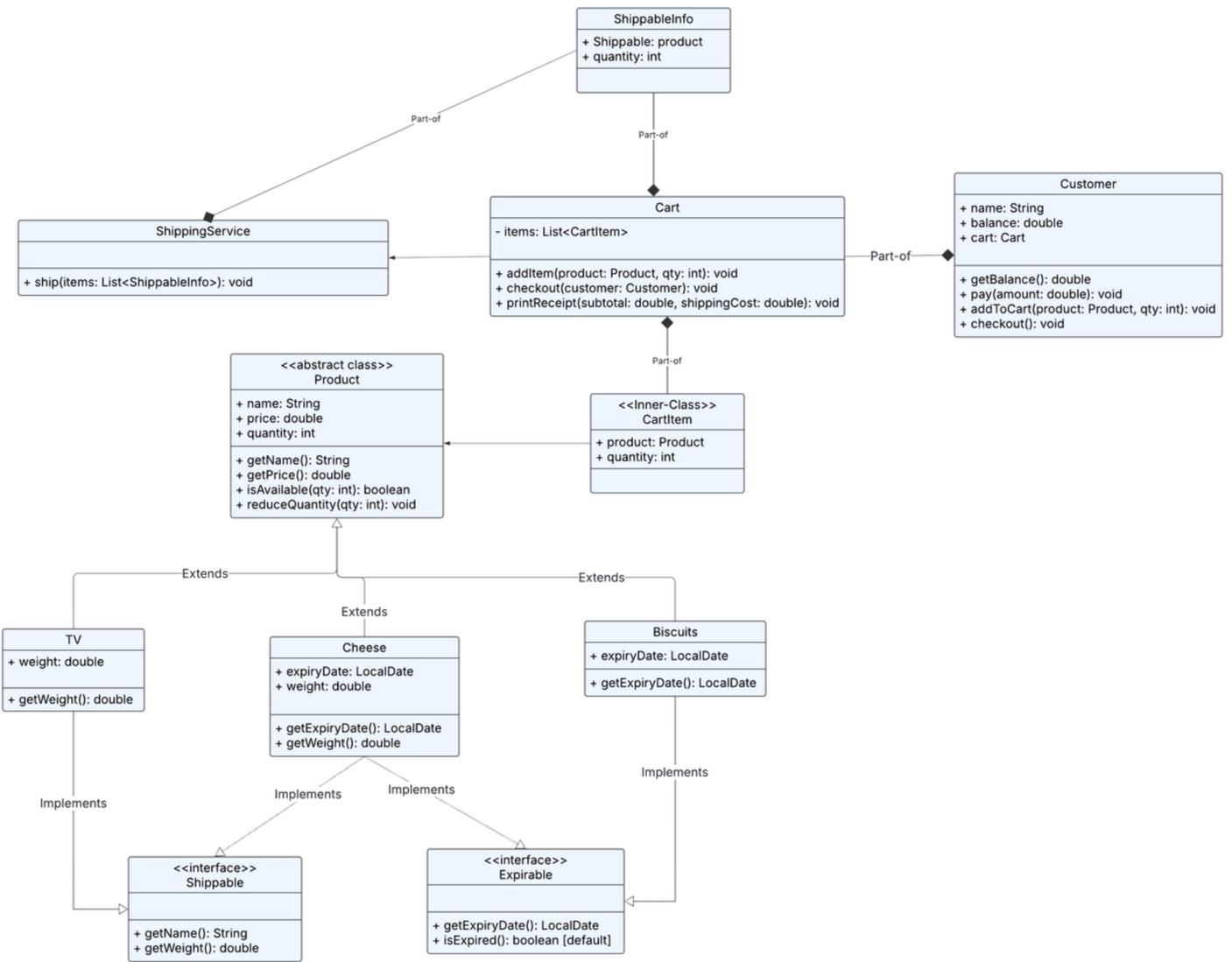
e-commerce Task for Fawry Internship

*The report includes a UML Class Diagram along with detailed test cases and their corresponding outputs.*

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# UML Class Diagram of the System



# Tests and Outputs

## TestCase 0: Normal Checkout

```
static void testNormalCheckout() { 1 usage new*
    System.out.println("\n***** Test 0: Normal Checkout *****");
    try {
        Customer c = new Customer( name: "Mohamed", balance: 1000);
        c.addToCart(new Cheese( name: "Cheese", price: 50, quantity: 5, LocalDate.now().plusDays( daysToAdd: 3), weight: 0.2), quantity: 2);
        c.addToCart(new TV( name: "TV", price: 400, quantity: 1, weight: 10.0), quantity: 1);
        c.checkout();
    } catch (Exception e) {
        System.out.println("Checkout failed: " + e.getMessage());
    }
}
```

