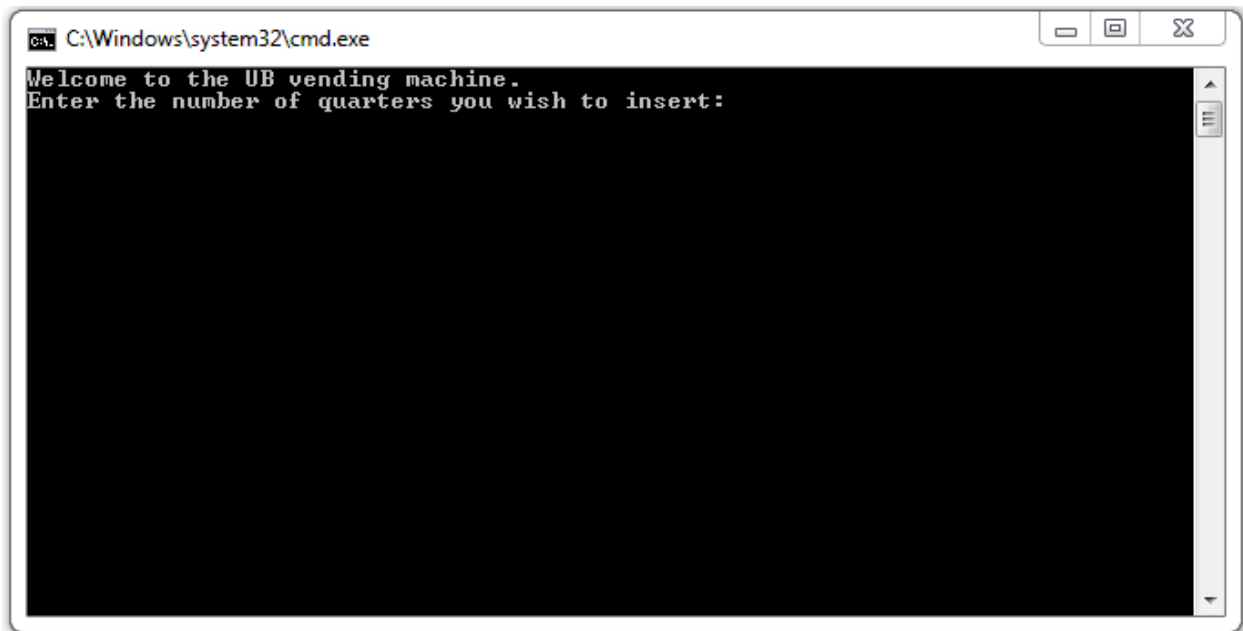


CPSC-442X Python Programming

Assignment 1: Vending Machine

Due: February 10, 2016 at 11:59 PM

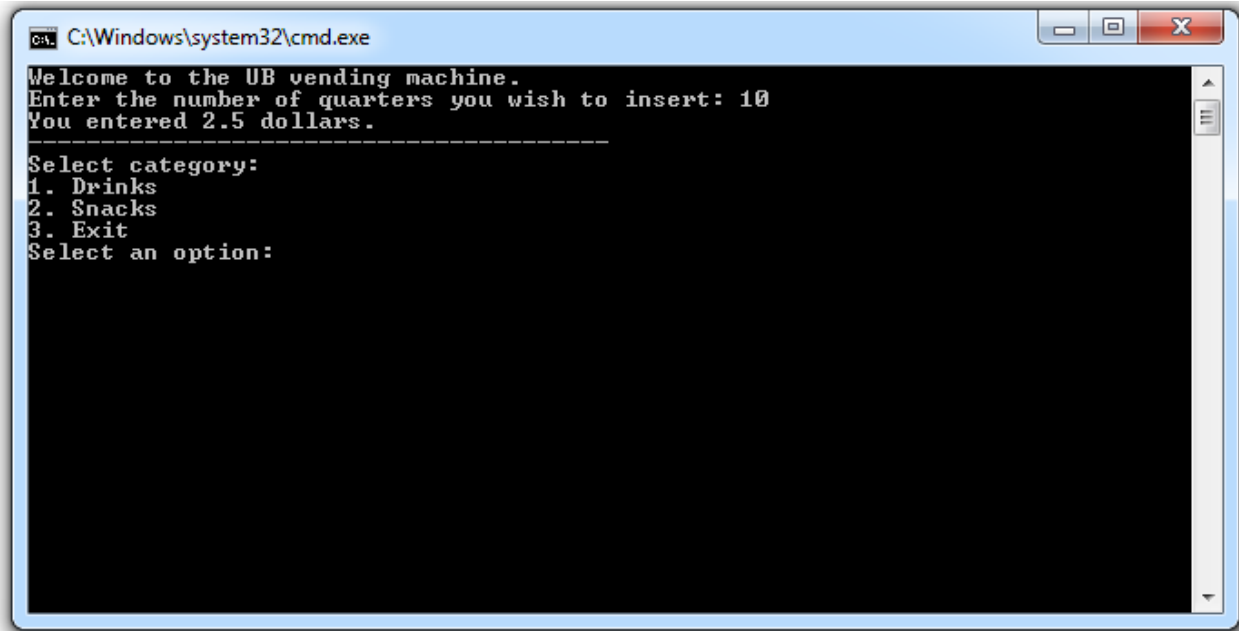
This assignment is a program for a simple vending machine. The machine only accepts quarter dollar coins. The program starts by welcoming the user and asking the user to enter the number of quarters they wish to insert:



```
C:\Windows\system32\cmd.exe
Welcome to the UB vending machine.
Enter the number of quarters you wish to insert:
```

