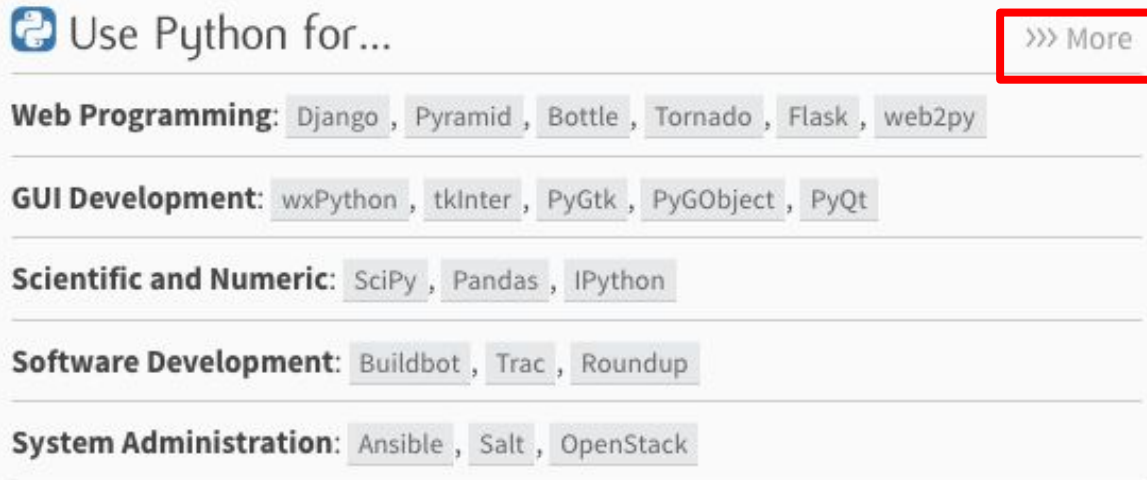


Aim: What is Python?

Do Now:

- 1) Have your notebook ready to take notes!
- 2) Go to www.python.org and explore!



python.org/about/apps

Block-based vs Text-based programming

Scratch



Python

```
1 | if x ==1:
2 |     currentpos = currentpos + 1
3 |     print "if block in Python"
```

```
1 | """ Lotto number generator for dojo"""
2 | import random
3 | balls = [1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16]
4 | picks = random.sample(balls,6)
5 | print picks
```

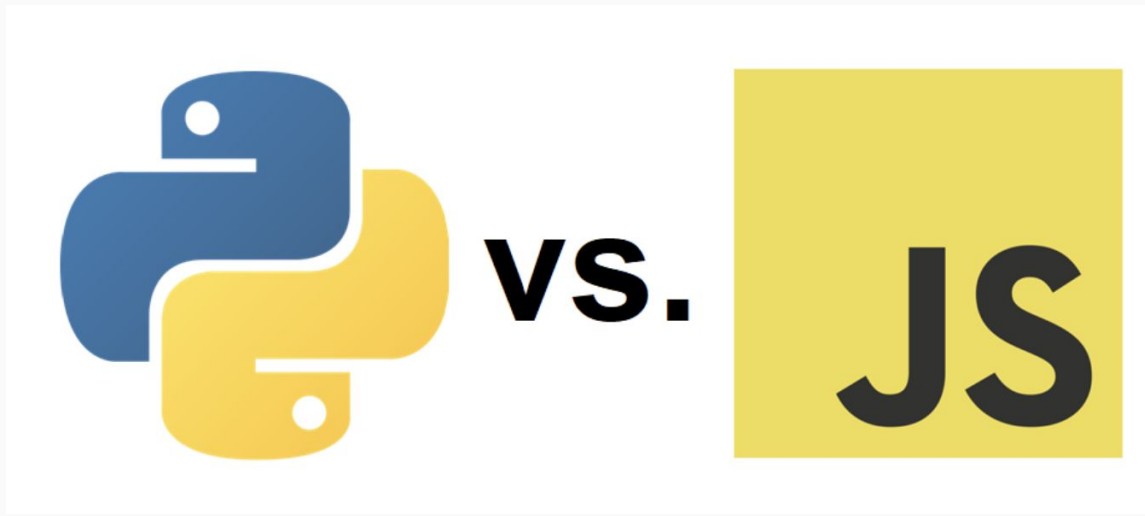
Block-based vs Text-based programming

Similarities

- Numbers, Text, Variables, User Input
- Conditionals, Lists, Loops, Functions

Differences

- Block advantages
 - Easy to learn fundamentals of programming
 - No syntax headaches
- Text advantages
 - Faster to write, test, and debug
 - You can do **WAY** more than block-based



What are some differences and similarities between **Python** and **Javascript**?

Take 5 minutes with a partner to look through the article.
When time is up, we will discuss this question whole class!

<https://www.freecodecamp.org/news/python-vs-javascript-what-are-the-key-differences-between-the-two-popular-programming-languages/>

REPL

A read--eval--print loop (REPL) is a simple, interactive computer programming environment that reads programmer inputs, evaluates them, prints the result, and then loops again.

Let's check it out! Please go to:

replit.com/languages/python3

Direct Instruction Mode

Vocabulary

Editor



The screenshot shows the repl.it Python editor interface. The top bar includes the repl.it logo, the word "Python", links for "languages" and "examples", and a "Log in" button. Below the top bar, there are three buttons: "share" with a share icon, "save" with a floppy disk icon, and "run" with a play icon. The editor area on the left contains three lines of code:

```
1 # This is my editor
2 # Here I can write multiple lines of code
3 # It is often called a SCRIPT or PROGRAM
```

 The output area on the right is dark blue and contains the text:

```
Python 2.7.2 (default, Jul 20 2011, 02:32:18)
[GCC 4.2.1 (LLVM, Emscripten 1.5, Empythoned)] on
linux2
> this is my interpreter / REPL
```

Interpreter

- Write a script
 - that contains multiple lines of code
- Run the script
- Can also use as a single-line REPL

print()

Every coder's first program: Hello World

```
print("Hello World")
```



Any predictions why we need "quotes" ?

The anatomy of this line of code

We are “calling” the **print** **function** that has already been defined by Python developers

Anything that goes inside of parenthesis of a function is called an **argument**

```
1 print("Hello World")
```

In this case, our argument is the **string** (which just means text) “Hello World”. Strings are always surrounded by quotes.

Your first Python script

Write a few lines of code that tell a story.

Use another **print()** every time you want a new line!

You can also start learning on your own at:

docs.python.org/3.10/tutorial/index.html

Make a prediction...

print('5+5')

print(5+5)

'5+5'

Summary

Based on what you know so far, what are some advantages, for you personally, of using Python over Javascript?