## Output:

```
*****
Test 0: Normal Checkout *****

**** Checkout receipt ****

2x Cheese      100$
1x TV          400$

-----
Subtotal      500$
Shipping      102$
Total         602$

**** Shipment notice ****

2x Cheese      400.0gm
1x TV          10.0kg

Total package weight 10.4kg
```

## TestCase 1: Quantity Exceeds Stock

```
static void testQuantityExceedsStock() { 1usage new *
    System.out.println("\n***** Test 1: Quantity Exceeds Stock *****");

    try {
        Customer c = new Customer( name: "Sara", balance: 1000);
        c.addToCart(new Cheese( price: 50, quantity: 2, LocalDate.now().plusDays( daysToAdd: 3), weight: 0.2), quantity: 3);
    } catch (Exception e) {
        System.out.println("Add to cart failed: " + e.getMessage());
    }
}
```

Output:

```
***** Test 1: Quantity Exceeds Stock *****
Add to cart failed: Requested quantity exceeds available stock.
```

## TestCase 2: Expired Product

```
static void testExpiredProduct() { 1usage new *
    System.out.println("\n***** Test 2: Expired Product *****");
    try {
        Customer c = new Customer( name: "Ali", balance: 1000);
        c.addToCart(new Cheese( price: 50, quantity: 5, LocalDate.now().minusDays( daysToSubtract: 1), weight: 0.2), quantity: 1);
        c.checkout();
    } catch (Exception e) {
        System.out.println("Checkout failed: " + e.getMessage());
    }
}
```

Output:

```
***** Test 2: Expired Product *****
Checkout failed: Cheese is expired.
```

## TestCase 3: Checkout Empty Cart

```
static void testEmptyCart() { 1 usage new *
    System.out.println("\n***** Test 3: Empty Cart *****");
    try {
        Customer c = new Customer( name: "Nada", balance: 1000);
        c.checkout();
    } catch (Exception e) {
        System.out.println("Checkout failed: " + e.getMessage());
    }
}
```

## Output

```
***** Test 3: Empty Cart *****
Checkout failed: Cart is empty.
```

## TestCase 4: Insufficient Balance

```
static void testInsufficientBalance() { 1 usage new *
    System.out.println("\n***** Test 4: Insufficient Balance *****");
    try {
        Customer c = new Customer( name: "Ziad", balance: 100);
        c.addToCart(new TV( name: "TV", price: 400, quantity: 2, weight: 10.0), quantity: 1);
        c.checkout();
    } catch (Exception e) {
        System.out.println("Checkout failed: " + e.getMessage());
    }
}
```

## Output

```
***** Test 4: Insufficient Balance *****
Checkout failed: Insufficient balance.
```

## TestCase 5: Only Shippable Products

```
static void testOnlyNonExpirableProduct() { 1 usage new *
    System.out.println("\n***** Test 5: Only TV (Non-expirable) *****");
    try {
        Customer c = new Customer( name: "Kareem", balance: 1000);
        c.addToCart(new TV( name: "TV", price: 400, quantity: 2, weight: 5.0), quantity: 1);
        c.checkout();
    } catch (Exception e) {
        System.out.println("Checkout failed: " + e.getMessage());
    }
}
```

### Output

```
***** Test 5: Only TV (Non-expirable) *****

**** Checkout receipt ****

1x TV          400$

-----
Subtotal      400$
Shipping      50$
Total         450$

**** Shipment notice ****

1x TV          5.0kg

Total package weight 5.0kg
```

## TestCase 5: Only Expirable Products

```
static void testOnlyExpirableProduct() { 1 usage new *
    System.out.println("\n***** Test 6: Only Cheese (Expirable) *****");
    try {
        Customer c = new Customer( name: "Kareem", balance: 1000);
        c.addToCart(new Biscuits( price: 20, quantity: 400, LocalDate.now().plusDays( daysToAdd: 3)), quantity: 1);
        c.checkout();
    } catch (Exception e) {
        System.out.println("Checkout failed: " + e.getMessage());
    }
}
```

### Output

```
***** Test 5: Only TV (Non-expirable) *****

**** Checkout receipt ****

1x TV          400$

-----
Subtotal      400$
Shipping      50$
Total         450$

**** Shipment notice ****

1x TV          5.0kg

Total package weight 5.0kg
```