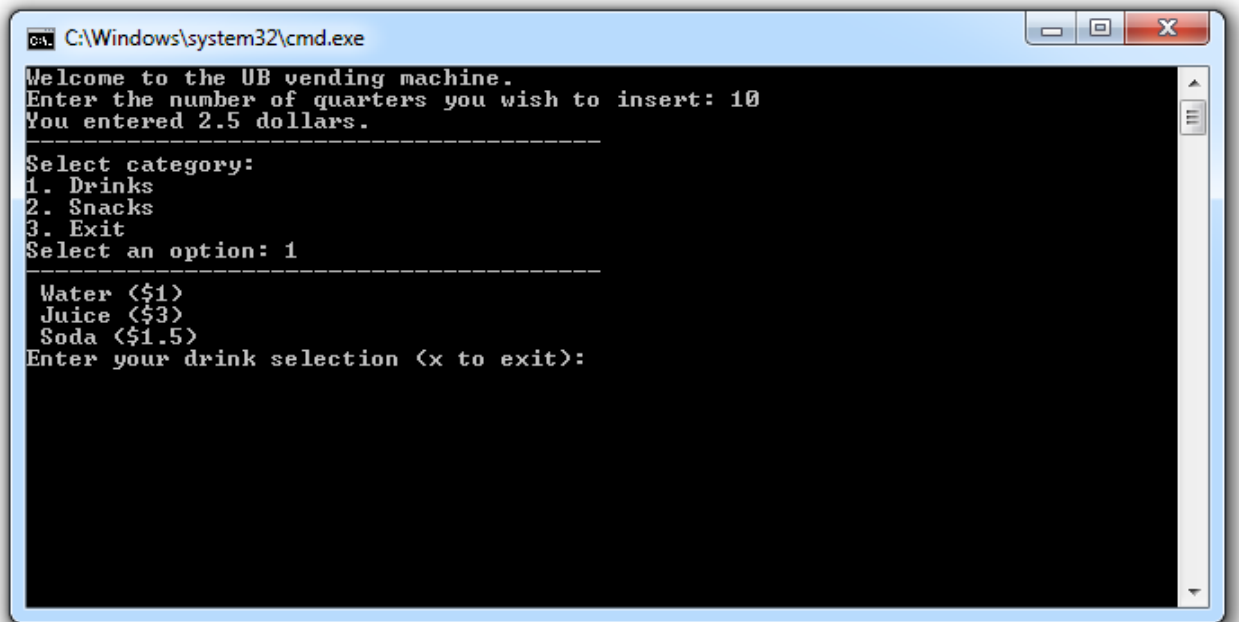
After the user enters the amount, it converts the amount to US Dollars by multiplying the integer number of quarters by 0.25 (No validation is required on the user input at this step) and prints the inserted amount.

