PYTHON 3: DEEP DIVE

PART 2

What this course is about

the Python language

the standard library → canonical CPython 3.6+ implementation

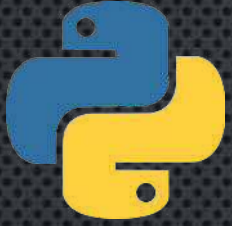becoming an expert Python developer

idiomatic Python

obtaining a deeper understanding of the Python language

and the standard library

this is NOT an introductory course

→ refer to prerequisites video or course description
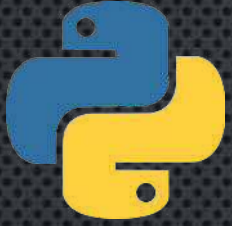
Included Course Materials

lecture videos

coding videos

Jupyter notebooks

projects and solutions

github repository for all code

https://github.com/fbaptiste/python-deepdive

Sequence Types

what are sequences?

slicing → ranges
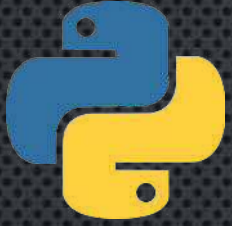
shallow vs deep copy

the sequence protocol

implementing our own sequence types

list comprehensions → closures

sorting → sort key functions

Iterables and Iterators

more general than sequence types

differences between iterables and iterators

lazy vs eager iterables

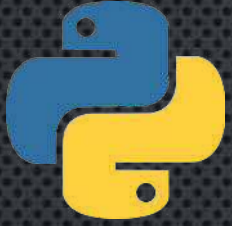the iterable protocol

the iterator protocol

writing our own custom iterables and iterators

Generators

what are generator?

generator functions

generator expressions

the `yield` statement

the `yield from` statement

how generators are related to iterators

Iteration Tools

Many useful tools for functional approach to iteration → built-in

→ itertools module

→ functools module

Aggregators

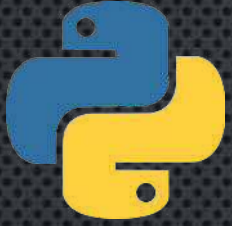Slicing iterables

Selection and filtering

Infinite iterators

Mapping and reducing

Grouping

Combinatorics

Context Managers

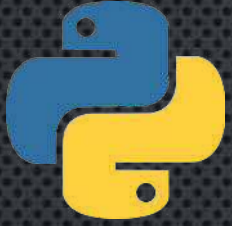what are context managers?

the context manager protocol

why are they so useful?

creating custom context managers using the context manager protocol

creating custom context managers using generator functions
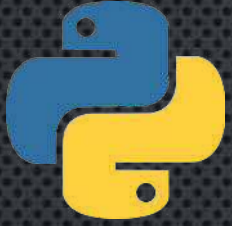
Projects

project after each section

should attempt these yourself first – practice makes perfect!

solution videos and notebooks provided

→ my approach

→ more than one approach possible

Extras

will keep growing over time

important new features of Python 3.6 and later

best practices

random collection of interesting stuff

additional resources

send me your suggestions!