

Python Tutorial series

LEARN TO PROGRAM USING PYTHON

OBJECTIVE

This tutorial series is most suited for those with no programming knowledge.

1. Introduce programming through Python.
2. Use project based method of learning.
3. Create an atmosphere for experimental and collaborative learning.

Tutorial Content

1. Overview and introduction to Python: What is Python? Why Python?...
2. Environment set up: Download and install compiler and text editor.
3. Basic Python Syntax, Types and operator.
4. Lists, Dictionaries.
5. Basic Statements: Conditionals, loops, comprehensions.
6. Functions: Parameters, arguments, variable scope
7. Interacting with Files.
8. Using Web API's

10 hours of workshop time.

Projects.

1. **Address Book:** You will write a program that generates the address for a given name.
2. **Area Calculator:** You will write a program that can calculate the area of a shape selected from a menu presented to a user. The user will provide the parameters to calculate the area of the respective shape and your program will display the area of the shape.
3. **Number Guessing game:** You will write a program that randomly generates a number. The user guesses the number and the program will say if its too high or too low. The game continues until the guess is correct.
4. **Amino Acid Sequencer.** You will write a program to convert a DNA sequence to an Amino acid sequence (protein).

And many more...

What you need to be successful

1. Laptop, doesn't matter which kind as long as you can type on it and access the internet.
2. An appetite to learn by doing.
3. High tolerance for errors. A big part of programming is debugging. It rarely works the first time.
4. 1-3 hours of weekly practice to reinforce concepts.