Chapter 2 outline:

- Mathematical sequences and Python lists (this past Wednesday)
- Recurrence relations and recursive functions (**today**)
- Functions on lists (next week Monday)
- More functions on lists (next week Wednesday) new
- Arrays, vectors, and intervals (next week ~~Wednesday~~ Friday)
- (Test on Chapters 1 & 2, ~~Mon, Sept 23~~ Wed, Sept 25)

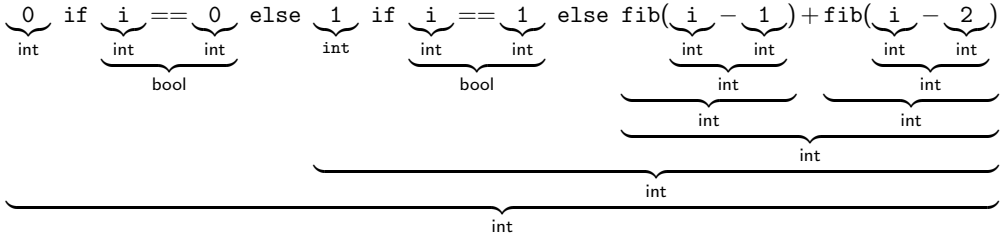
Today:

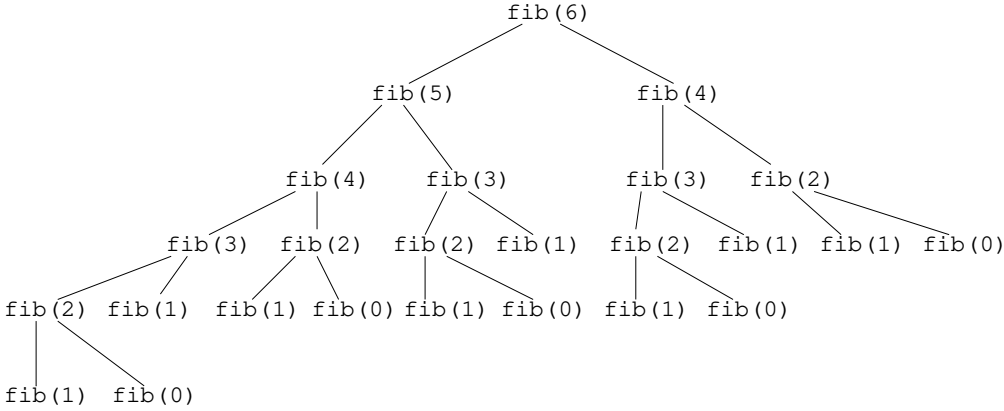
- Follow-up exercises from last time
- Recurrence relations
- Recursive functions
- Functions to build lists

The ideas introduced in Sections 2.2 (today) and 2.3 (next time) include

- Recursion, or defining a object or process self-referentially.
- Decision-making using conditional expressions and statements.
- Storing values in local (temporary) variables so that the values can be reused instead of recomputed.
- Algorithms for building sets and lists recursively.
- Algorithms for processing lists recursively.

```
      0                    if i == 0  # Option A
else  1                    if i == 1  # Option B
else  fib(i-1) + fib(i-2)  otherwise  # Option C
```




fib(6)
fib(5)
fib(4)
fib(4)
fib(3)
fib(3)
fib(2)
fib(3)
fib(2)
fib(2)
fib(1)
fib(2)
fib(1)
fib(1)
fib(0)
fib(2)
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For next time:

Do Exercises 2.2.(2, 3, 8, 9, 12).

Note that Exercise 2.2.12 (powerset) requires your solution to an exercise from a previous assignment: You'll need to grab your code from Exercise 1.8.13 (add to each).

Read 2.3

Take quiz (short)