Outline for October 18, 2022

Reading: §4.9

1. Lists as parameters: can change list elements in function and they are changed in caller [args2.py]
2. More on parameters: named arguments and variable number of arguments [args3.py]
3. `isinstance(obj,type)` function
   (a) `type` is `bool`, `float`, `int`, `list`, `str`, `tuple`
4. Recursion
   (a) `n` factorial [nfact.py]
5. Thinking recursively [recfun.py]
   (a) First: think of the recursive case (write the problem in terms of something involving a smaller instance of the problem)
   (b) Next: think of base case (when to stop)
   (c) Example: Find the length of a string
   (d) Example: Does the string only have alphabetic characters in it?
   (e) Example: Find the maximum element of a list
   (f) Example: Construct a string from a list of strings
   (g) Example: Reverse a string
6. Recursion
   (a) Palindromes [palindrome.py]
   (b) Fibonacci numbers [rfib.py]
   (c) Tower of Hanoi [hanoi.py]