

## App working under normal circumstances

```
static void Main(string[] args)
{
    RunCheckoutScenario();

    Console.ReadKey();
}

1 reference
private static void RunCheckoutScenario()
{
    // Services
    IShippingService shippingService = new ShippingService();
    IReceiptPrinterService receiptPrinter = new ReceiptPrinterService();
    ICheckoutService checkoutService = new CheckoutService(shippingService, receiptPrinter);

    // Customer setup
    var customer = new Customer { Id = 1, Name = "Mohamed", Balance = 1000 };

    // Product definitions with Ids
    var cheese = new ExpirableProduct { Id = 1, Name = "Cheese", Price = 100, Quantity = 5, ExpiryDate = DateTime.Now.AddDays(2) };
    var biscuits = new ExpirableProduct { Id = 2, Name = "Biscuits", Price = 150, Quantity = 5, ExpiryDate = DateTime.Now.AddDays(5) };
    var scratchCard = new NonExpirableProduct { Id = 3, Name = "ScratchCard", Price = 50, Quantity = 10 };

    // Wrap shippables
    var shippableCheese = new ShippableProductAdapter(cheese, 0.3);
    var shippableBiscuits = new ShippableProductAdapter(biscuits, 0.7);

    // Add items to cart
    customer.Cart.AddItem(shippableCheese, 2);           // 200 EGP
    customer.Cart.AddItem(shippableBiscuits, 1);        // 150 EGP
    customer.Cart.AddItem(scratchCard, 1);             // 50 EGP

    // shipment fees -> 10 EGP per kg

    // Checkout
    checkoutService.Checkout(customer, customer.Cart);
}
```

Normal output under normal circumstances

```
D:\Backend\C# Code\Fawry_T  X + v
Cheese is shippable.
Biscuits is shippable.
ScratchCard is not shippable.

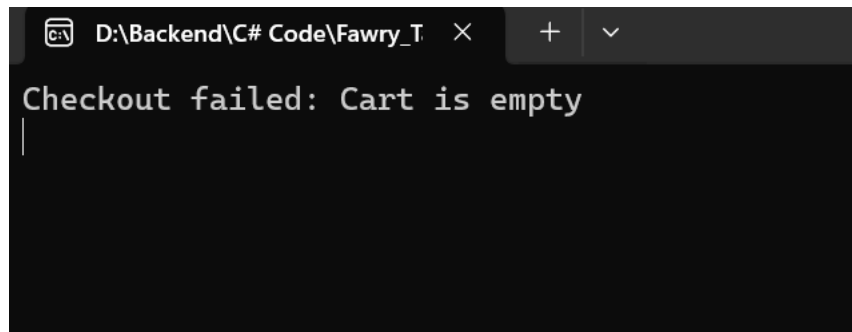
** Shipment notice **
2x Cheese      600g
1x Biscuits    700g
Total package weight 1.3kg

** Checkout receipt **
2x Cheese      200
1x Biscuits    150
1x ScratchCard  50
-----
Subtotal      400
Shipping      13
Amount        413
Balance left   587
```

Handling insufficient customer balance

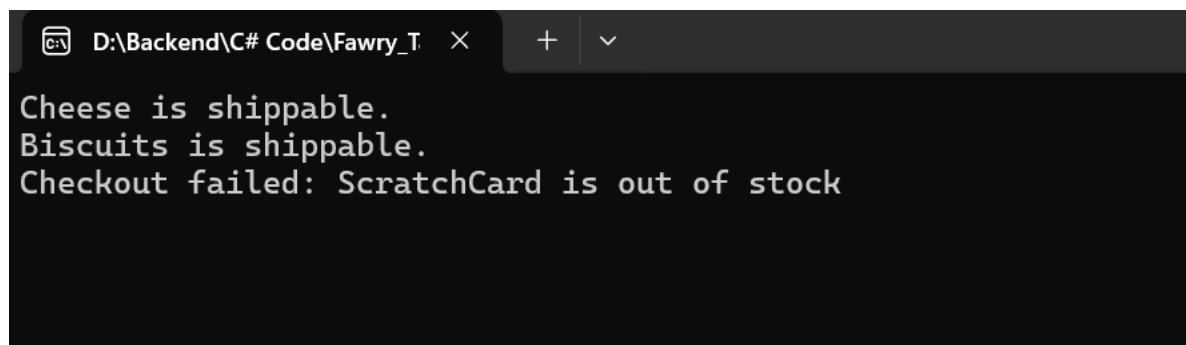
```
D:\Backend\C# Code\Fawry_T  X + v
Cheese is shippable.
Biscuits is shippable.
ScratchCard is not shippable.
Checkout failed: Insufficient customer balance
|
```

Handling if the cart is empty or is null



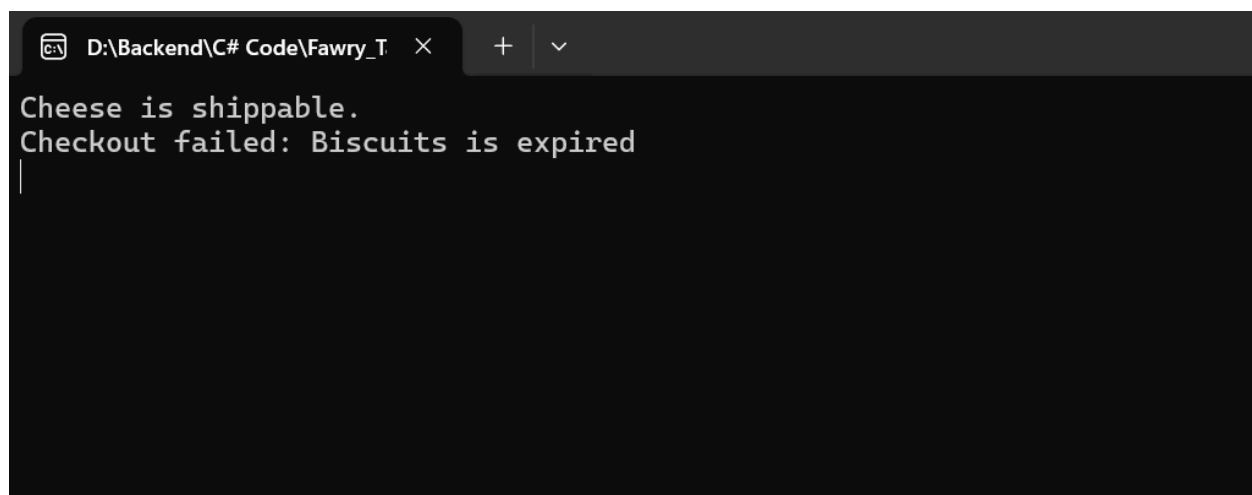
```
D:\Backend\C# Code\Fawry_T  X + v
Checkout failed: Cart is empty
|
```

Handling out of stock items



```
D:\Backend\C# Code\Fawry_T  X + v
Cheese is shippable.
Biscuits is shippable.
Checkout failed: ScratchCard is out of stock
|
```

Handling expired items



```
D:\Backend\C# Code\Fawry_T  X + v
Cheese is shippable.
Checkout failed: Biscuits is expired
|
```

