











Unit 1

## **Programming Basics in Python**

(S) Estimated Time: 20-24 hours

In this unit you'll learn the fundamental skills needed to program in Python. You'll set up a development environment, fill out your knowledge of the Python basics, and learn to use the command line and Git. You'll learn about data types, working with collections (lists, tuples, and dictionaries), control flow, functions, and object oriented programming.



The concepts and language features in this unit form the building blocks of all your future programs, no matter what problem domain you're working with. And while understanding and memorizing the Python language features covered won't yet make you a good Python programmer, they will equip you with the tools you'll need to solve real world problems in almost any domain imaginable.

Throughout the unit you'll use your skills to tackle a number of challenges and projects. You'll write a Fizz Buzz program, practice using object oriented programming to model a real world scenario, and even be introduced to our in-house pirate bartender.

## Goals

o Configure a development environment

- Get experience breaking down a process into an executable set of instructions
- Understand Python data types, how to work with collections of things, control flow, functions, objects and object oriented programming basics.
- o Brush up on using the command line, Git and Github

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