Advanced Python for JPMC

TTPS4804

Instructor

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Configuring Visual Studio code

Some settings to make programming with Python easier

Auto-save

- Search for "auto save"
- Set to after delay

Launch folder

- Search for "execute in"
- Check box for **Python > Terminal: Execute in File Dir**

Minimap

- Search for "minimap enabled"
- Uncheck Editor > Minimap: Enabled

Editor font size

- Search for "editor font size"
- Set **Editor**: **Font Size** to desired size

Terminal font size

- Search for "terminal font size"
- Set Terminal: Font Size to desired size

Themes

- Got to File > Preferences > Theme > Color Theme
- Select new theme as desired

Decorator Syntax

```
@mydecorator
def some_function():
    pass
```

same as

some_function = mydecorator(some_function)

Implementation

```
def mydecorator(original_function):
    @wraps(original_function)
    def _(*args, **kwargs):
        # add code here
        result = original_function(*args, **kwargs)
        return result
    return _
```

Decorator with parameters

```
@mydecorator(param, ...)
def some_function():
    pass
```

same as

```
some_function = mydecorator(param, ...)(some_function)
```

Implementation

```
def mydecorator(param, ...):
    def inner_decorator(original_function):
        @wraps(original_function)
        def _(*args, **kwargs):
            # add code here using decorator params
            result = original_function(*args, **kwargs)
            return result
        return _
        return inner_decorator
```

Iterables



Iterables



Containers (AKA collections)

Sequences

str bytes list tuple collections.namedtuple range()

returned by

sorted()
list comprehension
str.split()
etc.

Mappings

dict collections.defaultdict collections.Counter set frozenset

returned by

dict comprehension set comprehension *etc.*

Iterators

returned by

open()
reversed()
enumerate()
zip()
Itertools.groupby()
Itertools.chain()
itertools.zip_longest()
iterator class
generator expression
generator function
etc.

Containers

- All elements in memory
- Can be indexed with []
- Have a length

Builtin containers

Sequences

Mapping types

list

dict

tuple

set

string

frozenset

bytes

range

Iterators

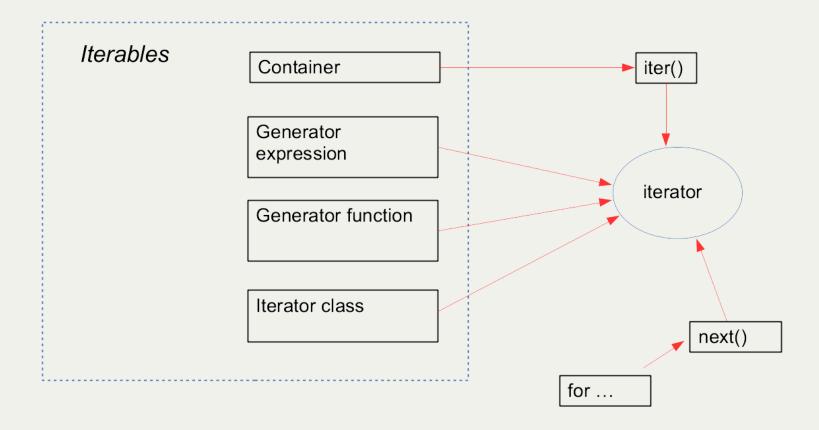
- Virtual (no memory used for data)
- Lazy evaluation (JIT)
- Cannot be indexed with []
- Do not have a length
- One-time-use

Iterators returned by

```
• open()
enumerate()
• DICT.items()
• zip()
reversed()
• generator expression or function
```

• iterator class

Iterators



Concurrency

