



Python

The Python Language (Duration: 30 hrs)

Setting Up the Work Environment

The Course Overview

Downloading and Installing Python

Using the Command Line and the Interactive Shell Hello World in Python

The Basics

Data Types and Variables

Arithmetic Operations

Understanding the Order of Operators

Comments

Variables Scope

Command Line Arguments

Data Input

Control Statements

If Statements

Else Statements

Elif Statements



Loops

While Loops

For Loops

Break, Continue and Else

Graphics

Turtles

Sequences

Range

String

Tuple

List

Dictionary

Set

Indexing, Sequencing and Slicing

Mathematical Function

Numerics

Generating Random Numbers

Datatype Conversions



Functions

Syntax Overview

More on Parameters

More on Returns

Arbitrary Arguments

Exception Handling

Try, Except, Finally

Raising Exceptions

Modules

Using Modules

Creating Modules

Packages

Creating Packages

File Handling

Opening Files

Reading and Writing Text Files

Directory Handling in Python



Pickling in Python

Object Oriented Programming with Python

Overview of Classes and Objects

Using 'Class'

Using Methods

Use Object Data

Inheritance

Database Handling with SQLite

Installing SQLite browser.

Creating a Database

Insert and Update Records

Retrieve and Delete Records

Web Framework

Introduction to Django - web framework

Network Programming

Introduction to Network Programming