



TDDBUDDY.COM

Heavy Metal Bake Sale

Rules

1. Strictly practice TDD
 - a. Follow the: Red-Green-Refactor cycle
 - b. Stop and read your code before refactoring.
2. Practice wishful coding
 - a. Do not write any production code until you have a failing test.
 - b. Or compilation failures to drive the need to implement the method.

The Kata

It is 1999 and a local metal band is looking to have a bake sale to raise funds for their new album. They have promised you a free CD if you make software to help run the sale; they are musicians not mathematicians after all.

There are four items they would like to sell on this sale with specific prices and quantities of each:

Brownie - 65c (48)

Muffin - \$1.00 (36)

Cake Pop - \$1.35 (24)

Water - \$1.50 (30)

The application must calculate the smallest amount of change to give a person if they overpay.
If you do not have stock of an item, you cannot make the sale.

Purchases are input as comma delimited string. The first letter of each item is its input code, B for Brownie, M for Muffin, C for Cake Pop and W for Water.

The application then responds with a total if there are enough of each item.

Otherwise responds with **"Not enough stock."**

If the total appears the user, then inputs the amount paid. If the amount is equal to or greater than the amount due the application, then figures out the amount of change to give.

If the amount is less than the amount due it responds with **"Not enough money."**

Examples

| | | | |
|--|--|--|---|
| Items to Purchase > B, C, W Total > \$3.50 Amount Paid > \$4.00 Change > \$0.50 | Items to Purchase > B Total > \$0.65 Amount Paid > \$0.75 Change > \$0.10 | Items to Purchase > C,M Total > \$2.35 Amount Paid > \$2.00 Change > Not enough money | Items to Purchase > W Total > Not enough stock |
|--|--|--|---|

Hint

Looks to use Stubs or Mocks or both when solving input and output problems. It just might start to feel like bits of clean architecture are showing up.¹

Bonus

Its many years later and your friends are once again looking to have a bake sale to make an album. You dust off your software from 1999 and refactor it to read the items, quantity and price all come from a configuration file. It must also now work as a Restful web service instead of writing to the console.

¹ <https://8thlight.com/blog/uncle-bob/2012/08/13/the-clean-architecture.html>