

CMT115 – Homework 1

Due Date: Oct 25, 2010

For this homework you are going to be creating the first part of a Java vending machine with several components. The focus of this homework is the menu system and some basic functionality. You will not be implementing a fully functional machine.

The Vending Machine Interface

The Java vending machine is a simple machine capable of taking either coin or ID card payments and vending various items. The vending machine has 12 positions (1-12) and each position can hold up to five items. The items should be uniform in each position. You will create an interface for interacting with the system.

Here is the vending machine display:

Welcome to the STUDENT NAME vending machine

1. Coke
2. Diet Coke
3. SOLD OUT
4. Coke
5. Coke
6. Caffeine-Free Diet Coke
7. Doritos
8. SOLD OUT
9. SOLD OUT
10. SOLD OUT
11. SOLD OUT
12. SOLD OUT

Current Credit: \$0.00

Card Balance: INSERT CARD

ADDITIONAL STATUS INFORMATION HERE

Here is the main menu (loops until end):

- Deposit coin (brings up the insert coin menu)
- Insert card (prompts user for their card number)
- Purchase item (prompts user to enter their selection)
- Cancel (clears out current card and/or returns money from machine)
- Service mode (brings up service mode menu)
- End (ends program)

Insert coin menu (loops until return is selected):

- Insert nickel
- Insert dime
- Insert quarter
- Insert dollar
- Return to main menu

Service mode menu (loops until finish):

- Load coin (prompts user for type of coin and number to load)
- Empty coins (empties out the machine and reports back how many coins)
- Load item (provides a list of items to load, then asks for position and loads one item at the BACK of the set of items in that position)
- Set price (prompts for a position and the price for those items)
- Finish (returns to the main menu)

Notes

- When drawing the main screen, also redraw the vending machine above the menu.
- For each insert coin command the current credit should be increased by the appropriate amount.
- For insert card right now all you should do is prompt the user for a card number. Once entered you should display "You have entered card number XXXX" and redraw the main menu.
- Purchase item should prompt a user for the position they want, and should make sure that only legal numbers 1-12 are entered.
- Purchase item should make sure there is sufficient money to purchase, and that the item is not sold out at that position. For this HW every item will cost \$1.00.
- Cancel should remove the credit from the machine and return the balance to \$0.00.
- For this HW you are not responsible for implementing the service menu commands, only the menu itself. When a service menu item is selected (other than Finish) you should simply print out to the screen "You have chosen XXX" where XXX is the menu option selected.
- You may use numbers for the menus to make selection easier.
- If a slot is sold out, you should display SOLD OUT rather than the item.
- For now you may make up your own vending machine items.
- You may want to make methods to display the vending machine and for the different menus.

Submission

Save your work as **HW1.java**. Submit your work through Blackboard. If there are any problems let me know.