Python Course

Strings and Files

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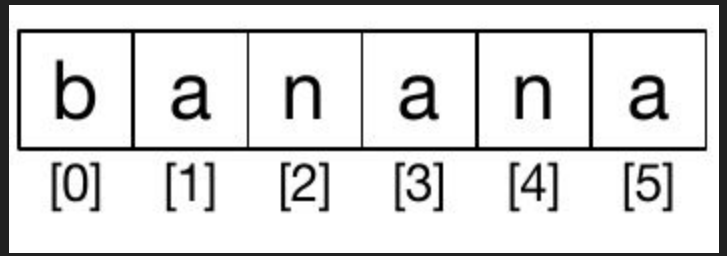
Strings

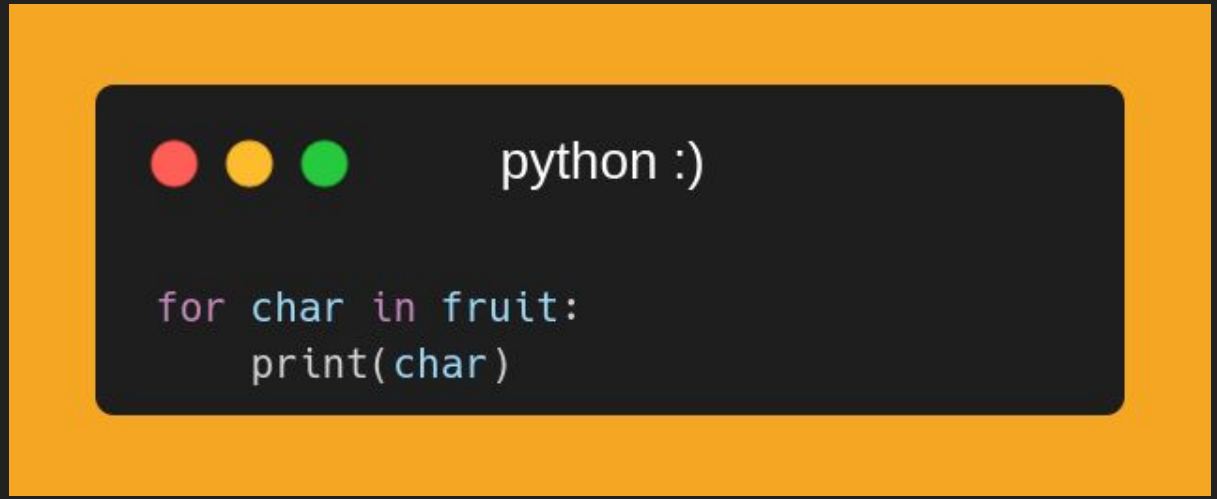
A string is a sequence of characters.

String Indexes



Getting the length of a string using len


python :)
index = 0
while index < len(fruit):
letter = fruit[index]
print(letter)
index = index + 1


python :)
for char in fruit:
print(char)

String slices

A segment of a string is called a slice.

python :)

```python
sample_string = "Python Course"

len(sample_string)
# 13

sample_string[0:6]
# 'Python'

sample_string[7:13]
# 'Course'

sample_string[:6]
# 'Python'

sample_string[7:]
# 'Course'
```

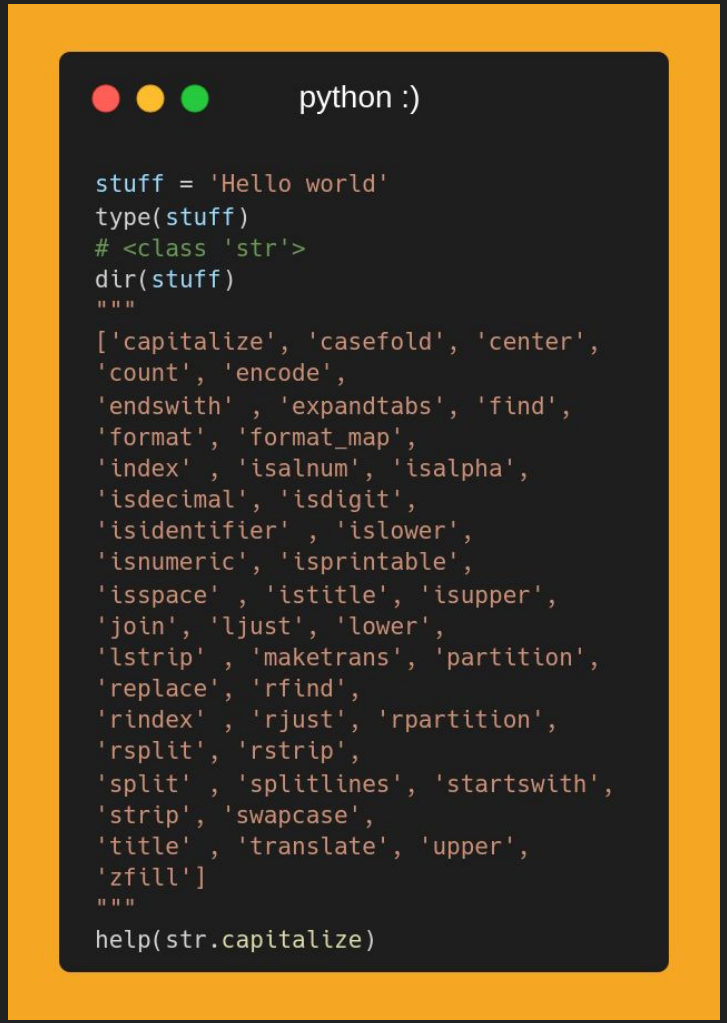
Strings are immutable

The in operator

String methods

Strings are an example of Python objects. An object contains both data (the actual string itself) and methods, which are effectively functions that are built into the object and are available to any instance of the object.

