



Advance Python



About Course

It is a Python module that implements various iterator building blocks and together they form 'iterator algebra' which makes it possible to efficiently build tools in the Python language.

Python is a high-level, interpreted, general-purpose programming language. Its design philosophy emphasizes code readability with the use of significant indentation.

ADVANCED PYTHON

CURRICULUM

① Python Modules

What is a Module?

Types of Modules

The import Statement

The from...import Statement

..import * Statement

Underscores in Python

The dir() Function

Creating User defined Modules

Command line Arguments

Python Module Search Path

② Packages in Python

What is a Package?

Introduction to Packages?

py file

Importing module from a package

Creating a Package

Creating Sub Package

Importing from Sub-Packages

Popular Python Packages

3 Python Date and Time

How to Use Date & DateTime Class

How to Format Time Output

How to use Timedelta Objects

Calendar in Python

datetime classes in Python

How to Format Time Output?

The Time Module

Python Calendar Module

Python Text Calendar, HTML Calendar Class

Unix Date and Time Commands

4 File Handling

What is a data, Information File?

File Objects

File Different Modes and Object Attributes

How to create a Text File and Append Data to a

File and Read a File

Closing a file

Read, read line ,read lines, write, write lines...!!

Renaming and Deleting Files

Directories in Python

Working with CSV files and CSV Module

Handling IO Exceptions

5 Python OS Module

Python Errors

Common RunTime Errors in PYTHON

Abnormal termination

Chain of importance Of Exception

Exception Handling

Try ... Except

Try .. Except .. else

Try ... finally

Argument of an Exception

Python Custom Exceptions

Ignore Errors

Assertions

Using Assertions Effectively

6 More Advanced PYTHON

Python Iterators, Generators, Closures, Decorators
and Python @property

7 Python Class and Objects

Introduction to OOPs Programming

Object Oriented Programming System

OOPS Principles

Example of w+ and ^ Expression
Example of \s expression in re.split function
Using regular expression methods
Using re.match()
Finding Pattern in Text (re.search())
Using re.findall for text
Python Flags
Methods of Regular Expressions

8 Python XML Parser

What is XML?
Difference between XML and HTML and XML, JSON, Gson
How to Parse XML and Create XML Node
Python vs JAVA
XML and HTML

9 Python-Data Base Communication

What is Database? Types of Databases?
What is DBMS?, RDBMS?
What is Big Data? Types of data?
Oracle
MySQL
SQL server
DB2
Postgre SQL

- Executing the Queries
- Bind Variables
- Installing of Oracle Python Modules
- Executing DML Operations...!!

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Multi-Threading

- What is Multi-Threading
- Threading Module
- Defining a Thread
- Thread Synchronization
- The components of a web page
- BeautifulSoup
- Urllib2
- HTML,CSS,JS,jQuery
- Dataframes
- PIP
- Installing External Modules Using PIP

11

Unit Testing with Py Unit

- What is Testing?
- Types of Testings and Methods?
- What is Unit Testing?
- What is PyUnit?
- Test scenarios, Test Cases, Test suites

12 Introduction to Python Web Frameworks

Django – Design

Advantages of Django

MVC and MVT

Installing Django

Designing Web Pages

HTML5, CSS3, AngularJS

PYTHON Flask, Bottle, Pyramid, Falcon

13 GUI Programming-Tkinter

Introduction

Components and Events

Adding Controls

Entry Widget, Text Widget, Radio Button, Check Button

List Boxes, Menus, ComboBox

14 Data Analytics

Introduction to data Big Data?

Introduction to NumPY and SciPY

Introduction to Pandas and Matplotlib

15 Introduction to Machine Learning with Python

- What is Machine learning?
- Machine Learning Methods
- Predictive Models
- Descriptive Models
- What are the steps used in Machine Learning?
- What is Deep Learning?

16 Data Science

- What is Data Science?
- Data Science Life Cycle?
- What is Data Analysis, Data Mining
- Analytics vs Data Science

17 Internet of Things

- IMPACT OF THE INTERNET
- What is IOT
- History of IoT
- What is Network, Protocol, smart?
- How IoT Works?
- The Future of IoT



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