Next, the program will call a function called `main_menu()` which will display the main menu with 3 options: 1. Drinks 2. Snacks 3. Exit and asks the user to enter the selection as an integer (Validate the user input):



```
C:\Windows\system32\cmd.exe
Welcome to the UB vending machine.
Enter the number of quarters you wish to insert: 10
You entered 2.5 dollars.
-----
Select category:
1. Drinks
2. Snacks
3. Exit
Select an option:
```

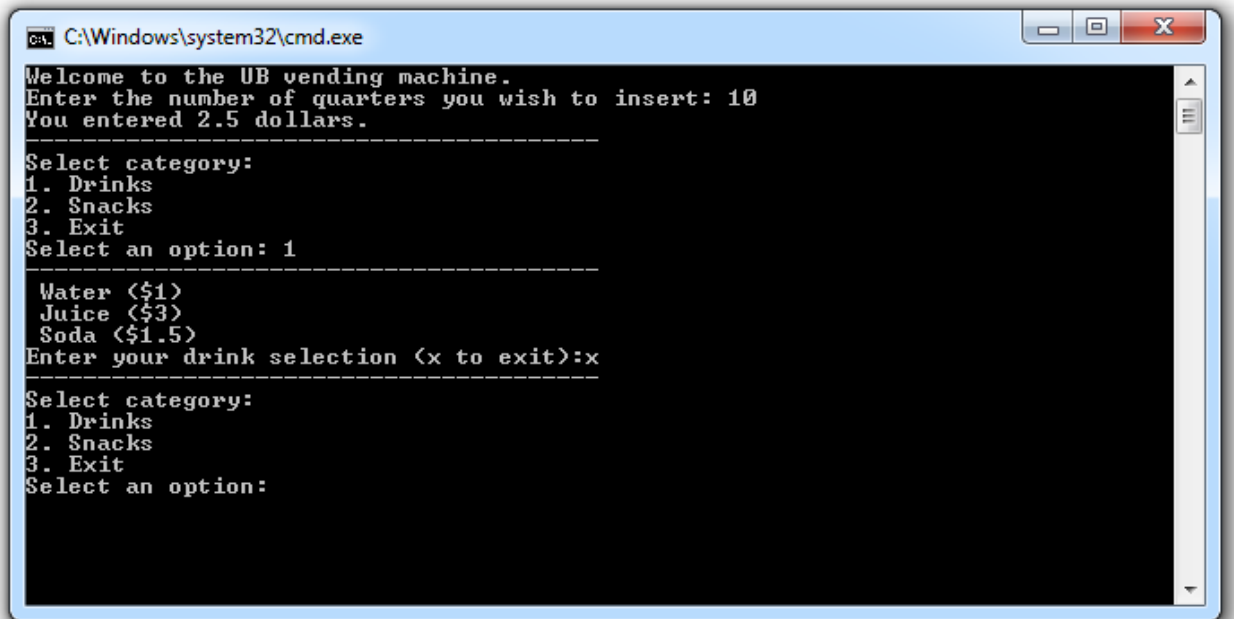
If the user select the first option (1), then call the function `drinks_menu()` which will use a display three drinks options along with the prices as follows: Water: 1, Juice: 3, and Soda: 1.5. Then it asks the user to enter the drink name as a string or enter x to exit to the main menu:



```
C:\Windows\system32\cmd.exe
Welcome to the UB vending machine.
Enter the number of quarters you wish to insert: 10
You entered 2.5 dollars.
-----
Select category:
1. Drinks
2. Snacks
3. Exit
Select an option: 1
-----
Water ($1)
Juice ($3)
Soda ($1.5)
Enter your drink selection (x to exit):
```

