Lab 2

Objectives

- Learn about variables
- Familiarize yourself with operators in Python
- Apply conditional operators in Python

Problems

1. Hot dog calculator (20 points)

   Assume that hot dogs come in packages of 10, and hot dog buns come in packages of 8. Write a program (hotdog.py) that calculates the number of packages of hot dogs and the number of packages of hot dog buns needed for a cookout, with the minimum number of leftovers. The program should ask the user for the number of people attending the cookout and the number of hot dogs each person will be given. The program should display the following details:

   - The minimum number of packages of hot dogs required
   - The minimum number of packages of hot dog buns required
   - The number of hot dogs that will be left over
   - The number of hot dog buns that will be left over

2. Shopping Cart Program (30 points)

   Write a Python program (shoppingcart.py) that does the following:

   - Print a message that says "Welcome to the Healthy Fruits Shop!"
   - Print "Please enter how many pounds of raspberries you would like to buy ($1.75 per pound):". Store the customer entered value in a variable.
   - Print "Please enter how many pounds of strawberries you would like to buy ($1.25 per pound):". Store the customer entered value in a variable.
   - Print "Please enter how many apples you would like to buy ($0.5 per apple):". Store the customer entered value in a variable.
   - Print "Please enter how many mangoes you would like to buy ($1.75 per mango):". Store the customer entered value in a variable.
   - Compute and display the total owed by the customer. Make sure to round the total to 2 decimal places as this is a monetary amount and not a floating-point amount.
   - Now ask the customer to enter an amount to pay for the fruits and store that value in a variable.

- Check to see if the customer entered amount is greater than the amount owed to the store. If not, show a message to the customer and ask them to enter more money. Add the entered money to the previously entered money. If the amount paid is still not enough, ask again for more money. Continue this process until the amount paid is either equal or exceeds the amount owed.
- Compute and display the change owed to the customer.
- Now compute the number of $5, $1, quarters, dimes, nickels, and pennies required to return that change to the customer. The store does not give out any higher denominations, such as $10, $20, $50, or $100 bills.
- Display only the amount of change that must be disbursed to the customer. Test your code using the following test cases:
  - If the total is $14.75 (4.34 lbs. raspberries, 3.2 lbs. strawberries, 2.12 lbs. apples, and 1.2 lbs. mangoes) and the customer gives you $20, then your program must display "The change is $5.25. Give the customer 1 $5 bill, and 1 quarter."
  - If the total is $3.23 (0.9 lbs. raspberries, 0.7 lbs. strawberries, 0.5 lbs. apples, and 0.3 lbs. mangoes) and the customer gives you $20, then your program must display "The change is $16.77. Give the customer 3 $5 bill, 1 $1 bill, 3 quarters, and 2 pennies.

Upload the following files to Canvas:

- 1 screenshot of executed code in command line/terminal window for the hotdog.py file (either paste into Word document or as an image)
- 2 screenshots of executed code (two use cases as described above) in command line/terminal window for the shoppingcart.py file (either paste into Word document or as an image)
- Text files of your code named hotdog.py and shoppingcart.py (put your name and section as comments at the top of files)

Notes:

- README.txt file - A description of your lab with your name and your student ID. Please include any problems you faced, any resources you used, names of friends/tutors you received help from
- Your code should contain some meaningful comments
- Your code should be well organized and formatted