Programming Assignment 2

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

For Questions 1 through 7 you will NOT be using the computer. You will be writing (typing) the programs using correct syntax and spacing. If there should not be a space, do not put one; if there should be a space make sure it has one.

1. **Write** an assignment statement for the following: (5 points)
   1. Blue 15
   2. Yellow 25
   3. Green 99
2. Using the variables created above **write** the “print” the expressions to the screen together in one line. (5 points)
3. You need the user of a program to enter their dog’s name. **Write** a statement that prompts the user to enter this data and assign the input to a variable that makes sense. Add comments. (10 points)
4. A. You need the user of a program to enter the amount of income they made this week. **Write** a statement that prompts the user to enter this data and assigns the input to a variable that makes sense. Add comments. (10 points)

B. What class type is the numeric answer from above? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Why?\_\_\_\_\_\_\_\_

1. Create a variable. Print the variable in a sentence so that the created sentence incorporates the variable (but prints the expression; should not have any quotes in expression when printed) all on one line. (10 points)
2. Write **pseudocode** for this scenario: (10 points)

Suppose your phone plan allows you to use 700 minutes per month. If you use more than this limit in a month, you are charged an overage fee of 35 cents for each excess minute. Your phone shows you the number of excess minutes that you have used in the current month, but it does not show you how much your overage fee currently is. Until now you’ve been doing the math the old-fashioned way with a pencil, paper, and calculator. You would like to design a program that will simplify this task. You would like to be able to enter the number of excess minutes and have the program perform the calculation for you

1. Create a **flowchart** for the above pseudocode. (10 points)

Now you will use Interpreter Mode in Python for number 8 and 9.

1. Now create the program. Make sure to use comments and logical variables. Use the **interpreter** and copy and paste here. (10 points)
2. You go grocery shopping and you purchase five items. Write a program (using variables and asking for input) that will get the price of each item, then displays the subtotal of the sale, displays the amount of sales tax, and displays the total (All 3 on separate line!). We will use sales tax of 7%. \*\* Declare and then initialize. Hint: float (30 points)
   1. Write the pseudocode
   2. Draw a Flow Chart
   3. Hand Check the program (look up if we didn’t get to in class)
   4. Copy and paste the program from **python interpreter**