Code Kata - Vending Machine

The goal of this program is to model a vending machine and the state it must maintain during its operation. How exactly the actions on the machine are driven is left intentionally vague and is up to the implementor.

What does a vending machine do ?

The machine works like all vending machines : it takes money into a slot, then gives you items.

The vending machine accepts money in the form of nickels (5 cents), dimes (10 cents), quarters (25 cents), and dollars (100 cents). Just assume everything is a coin rather than a paper note for this kata, to keep things simple.

You must have at least have 3 primary items that cost $0.65, $1.00, and $1.50. The user may hit a “coin return” button to get back the money they’ve entered so far. If you put more money in than the item’s price, you get change back.

Specification

The valid set of actions on the vending machine are:

NICKEL(0.05), DIME(0.10), QUARTER(0.25), DOLLAR(1.00) – insert money
COIN RETURN – returns all inserted money
GET-A, GET-B, GET-C – select item A ($0.65), B ($1), or C ($1.50)
SERVICE – a service person opens the machine and sets the available change and items
The valid set of responses from the vending machine are:

NICKEL, DIME, QUARTER – return coin
A, B, C – vend item A, B, or C

The vending machine must track the following state:

available items – each item has a count, a price, and a selector (A,B,or C)
available change – # of nickels, dimes, quarters, and dollars available
currently inserted money