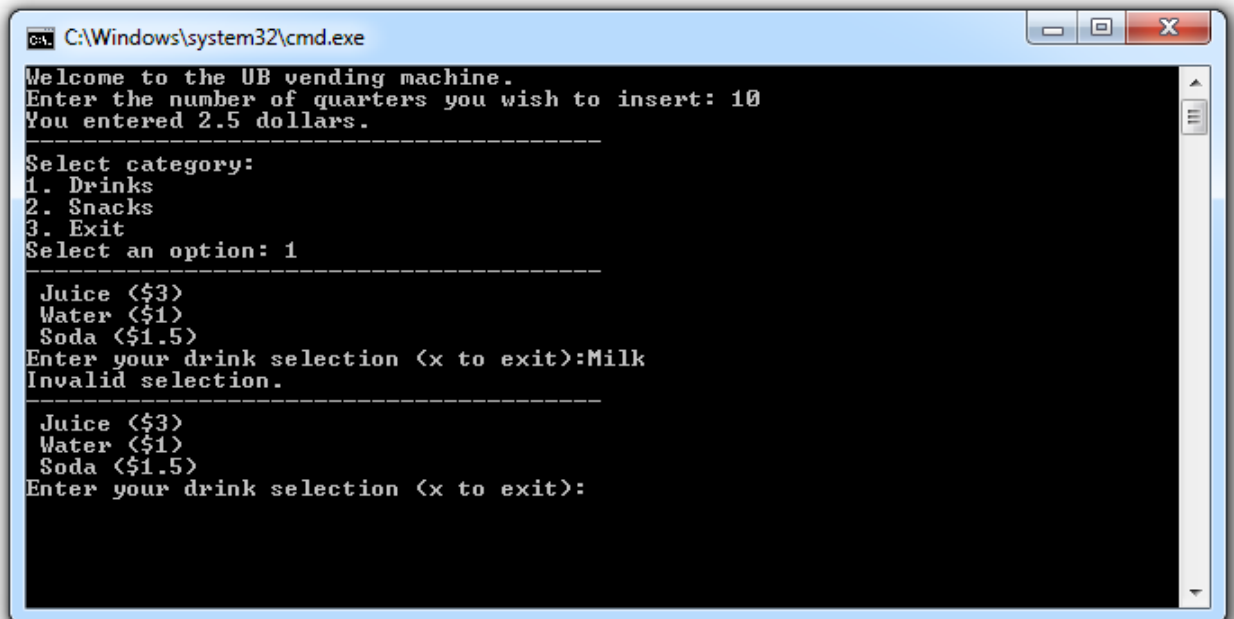
The validation for this step falls in three category:

1. The user input is "x" then return to the main menu by calling the main_menu() function



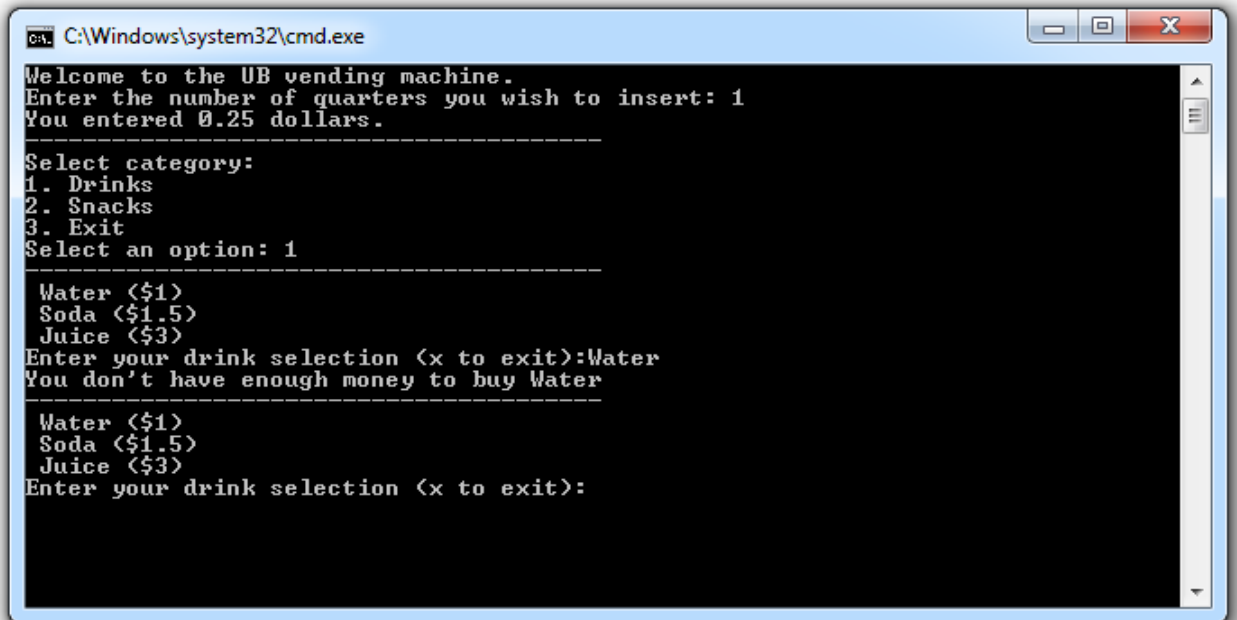
```
C:\Windows\system32\cmd.exe
Welcome to the UB vending machine.
Enter the number of quarters you wish to insert: 10
You entered 2.5 dollars.
-----
Select category:
1. Drinks
2. Snacks
3. Exit
Select an option: 1
-----
Water <$1>
Juice <$3>
Soda <$1.5>
Enter your drink selection <x to exit>:x
-----
Select category:
1. Drinks
2. Snacks
3. Exit
Select an option:
```

