HOMEWORK 13

CS 125

due at 12:45pm (classtime) on Thursday, October 8

Write one or more Python *functions* to solve each of the following problems. Plan each function on paper before you implement it in code.

Prepare your solutions in a single Python file. Use comments to clearly state the problem number for each of your solutions. Provide test cases to show that your functions produce the desired output. Upload your file to the Homework 13 assignment on Moodle.

1. **Type errors**: Consider the following Python code:

```
def B(b_list):
    s = 0
    for i in b_list:
        s += i
    return s

def A(a_list):
    return B(a_list)

print( A( [1, 2, 3] ) )
print( A( [1, "two", 3] ) )
```

   Function `B()` adds up a list of numbers, but if the list contains a non-numerical entry, the function will raise a `TypeError`. Modify function `A()` so that the call to function `B()` is inside of a `try` block and any `TypeError` is handled by printing a helpful message for the user.

2. **Opening a file**: Write a function that asks the user for the name of a file. The program should then attempt to open the file and print the first ten lines of the file. However, if the program is unable to open the file, it should handle the resulting exception and print a helpful error message

3. **Opening a file again:** Write a function that asks the user for the name of a file. The program should attempt to open the file and print its first ten lines. However, if the program cannot open the file, it gives the user two choices: either enter another file name and try again, or quit. The program should continue trying to open files, until

either it successfully opens a file or the user chooses to quit.

4. **Running sum of numbers**: Create a function that sums floating point numbers entered by the user while ignoring any lines entered by the user that are not valid numbers. Your function should display the current sum after each number is entered. It should display an appropriate error message after any invalid input, and then continue to sum any additional numbers entered by the user. Your function should quit when the user enters a blank line.