INLS 560 - Assignment 2: Vending Machine

Date Assigned: Fri. Aug 29, 2014

Completion Date: Fri. Sept 5, 2014 (midnight)

Software issues:

If you feel there are mistakes in this assignment, check the web page and Sakai for corrections, and

report them to us if they have not been made.

Description

Vending machines on campus sell lots of goodies for nominal fees. Assume that all snacks cost between

25 cents and 1 dollar, and prices are always multiples of 5. A user can only buy 1 item at a time, and the

machine only accepts a single dollar bill for each transaction. You need to determine the correct change

to be dispensed. You'll need to prompt the buyer for the price of their item and then determine their

change in terms of # of quarters, # of dimes and # of nickels. Very few people prefer to get all nickels as

their change, so be sure to always calculate quarters, then dimes, then nickels.

You should also make sure that your output is grammatically correct, such that if only 1 nickel is owed,

then you output nickel rather than nickels. This program is meant to test your understanding of input

statements, output statements, if-else statements, functions, and mathematical calculations.

Write a Python program that includes a main function. (You must define a main function and call it).

Your main function should also call the following functions:

- get_user_input()
  - o Asks the user for the cost of their item.
  - o Returns the cost of the item.
- calculate_correct_amount_of_change(cost_of_item)
  - o Takes an argument cost_of_item
  - o Calculates the total amount of quarters, dimes and nickels needed to make the correct change.
  - o Outputs the correct number of quarters, dimes and nickels using proper grammar.

You must use if-else statements in your code. Be sure to comment your code.

Sample Interactions

Some examples of possible dialog with the user might be (user input is in italics and bold):

Test 1

Enter price of item (from 25 cents to $1, in 5-cent increments): **45**

You bought an item for 45 cents and gave me a dollar.

Your change is 2 quarters, 0 dimes, and 1 nickel.

Test 2

Enter price of item (from 25 cents to $1, in 5-cent increments): **65**

You bought an item for 65 cents and gave me a dollar.

Your change is 1 quarter, 1 dime, and 0 nickels.

Use the Pycharm Community Edition IDE to develop and execute the code.

Grading

Programs will be graded based on whether they display the correct output, the correct logic, and style. In this assignment style means, make variable names meaningful. Do not create one letter variable names or variable names that do not have anything to with the assignment. The program must not only print the correct values, but the code must actually perform the correct operations.

Getting Help

If you have trouble, please post a question on Piazza before contacting me. Before posing a question, please check if this question has been asked before. This will reduce post clutter and reduce our burden. Repeat questions will be ignored by the instructors.

Piazza allows anyone to respond. So if you see a question that you think you can respond to, please do so, as that will reduce our burden and help you "teach" your fellow students.

Good luck!