2. The user input is not in the dictionary, then display an error message and show the drinks menu again.



```
C:\Windows\system32\cmd.exe
Welcome to the UB vending machine.
Enter the number of quarters you wish to insert: 10
You entered 2.5 dollars.
-----
Select category:
1. Drinks
2. Snacks
3. Exit
Select an option: 1
-----
Juice <$3>
Water <$1>
Soda <$1.5>
Enter your drink selection <x to exit>:Milk
Invalid selection.
-----
Juice <$3>
Water <$1>
Soda <$1.5>
Enter your drink selection <x to exit>:
```

3. The user input is valid but the user does not have enough money, then display an error message and show the drinks menu again.



```
C:\Windows\system32\cmd.exe

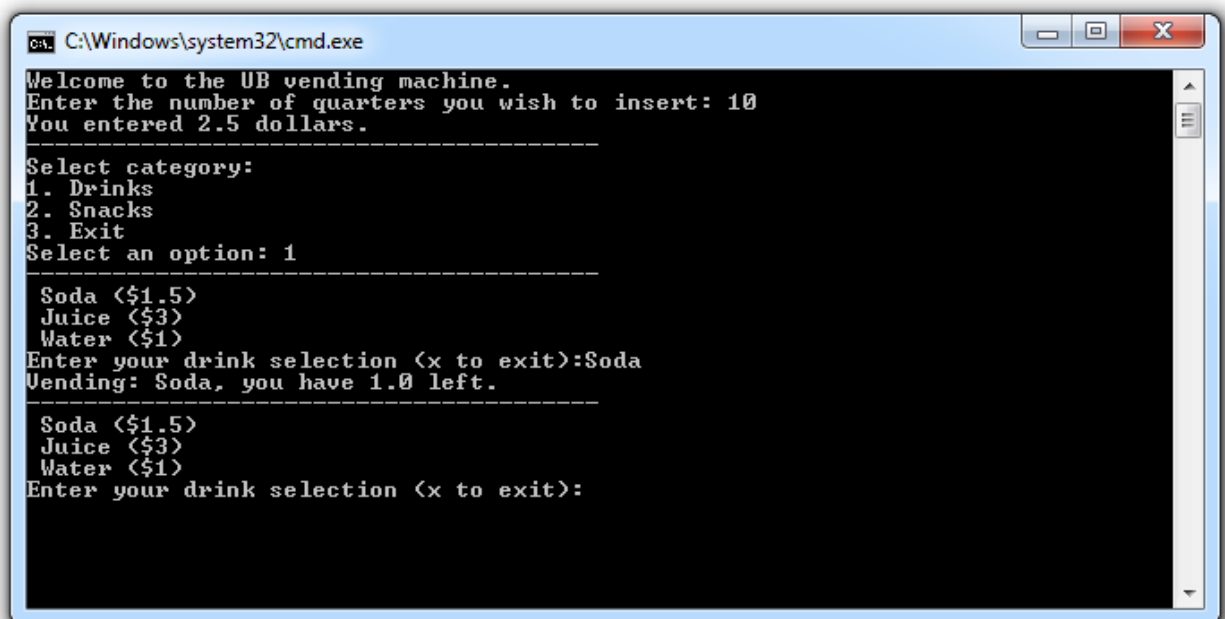
Welcome to the UB vending machine.
Enter the number of quarters you wish to insert: 1
You entered 0.25 dollars.

-----
Select category:
1. Drinks
2. Snacks
3. Exit
Select an option: 1

-----
Water ($1)
Soda ($1.5)
Juice ($3)
Enter your drink selection (x to exit):Water
You don't have enough money to buy Water

-----
Water ($1)
Soda ($1.5)
Juice ($3)
Enter your drink selection (x to exit):
```

