

APS106 - LAB # 7

This lab will test your ability to work with data structures and loops. Due: 11:59pm, Friday, March 22th, 2019

Question: From your math courses, you may recall that some number sequences can be defined as a cumulative sum of previous terms. With this nature, we can construct a new sequence called K sequence as shown below:

$$K(0) = 2;$$

$$K(1) = 1;$$

$$K(n) = (K(n-1) + K(n-2))^2, n > 1.$$

For this lab, you are to write a function `Kseq(start, stop, step)` that when passed the definition of a sequence of numbers in terms of a start, stop, and step size value, returns the corresponding K sequence as a list.

Sample Inputs and Outputs

Inputs: *(start, stop, step)*

`Kseq(0,6,1)`

`Kseq(2,6,2)` #starts from the 2nd to the 6th number in the sequence, lists them with a step size of 2

Outputs

[2, 1, 9, 100, 11881, 143544361]

[9, 11881]

TO DO:

- Download the file lab7.py and complete the functions.
- Test and submit your code on MarkUs.

IMPORTANT: Do not change the file name or function names. Do not use `input()` or `print()`. Your file should not contain any additional lines of code outside the function definitions. Test cases are provided on MarkUS. Additional tests will be used in grading.