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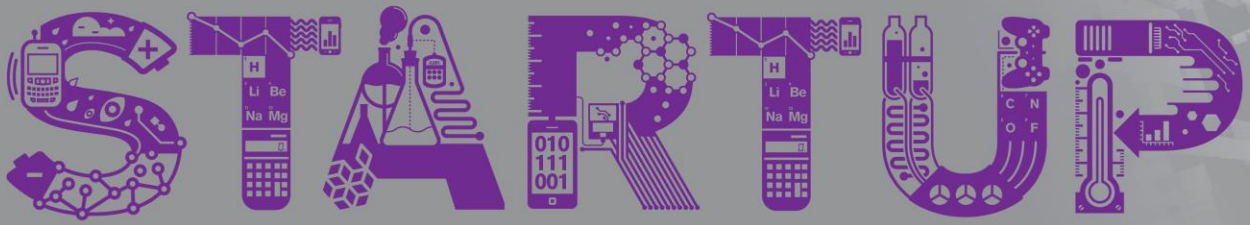

STARTUP

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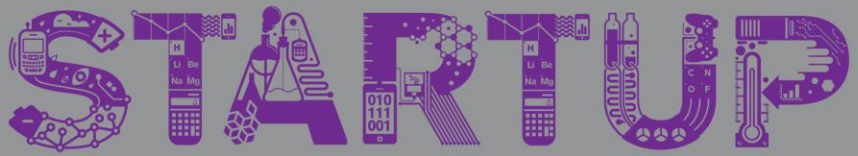

Python Lesson 2

Using Other People's Code

Using Other People's Code

- One important coding strategy is "don't reinvent the wheel."
- We try to re-use code as much as possible.
- Python comes with lots of built-in functionality you can use right away.

Printing to the console

- You've already seen a reusable piece of code:

```
print("Hello World!")
print("I love to print things!")
```

- Every time you run print, the computer looks up the code that tells it how to print to the console.
- We call a reusable piece of code a **function**.

Input

- Try running the following code:

```
answer = input("What's your favorite number?")
print("You like " + answer)
```

- Input is a function that asks a user to input some data.
- We can then store that data in a variable.

Example 1

- Try running the following code:

```
answer = len("Hello World!")
print(answer)
```

- What does the len function do?

Anatomy Of A Function

Functions have names

We can input data, called **parameters**, into functions. Parameters are passed in between parentheses.

```
answer = len("How long is this question?")
```

Functions can **return** data, which we can store in variables to use later.

Multiple Parameters

- Try running the following code:

```
name = "John Smith"
print("Hello", name)
```

- Many functions take multiple parameters. We pass them in separated by commas.

Modules

- Specialized groups of functions are often packaged together into **modules**.
- To use a function from a module, you must tell the computer which modules you want by **importing** it.
- To use a function in a module, you need to use both the module name and the function name, separated by a period.

Modules

- Try running the following code:

```
import math
square_root_of_81 = math.sqrt(81)
print(square_root_of_81)
```

Recap

- Functions are reusable pieces of code.
- Functions can take inputs, called parameters, and return data.
  - For example, the_length = len(“a very long string”)
- Groups of functions are often packaged into modules.
- To use a module, you must import it.
- To call a function in a module, use the module name and the function name, separated by a period.
  - For example, the_answer = math.sqrt(65536)