Purpose

Understand input and output from the keyboard and filesystem.

Assignment

1. File I/O (hw04a.py):  Write a python program named "hw04a.py" that:
   1. Accepts an input and output filename from the command line
      1. ./hw04a.py <input filename> <output filename = "out.txt">
      2. If no input filename is provided, prompt the user to enter one
         1. "Please enter an input filename: "
      3. If no output filename is provided default to "out.txt"
   2. Reads the input file line by line
      1. Each line in the file will be in the format "<value>,<value>/n"
      2. Store the values in variables and calculate their sum
      3. Print a line to the screen and to the output file according to this format as floats with 2 decimal place precision
         1. <value 1>+<value 2>=<sum>\n
2. Interactive I/O (hw04b.py):  Write a simple calculator that does + - \* / on two numbers
   1. Your program should prompt the user with a "> " and then the user will type
      1. <val1> <operator> <val2>\n
         1. The program should accept any valid numbers with or without spaces separating them from the operators:
            1. "-1.3e-4 + 5.6e-4"
            2. "5/6"
         2. If the numbers cannot be correctly read it must print "Invalid input\n" and continue
         3. The <operator> must be one of  +-/\*
            1. If the operator is not +,-,/ or \* it must print "Invalid operator\n" and continue
      2. The program will print the result as
         1. <val1> <operator> <val2> = <result>\n
         2. use the "g" format specifier for the numbers
      3. If the user types "quit" the program will exit
      4. **I will test it by streaming the file hw04b.input into it and it should produce an output matching hw04b.correct.**