Python has a function called dir which lists the methods available for an object. The type function shows the type of an object and the dir function shows the available methods.



Parsing strings

python :)

```
data = 'From stephen.marquard@uct.ac.za
Sat Jan 5 09:14:16 2008'

atpos = data.find('@')
print(atpos)
# 21

sppos = data.find(' ',atpos)
print(sppos)
# 31

host = data[atpos+1:sppos]
print(host)
# uct.ac.za
```

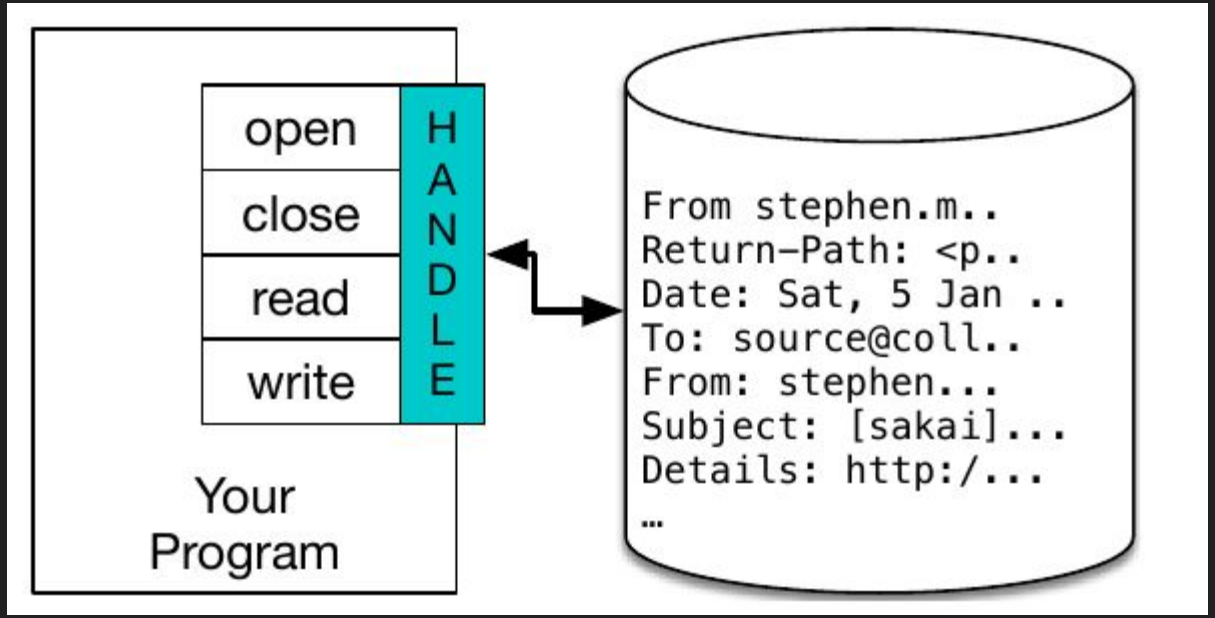
Files

