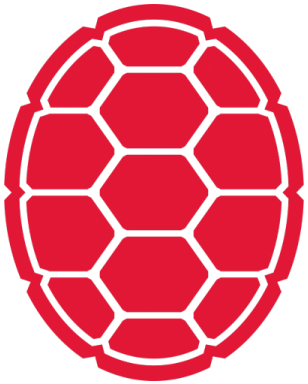

Python: Datatypes

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Datatypes

Programming is about manipulating data. Different types of informations are stored differently.

- integers
- floats
- strings
- lists
- dictionaries.

Datatypes

```
>>> 22//7
3
>>> s = 22/7
>>> s
3.1428571428571428
```

Strings

```
>>> s = " I am the very model of a modern Major-General "
>>> s.strip()
'I am the very model of a modern Major-General'
>>> s.find("am")
3
>>> s.replace("modern Major-General", "Gilbert caricature")
' I am the very model of a Gilbert caricature '
```

Lists

A list is an ordered collection of data (of any type). Both lists and strings can access using the accessor [].

```
>>> l = range(10)
>>> l
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
>>> l[4]
4
>>> list(s)
[' ', 'I', ' ', 'a', 'm', ' ', 't', 'h', 'e', ' ', 'v', 'e'
>>> s.split(" ")
['', 'I', 'am', 'the', 'very', 'model', 'of', 'a', 'modern'
>>> "am" in s.split()
True
>>> "Mikado" in s.split()
False
>>> filter(lambda x: x != "", s.split(" "))
['I', 'am', 'the', 'very', 'model', 'of', 'a', 'modern', 'M
```

Dictionaries

```
>>> d = {}
>>> d[3] = 4
>>> d[3]
4
>>> d[2]
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
KeyError: 2
>>> d[3] = 2
>>> d[3]
2
```

Putting it Together

- Functions, classes