Lab 3

Python Programming II: Selection and Control

In this exercise, we consider an extension of the Scientific Hello World script ***hw.py***. The script is now supposed to read an arbitrary number of command-line arguments and write the natural logarithm of each number to the screen. For example, if we provide the command-line arguments

1.0 -0.9 2.1

the script writes out

ln(1) = 0

ln(-0.9) is illegal

ln(2.1) = 0.741937

Implement four types of loops over the command-line entries:

(a) a ***for r*** in ***sys.argv[1:]*** loop (i.e., a loop over the entries in ***sys.argv***, starting with index 1 and ending with the last valid index),
(b) a ***for*** loop with an integer counter ***i*** running over the relevant indices in ***sys.argv*** (use the ***range*** function to generate the indices),
(c) a ***while*** loop with an integer counter running over the relevant indices in ***sys.argv***,
(d) an "infinite" ***while 1:*** loop, with an integer counter and a ***try-except*** block where we break out of the loop when ***sys.argv[i]*** is an illegal operation.