Reading files

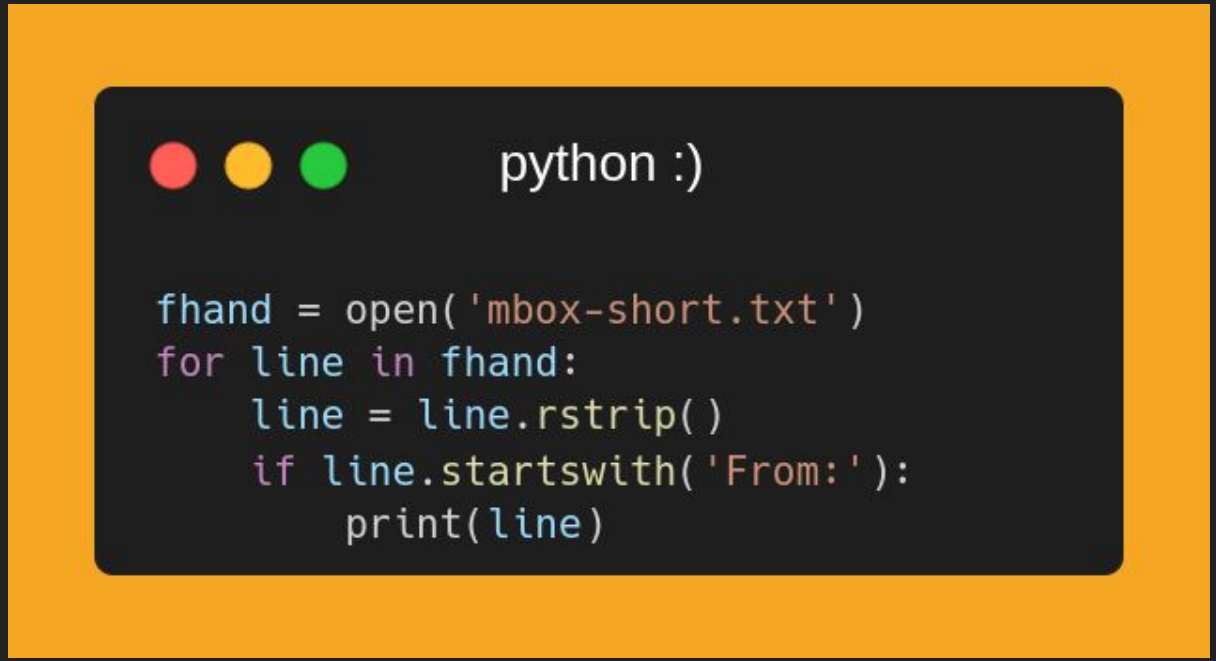
python :)

```
fhand = open('mbox-short.txt')
print(fhand)
# <_io.TextIOWrapper name='mbox-
short.txt' mode='r' encoding='UTF-8'>

count = 0
for line in fhand:
    count = count + 1
print('Line Count:', count)

inp = fhand.read()
print(len(inp))
# 94626

print(inp[:20])
# From stephen.marquar
```

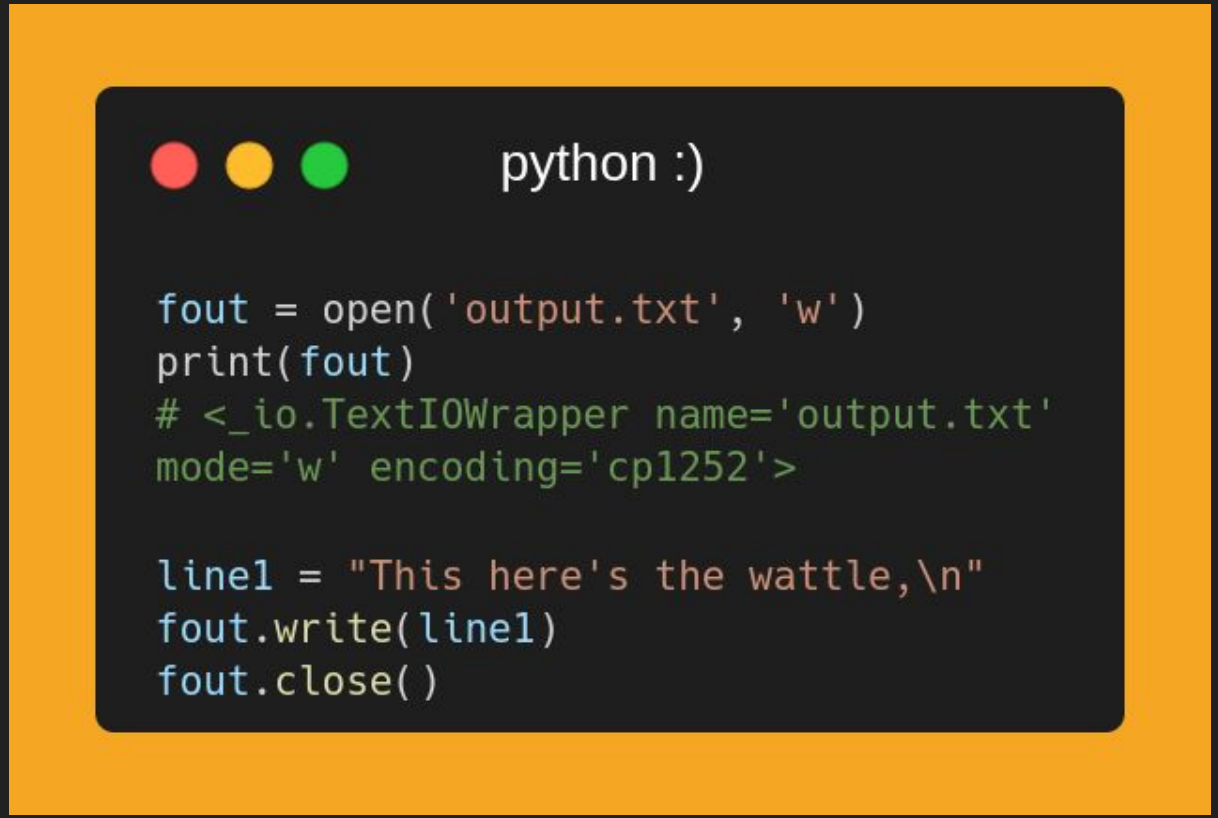
A File Handle



Searching through a file



Writing files



Any Questions?