

Python programming review

Overview

- 4 python programming project (instead of lisp)
- Programming rules for this course:
 - No imported module (just general python)
 - Python ≥ 3.6 should be OK. You will not lose points due to version error
 - Code should be well commented, hard-to-read code might lose points
 - Other rule you might adapt in other programming courses

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Immigrating from LISP to python

- Recursion: $\text{Fib}(1) = 1, \text{Fib}(2) = 1, \text{Fib}(n) = \text{Fib}(n-1) + \text{Fib}(n-2)$
- Advantage of recursion?
- Lambda expressions (inline functions)

```
1 def fib(n):
2     assert n > 0
3     if n <= 2:
4         return 1
5     else:
6         return fib(n-1) + fib(n-2)
```

```
lambda fib n: 1 if n <= 2 else fib(n-1) + fib(n-2)
```
- Nested data structures (next week)