

## **CS 112 Assignment 5i - Individual**

Submit your finished code to the Dropbox. You will need to pass off the assignments with the TA or tutor during their office hours (their information is in the CS 112 Course Information section of the Table of Contents), or the instructor in class. Follow the formatting guide which is also found in the CS 112 Course Information section.

Read the instructions carefully. Make sure your output matches the example run.

**THIS PROGRAM IS TO BE DONE INDIVIDUALLY.**

**No group or partner work on this assignment.**

### **Program: Add Two Numbers**

This program is really quite simple. The program will do the following:

- Ask the user to enter two numbers
- Print out the sum of the two numbers in a complex string output (see example)
- Ask the user if they would like to run the program again

The purpose of this program is to practice while loops and input validation. The program must do three input validations:

- Validate that the first number entered is a number
- Validate that the second number entered is a number
- Validate the question regarding playing again is answered with a 'Y' or 'N'

### **Hints**

Your program will need 4 while loops:

- One for the first number input validation
- One for the second number input validation
- One for the 'Y'/'N' input validation
- One to run the program again and again until the user answers 'N'

Once you have completed this program you will be able to reuse the code for many other programs. Try to make this your cleanest, best commented code to date so that you can easily understand how it works when you use it in future projects.

## **Example Run**

This program will help us practice input validation and while loops.  
The user will be asked to enter two numbers which will both be validated.  
The sum of the numbers will then be displayed in a complex print statement  
and the user will be asked if they would like to run the program again.

Please enter the first number: five  
Invalid response. Please enter a whole number.

Please enter the first number: 5  
Please enter the second number: 7

$5 + 7 = 12$

Would you like to run the program again? (Y/N): 000  
Invalid response. Please answer with a 'Y' or 'N'.  
Would you like to run the program again? (Y/N): Y

This program will help us practice input validation and while loops.  
The user will be asked to enter two numbers which will both be validated.  
The sum of the numbers will then be displayed in a complex print statement  
and the user will be asked if they would like to run the program again.

Please enter the first number: 10  
Please enter the second number: 32

$10 + 32 = 42$

Would you like to run the program again? (Y/N): N  
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