

Python Learning Objectives

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Through this course, we will learn how to use the Python programming language. Python is an exciting and amazing language to work with. It is also easy to understand and highly readable. We will come along lots of technical terms and concepts related to programming. We will however not focus on memorizing the code or even the terms. With continuous practice, we will reinforce these concepts and terms that will help us keep growing stronger and better technically. With time and practice, it will also be easier to write code from the top of our heads. Practice, practice, practice and you'll keep getting better at it.

We'll start off by learning the basics of python. This will entail working with python data types which include strings, integers, lists and much more. Another essential part is using the python shell, which is writing and executing our code in the terminal (Sounds like a hacker thing to do, right?). We will also learn how to create and use classes in our applications by using concepts of Behaviour Driven Development. We'll also learn how to test our programs using unittests, a concept known as Test Driven Development.

Once we are done familiarizing ourselves with the basics of Python, we will then dive into using a web framework known as Flask to develop web applications. While at it, we'll learn how to initiate flask applications. We will also learn how to use API's in our flask apps, which will entail consuming data from an API and displaying it in our application. More to this, we will learn how to create a database and connect our application to the database in order to store our application's data. Authenticating users into our applications is a concept that we will learn and implement. In order to collect user data, we will create web forms with form fields where users can fill in data, for example, their birth date, postal address and city. We can then store this data in our applications database. Finally, we will learn how to deploy our web applications to Heroku cloud platform.

By the end of the Python module, we will be in the capacity to:

1. Understand the definition of python and what makes it an OOP(Object Oriented Programming) Language.
2. Work with python data types such as strings, lists, e.t.c and manipulate them using inbuilt python functions.
3. Comfortably use control flows such as loops and conditional statements in python.
4. Write our own functions and methods.
5. Write tests that check for the behaviour of our code.
6. Make requests to an API in a flask application.
7. Consume data from an API and process it for use in our applications.
8. Create an SQL database and run SQL commands on the database.
9. Connect a flask application to a database and store data from the application in the database.
10. Deploy our applications to production on Heroku Cloud Platform.

Enjoy your coding journey in Python!