

代码报告：

Goods
-String name -float price
+Goods(String _name,float _price) +void setName(String _name) +String getName() +void setPrice(float _price) +float getPrice()

```
public class Goods {  
  
    private String name;  
  
    private float price;  
  
    public Goods(String name, float price) {  
  
        this.name = name;  
  
        this.price = price;  
  
    }  
  
    public void setName(String name) {  
  
        this.name = name;  
  
    }  
  
    public String getName() {  
  
        return name;  
  
    }  
}
```

```

    public void setPrice(float price) {

        this.price = price;

    }

    public float getPrice() {

        return price;

    }

}

```

Basket
-ArrayList<Goods> goodsList
+void addGoods(Goods goods) +ArrayList<Goods> getAllGoods() +boolean isEmpty() +void clear() +float getTotalPrice()

```

class Basket {

    private ArrayList<Goods> goodsList;

    public Basket() {

        goodsList = new ArrayList<>();

    }

    public void addGoods(Goods goods) {

        goodsList.add(goods);

    }

}

```

```
public ArrayList<Goods> getAllGoods() {  
  
    return goodsList;  
  
}  
  
public boolean isEmpty() {  
  
    return goodsList.isEmpty();  
  
}  
  
public void clear() {  
  
    goodsList.clear();  
  
}  
  
public float getTotalPrice() {  
  
    float totalPrice = 0;  
  
    for (Goods goods : goodsList) {  
  
        totalPrice += goods.getPrice();  
  
    }  
  
    return totalPrice;  
  
}  
}
```

Store
-static final Goods[] GOODS //所有商品 -static Basket basket //存放选中商品的购物篮 -static final String MESSAGE_HEADER //菜单顶部 -static final String MESSAGE_FOOTER //菜单底部
-static void exit() //打印消息退出整个程序 -static void checkOut() //买单，打印所有已经选择的商品 -static void invalidInput() //当输入错误的时候，打印消息 -static void addGoods(int choice) //添加选中的商品到购物篮 -static void printMenu() //打印菜单 +static void main(String args[]) //程序入口

```

class Store {

    private static final Goods[] GOODS = {

        new Goods("Bread", 1.0f),

        new Goods("Cocacola", 1.0f),

        new Goods("Beer", 1.0f),

        new Goods("Chocalate", 1.0f),

        new Goods("Pencil", 0.5f),

        new Goods("Notebook", 3.0f),

    };

    private static Basket basket = new Basket();

    private static final String MESSAGE_HEADER =

    "*****\n"

    + "Welcome to XiaoFang Convenience Store\n"

    + "*****";

    private static final String MESSAGE_FOOTER =
  
```

```

"-----";

    private static final String MESSAGE_TOTAL = "\n=====CHECK
OUT=====\\n";

    private static final String MESSAGE_THANKS =
"=====\\n"

        + "TOTAL:   $%.2f\\n"

        + "THANKS! ";

    private static void exit() {

        System.out.println(MESSAGE_FOOTER);

        System.exit(0);

    }

    private static void checkOut() {

        System.out.println(MESSAGE_TOTAL);

        ArrayList<Goods> goodsList = basket.getAllGoods();

        for (Goods goods : goodsList) {

            System.out.println(goods.getName() + "\\t\\t" + goods.getPrice());

        }

        float totalPrice = basket.getTotalPrice();

        System.out.printf(MESSAGE_THANKS, totalPrice);

    }

```

```
private static void invalidInput() {
```

```
    System.out.println("Invalid input. Please try again.");
```

```
}
```

```
private static void addGoods(int choice) {
```

```
    if (choice < 1 || choice > GOODS.length) {
```

```
        invalidInput();
```

```
        return;
```

```
    }
```

```
    Goods goods = GOODS[choice - 1];
```

```
    basket.addGoods(goods);
```

```
    System.out.println("You have selected [" + goods.getName() + "], $" + goods.getPrice());
```

```
}
```

```
private static void printMenu() {
```

```
    System.out.println("\n" + MESSAGE_HEADER);
```

```
    System.out.println();
```

```
    for (int i = 0; i < GOODS.length; i++) {
```

```
        System.out.println("<" + (i + 1) + ">" + GOODS[i].getName() + "\t\t" +
```

```
GOODS[i].getPrice());
```

```

    }

    System.out.println();

    System.out.println("<9>CHECK OUT");

    System.out.println("<O>EXIT");

    System.out.println(MESSAGE_FOOTER);

    System.out.print("PLEASE SELECT A NUMBER: ");

}

public static void main(String[] args) {

    Scanner scanner = new Scanner(System.in);

    while (true) {

        printMenu();

        int choice = scanner.nextInt();

        scanner.nextLine();

        if (choice == O) {

            exit();

        } else if (choice == 9) {

            checkOut();

            basket.clear();

            System.out.print("\nPress any key to continue shopping...");

