25 points Homework Assignment #2

Objectives:

1. Become acquainted with the programming environment.
2. Study the accompanying flowchart and video tutorial noting how the program code matches the logical solution shown in the flowchart.
3. Use IDLE to enter the Python program code shown.
4. Follow the class standards.
5. Execute the program using the input test data provided to verify it is working correctly.

Follow the directions beginning with section “Writing a Python Program in the IDLE Editor” in Appendix B on pages 571 – 576. Use script mode to enter the Python program statements exactly as shown below. Save your program using .py as the file extension. Then run your program to input the number of gallons shown in the test data below. The program will output the number of quarts and liters for that number of gallons. Note that there are 4 quarts and 3.785 liters in a gallon. Read Chapter 2 in the Flowcharting Guide.

Use the flowchart provided to fill in the table below by calculating the correct output for the input value of 5 gallons.

|  |  |  |
| --- | --- | --- |
| gallons | quarts | liters |
| 1 | 4 | 3.785 |
| 5 | 20 | 18.925 |

Use the D2L drop box for Homework 2 to submit a compressed folder containing your Python program consisting of the statements shown below. Follow the class standards for naming the program file and the compressed folder. Enter the statements exactly as shown, but enter your own name and the current date for the Programmer: and Date: comment lines.

#==================================================================

# Program: Convert

# Programmer: Teresa Potts

# Date: 01/23/2013

# Abstract: This program converts the number of gallons entered

# to its equivalent in quarts and liters which are

# displayed as output.

#==================================================================

# get input from the user

gallons = int(input('How many gallons? '))

# do the conversions

quarts = gallons \* 4

liters = gallons \* 3.785

# display the output to the user

print('The number of quarts in', gallons, 'gallons is', quarts)

print ('The number of liters in', gallons, 'gallons is', liters)