

Python SSC Short Course

April Wright

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Ecology, Evolution and Behavior
Center for Computational Biology and
Bioninformatics

Introduction

- This powerpoint is just an outline
 - Contains links to more resources and practice
- <https://gist.github.com/wrightaprilm/6858471/>
- Stop me if you are lost!

Python!

- A good trade-off between human and computer time
- Open source
- Well-documented
- Active user community

Goals

- Assign a variable
- Use a loop
- Understand when and why you might use certain data structures
- Read in a file

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Google intelligently when you are stuck!

To the pythons!

Open the terminal

Type python

Variables

- [Python Variable Documentation](#)
- [SWC lesson on basics](#)

Strings and integers

Exercise one

- Assign a few numbers to variables
- Do a mathematical operation with them
- Test if the result is less than ten
- Print the answer to the screen in a complete sentence

Answer One

a = 4

b = 5

c = a + b

d = c < 10

print("The sum of %i and %i is %i. It is %s that
this value is less than 10" %(a,b,c,d))

Control flow

How often do you want to do an operation to
just one number?

Control flow

How often do you want to do an operation to just one number?

For Loop

[Tutorial](#)

[SWC](#)

Exercise 2

- Iterate over your list and print to screen if each letter is a vowel or not

(Hint: Two lists might be helpful!)

Possible solution

```
letters=['a','b','c','d','e','f','g'] vowels=  
['a','e','i','o','u']
```

```
for letter in letters:
```

```
    if letter in vowels:
```

```
        print('%s is a vowel' %letter)!
```

```
    else:
```

```
        print('%s is not a vowel' %letter)!
```

But wait...

- More often than not, we want to utilize data that's stored in files
- In the file that you downloaded previously, you will find a .txt file

```
git clone git@github.com:wrightapril/SSC_short.git
```


IO

- Open a file
- Read in
 - Iterables:
 - Lists
 - Dictionaries

Exercise

- Open the lizards file and read it in
- Choose a column and calculate its average
- Output the average, in a full sentence, to a file

Wrap-up

- You need to practice!
- CodeAcademy
- Software Carpentry
- Learning Python the Hard Way

Evaluations

<http://tinyurl.com/SSC-shortcoursesurvey>

