Python Lecture Series

{ *She* **Code** }

To follow along with the slides go to: https: //goo.gl/XwOLI4

Welcome to SheCode!

- Our team:
  - Alex
  - Amrutha
  - Anya
  - Catherine
  - Erika
  - Nick
  - Joyce
  - Rubi
  - Saran
  - Stephanie

Day 1: Intro to Python

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- What is Python?
- Computation & syntax
- Creating & updating variables
- Strings and slices
- Thinking about a project

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- If you have any questions/trouble, just raise your hand and a TA will come help you out
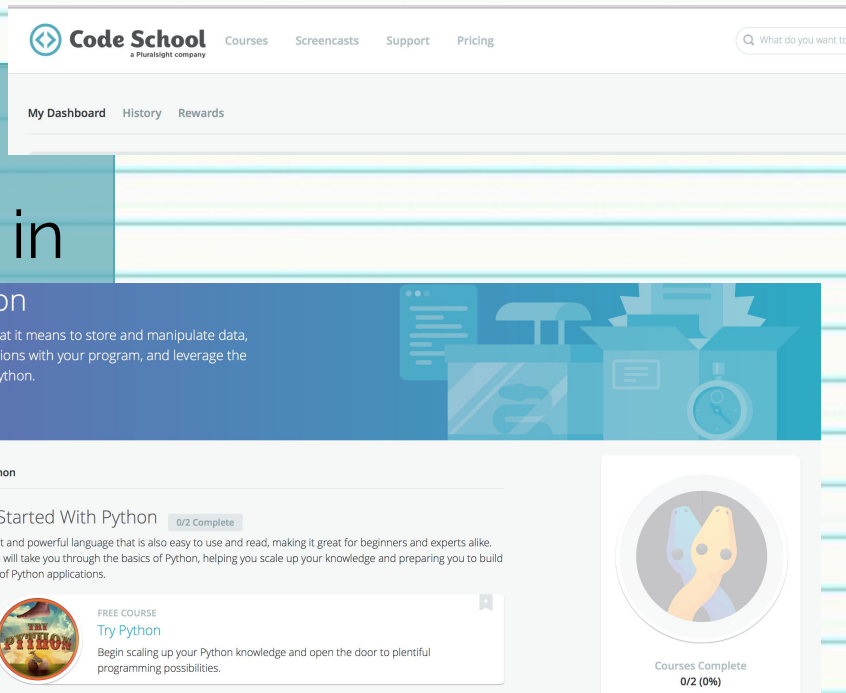
- Also refer back to the slides if you need extra help!

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4. Try Python: Level 1

Python

Explore what it means to store and manipulate data, make decisions with your program, and leverage the power of Python.

Paths > Python

Getting Started With Python   0/2 Complete

Python is a fast and powerful language that is also easy to use and read, making it great for beginners and experts alike. These courses will take you through the basics of Python, helping you scale up your knowledge and preparing you to build a wide variety of Python applications.

FREE COURSE
Try Python

Begin scaling up your Python knowledge and open the door to plentiful programming possibilities.

Courses Complete
0/2 (0%)

http://campus.codeschool.com/courses/

try-python/level/1/section/1/happy-birthday

Python: An Overview

What is Python?

- High-level programming language
- Advantages:
  - Loose, easy syntax
  - Quick to write
  - LOTS of documentation
- Disadvantages:
  - Runs slower than other languages (like Java)

Python Syntax

- No ";" to end lines
  - Why could this be a problem? Why is this easier?
- Indentation after colons
  - Why do we need to indent?

    if (nick == True):

      print "Hello world!"

- #comments
  - Why are comments so important?
- Full styling guide: https://www.python.org/dev/peps/pep-0008/

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Python Basics: Math

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- Important for updating variables, keeping score, etc.
- Symbols:
  - Addition: 2 + 1
  - Subtraction: 2 – 1
  - Multiplication: 2 * 1
  - Division: 2 / 1
- Activity:
  - Levels 1.1-1.4
  - Ask a TA if you need help!

Python Basics: Variables

- What is a variable? What can be stored?
- https://www.python.org/dev/peps/pep-0008/
- Appropriate variable names in python:
  - Lowercase
  - Underscores "_" between words
  - erika_is_awesome = "Bae-rika"
- Activity:
  - Levels 1.6-1.9

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Libraries

- For most coding languages, there are "libraries" that you can add into your own code
- Libraries provide functions that you can call on!
  - In python: import **[library name]**

Popular Libraries

- https://docs.python.org/3/library/

- Many functions available that can help you code, and make your coding life easier
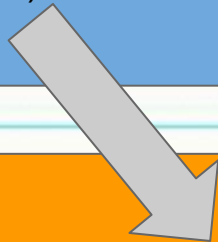
Part 2: Strings
Intro to Strings

What is a String?

- A group of characters

- **Creating a string**: enclose them in double(") or single(') quotes

Ex: string_name = 'Puppy dogs'

Printing Output

YOUR CODE goes here
print("hello")

The OutPut (Console): Hello

print(<Varible with a string>)
OR
print("string")

- only things you print() show up in console
- declaring variables happens behind the scenes

What will this print?

1) best_singer = "Beyonce"
   print(best_singer) ➡️ **?**

2) best_singer = Taylor Swift
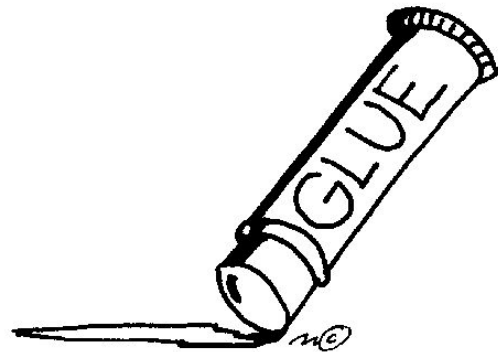   print(best_singer) ➡️ **?**

3) print(Hillary Clinton) ➡️ **?**

Concatenating (THE GLUE)

+   is the GLUE between two strings and variables

my_school = "Yale"
that_school = "Harvard"
school_end = "University"

print("I go to" + my_school + school_end)

Strings and Slices

How to access smaller parts of the string?

Remember: What is a string?
  - lots of characters

Strings are 0 indexed (AH!)

Strings and Slices Con'd

```
str1 = "Erika Alexandra"
string2 = "I love to eat pizza"


E = str1[0]          string2[3] = ?
r = str1[1]          pizza = ?
i = str1[2]          string2[1:5] = ?
k = str1[3]
Alex = str1[6:9]
```

What is an INT CASTING

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When do you have to cast?

- when you want an int to be recognized as a string

Another Function : str(int)

Special Characters

1) NEWLINE **\n**
2) Tab **\t**

- Put these inside the quotes to express you want it to print on a new line

- **EX:** print("Hello students "\n\t" + student_name1 + "\n\t" + student_name2)

The OutPut (Console):
Hello students
        student_name1
        student_name2

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- **Activity** http://campus.codeschool.com/courses/try-python/level/2/section/1/video/1

EXTRA EXCERISE

○ TRY ON YOUR OWN:

on a whiteboard near you
-declare your name in a variable and print it in a variable called sentence

Thank You!