COMP8270
Programming for Artificial Intelligence

Class 3

The object of this class is to get some practice writing Python functions, and learn how to get data in and get answers out. To get started create a Jupyter workbook and call it Class 3.

1. Write a python function that accepts two arguments and returns their sum. It should be polymorphic.
2. Implement a python function that accepts a list and compute its sum. E.g.:

   f ([1, 2, 3, 4]) → 10

3. Implement a Python function that accepts two lists and returns a third list containing the element-wise sums. This operation only makes sense if the lists are the same size, so check for that and return nothing when a size mismatch is detected. E.g.

   f ([1, 2, 3], [4, 5, 6]) → [5, 7, 9]
   f([1], [2,3]) → None

4. Update your solution to exercise 3 to accept the KWARGs: “Arg1” and “Arg2”, their values are the lists.
5. Update your solution to exercise 4 to return a tuple of the form (len, list-of-sums)
6. Implement a function that computes the Fibonacci sequence (Recall that the sequence is constructed as $F_i = F_{i-2} + F_{i-1}$). It will accept an argument for the length of the desired sequence. Feel free to use either iteration or recursion. Fib(6)→[0, 1, 1, 2, 3, 5]