



Module 6 - Learning A New Language with Python!



Meet the Team!

Module Lead:

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TA's:

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Module 6 Overview

- Week 17: Python language (inverted style)
 - Intro to Python Basics
- Week 18: Python web applications (lecture style)
 - Building a server with Python & Flask
- Week 19: Docker (lecture style)
 - Docker and Project Planning
- Week 20: Group projects
 - Second Group Project with a Python (Flask) Server



Module 6 Resources

- Please refer to the Module 6 Resources git repo for lecture notes, learning objectives, and other resources that will help you succeed in Module 6!
- <https://github.com/appacademy/Module-6-Resources>



Week 17 Overview

- Learning the basics of a new language - Python!
- Will feel a lot like Mod 1 this week
 - Using the REPL again
 - Lots of short smaller problems to practice on
 - Will be back in VSCode by end of the week (and for the assessment)
 - Focus on using the Python Documentation or built in Help when needed



Week 17 - Days

- Today: Python setup & basics
- Tuesday: Python data types & control flow
- Wednesday: Python collections
- Thursday: Python importing, decorators, and classes
- Friday: Python dependency management, unittesting, and study day



Python vs JavaScript Demo!

- This week is really not about learning new concepts, its learning how we do things we already know how to do in JavaScript
- Some things will look very similar to JS
- Let's look at some code!



Intro to Python Section - Readings & Videos

- Intro to Python Section in Open (20 min)
 - A second Language - 10 min
 - Intro to Functions - 10 min



Strings - Reading & Videos

- Strings (30 min)
 - String Data Type - 10 min
 - Simple Formatted Strings Video - 11 min
 - Formatted Strings - 5 min
 - Arithmetic with Strings Video - 4 min



Strings - Quiz & Problems

- Strings Problems (17 min)
 - Strings? Quiz - 5 min
 - Strings REPL Problems (Hello, Eggs And Spam, Multiline Strings, Concatenate Names, Fun With Strings, Same Number of Characters?, Format Name) - 12 min



Boolean - Reading

- Boolean (5 min)
 - Boolean Data Type - 5 min



Boolean - Problems

- Boolean (3 min)
 - Boolean REPL Problems (Numeric Equality, Not Equal, Using and) - 3 min



Numbers - Readings

- Numbers (15 min)
 - Number Data Type - 10 min
 - NoneType Data Type - 1 min



Numbers - Quiz & Problems

- Number Problems (20 min)
 - Arithmetic Operators Quiz - 5 min
 - Number REPL Problems (Adding Two Numbers, Plus, Minus, More, Return Next Number, Convert Minutes To Seconds, Livestock Legs, String to Integer) - 15 min



Variables - Reading, Video & Quiz

- Variables (10 min)
 - Variables - 5 min
 - NoneType Variables Quiz - 5 min



Operators - Reading

- Operators (10 min)
 - Comparison Operators - 5 min
 - Identity vs. Equality - 5 min



Operators - Problems

- Operators (4 min)
 - Operators REPL Problems (Is Divisible By 5, Calculate Exponent, and Remainder of Two Numbers) - 4 min



Python Installation

- Install Pyenv
- Configure shell environment for Pyenv by updating startup scripts
 - Windows users need to install some extra dependencies for Python
- Install Python (using Pyenv)
- Install Pipenv
 - Don't worry about this - we'll get to later this week!
- Navigate to the unified setup for details on how to install python for your specific system
 - <https://github.com/appacademy/unified-setup>



Verify your Python Install

- The following commands should return the same Python version:
 - `python --version`
 - `python3 --version`
- `which python` should return `~/.pyenv/shims/python`