```

```

        scanner.nextLine();

    } else {

        addGoods(choice);

    }

}

}

}

```

界面运行结果：

```

D:\jdk-java\bin\java.exe "-javaagent:D:\IDEA\IntelliJ IDEA 2022.2.1\lib\idea_rt.jar=62998:D:\IDEA\IntelliJ IDEA 2022.2.1\bin" -Dfile.encoding=UTF-8
*****
Welcome to XiaoFang Convenience Store
*****

<1>Bread      1.0
<2>Cocacola   1.0
<3>Beer       1.0
<4>Chocalate  1.0
<5>Pencil     0.5
<6>Notebook   3.0

<9>CHECK OUT
<0>EXIT
-----
PLEASE SELECT A NUMBER: 2
You have selected [Cocacola], $1.0

*****
Welcome to XiaoFang Convenience Store
*****

<1>Bread      1.0
<2>Cocacola   1.0
<3>Beer       1.0
<4>Chocalate  1.0
<5>Pencil     0.5
<6>Notebook   3.0

<9>CHECK OUT
<0>EXIT
-----
PLEASE SELECT A NUMBER: 4
You have selected [Chocalate], $1.0

*****
Welcome to XiaoFang Convenience Store
*****

<1>Bread      1.0
<2>Cocacola   1.0
<3>Beer       1.0
<4>Chocalate  1.0
<5>Pencil     0.5
<6>Notebook   3.0

<9>CHECK OUT

```


测试报告;

```
import org.junit.Before;
```

```
import org.junit.Test;
```

```
import java.util.ArrayList;
```

```
import static org.junit.Assert.*;
```

```
public class StoreTest {
```

```
    private Store store;
```

```
    private Goods[] goodsList;
```

```
    @Before
```

```
    public void setUp() {
```

```
        store = new Store();
```

```
        goodsList = new Goods[]{
```

```
            new Goods("Bread", 1.0f),
```

```
            new Goods("Cocacola", 1.0f),
```

```
            new Goods("Beer", 1.0f),
```

```
            new Goods("Chocalate", 1.0f),
```

```
            new Goods("Pencil", 0.5f),
```

```
            new Goods("Notebook", 3.0f),
```

```
        };
```

```
}
```

```
@Test
```

```
public void testAddGoods() {
```

```
    Basket basket = new Basket();
```

```
    basket.addGoods(goodsList[0]);
```

```
    assertFalse(basket.isEmpty());
```

```
    assertEquals(1, basket.getAllGoods().size());
```

```
    basket.addGoods(goodsList[1]);
```

```
    assertFalse(basket.isEmpty());
```

```
    assertEquals(2, basket.getAllGoods().size());
```

```
}
```

```
@Test
```

```
public void testGetTotalPrice() {
```

```
    Basket basket = new Basket();
```

```
    basket.addGoods(goodsList[0]);
```

```
    basket.addGoods(goodsList[1]);
```

```
    basket.addGoods(goodsList[2]);
```

```
        float totalPrice = basket.getTotalPrice();

        assertEquals(3.0f, totalPrice, 0.01);

    }
}
```

```
@Test
```

```
public void testCheckout() {

    Basket basket = new Basket();

    basket.addGoods(goodsList[0]);

    basket.addGoods(goodsList[1]);

    basket.addGoods(goodsList[2]);

    ArrayList<Goods> goodsList = basket.getAllGoods();

    assertEquals(3, goodsList.size());

    float totalPrice = basket.getTotalPrice();

    assertEquals(3.0f, totalPrice, 0.01);

}

}
```