4. The user input is valid, and the user has enough money to buy the drink, then add the drink cost to the total variable and show the drinks menu again.



```
C:\Windows\system32\cmd.exe

Welcome to the UB vending machine.
Enter the number of quarters you wish to insert: 10
You entered 2.5 dollars.

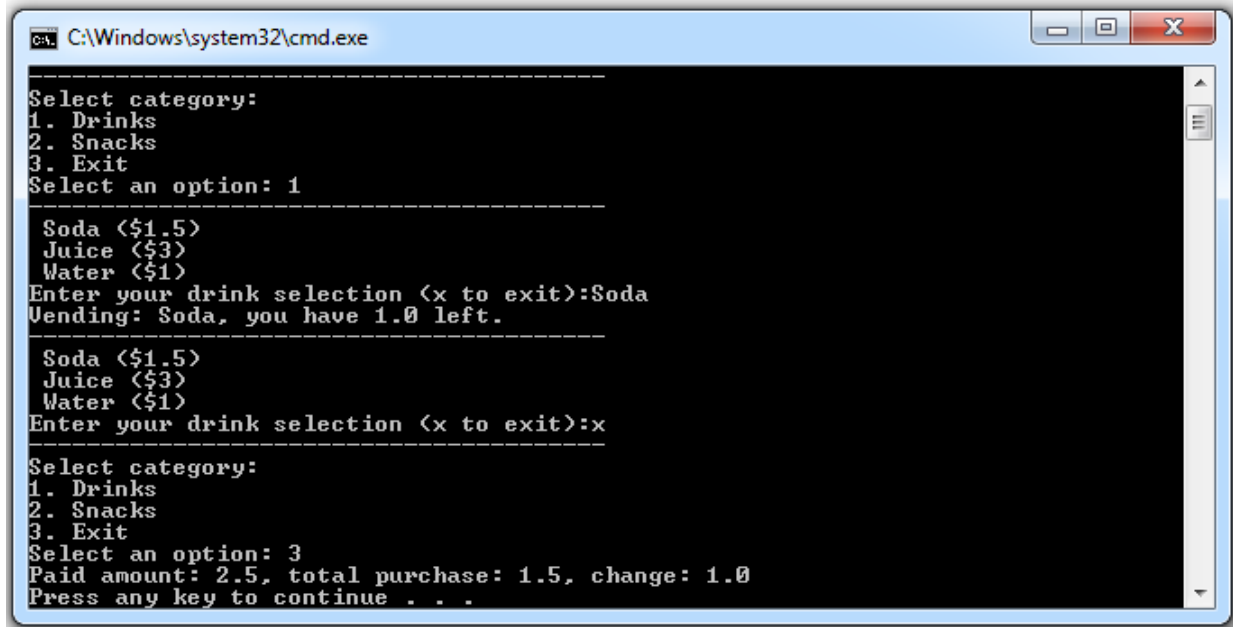
-----
Select category:
1. Drinks
2. Snacks
3. Exit
Select an option: 1

-----
Soda ($1.5)
Juice ($3)
Water ($1)
Enter your drink selection (x to exit):Soda
Vending: Soda, you have 1.0 left.

-----
Soda ($1.5)
Juice ($3)
Water ($1)
Enter your drink selection (x to exit):
```

Same options apply to the snacks but using the following menu items: Chips: 1.25, Peanuts: 0.75, and Cookie: 1

If the user selects option 3 from the main menu, then a good by message is displayed showing the inserted amount, the total purchase amount, and the change:

A screenshot of a Windows command prompt window titled "C:\Windows\system32\cmd.exe". The window has a black background with white text. The text shows a program running that simulates a vending machine. It starts with a menu: "Select category:", "1. Drinks", "2. Snacks", "3. Exit". The user enters "1". Then it shows prices: "Soda (\$1.5)", "Juice (\$3)", "Water (\$1)". The user enters "Soda". The program says "Vending: Soda, you have 1.0 left." and shows the prices again. The user enters "x". Then it shows the menu again. The user enters "3". The program says "Paid amount: 2.5, total purchase: 1.5, change: 1.0" and "Press any key to continue . . .".

```
C:\Windows\system32\cmd.exe

-----
Select category:
1. Drinks
2. Snacks
3. Exit
Select an option: 1
-----
Soda ($1.5)
Juice ($3)
Water ($1)
Enter your drink selection (x to exit):Soda
Vending: Soda, you have 1.0 left.
-----
Soda ($1.5)
Juice ($3)
Water ($1)
Enter your drink selection (x to exit):x
-----
Select category:
1. Drinks
2. Snacks
3. Exit
Select an option: 3
Paid amount: 2.5, total purchase: 1.5, change: 1.0
Press any key to continue . . .
```

Notes: Use the keyword global inside any function that will update a global variable.

START EARLY!!!

And have fun!