

Recall:

Modules

- Python files as scripts (**or not**)
- The `import` statement
- Python scripts and `__main__`

2 / 13

Ask a couple of Top Hat questions here

Also recall:

`dir` tells us names in a module (or other things we'll see later):

```
>>> import example
>>> dir(example)
```

Later is now!

Other uses of `dir`

We can use `dir()` with other things, too:

```
dir('Hello!')
```

```
# ...  
'isupper',  
'join',  
'ljust',  
'lower',  
# ...  
'replace',  
# ...  
'split',  
# ...
```

Q: what are these?

A: object *methods*

Q: what are objects?

Object

A bundle of *code* and *data*

Example: string

Code: things we can do with *any* string — *methods*

find the first J in a string

count the spaces in a string

convert a string to upper-case characters

Data: the characters in *this* string

Methods

Like functions, but for *specific* objects

```
# Get the length of the temperatures list:  
l = len(temperatures)  
  
# Count the "Jo"s in the instructor's name:  
jos = instructor_name.count('Jo')
```

A method knows *which object* it's applied to

```
'hello'.count('l')  
'Listen Lionel, Ligon likes leprechauns but Lisa loves lions'.count('l')
```

6 / 13

Same code, different object

A brief foretaste

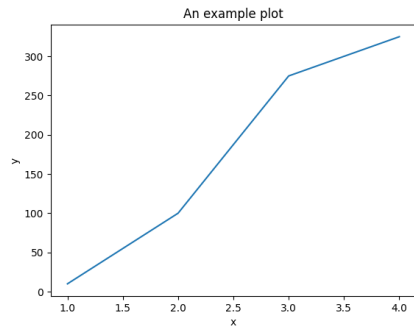
```
import matplotlib.pyplot as plt

f = plt.figure()
ax = plt.axes()

independent = [1, 2, 3, 4]
dependent = [10, 100, 275, 325]

ax.plot(independent, dependent)
ax.set_xlabel('x')
ax.set_ylabel('y')

f.show()
```



List methods

Some commonly-used methods on lists:

- append
 - index
 - sort
 - clear
 - insert
 - count
 - remove
 - extend
 - reverse
- and more!***

String methods

- capitalize
 - count
 - endswith
 - find
 - index
 - isalnum
 - isalpha
 - isascii
 - isdecimal
 - isdigit
 - isidentifier
 - islower
 - isnumeric
 - isprintable
 - isspace
 - istitle
 - isupper
 - join
 - lower
 - lstrip
 - replace
 - rfind
 - split
- and more!**

So...

What do I have to remember?

- what each of these methods do (clue's often in the name)
- *not* a list of all of these methods

On an exam: I'll remind you of what methods *exist*, you'll remember what they *do*

On an assignment / in your project: practice using whichever methods are helpful!

Summary

Objects

Methods

Common methods of:

- `list`
- `str`