Python Programming

Introduction:

The Python program is a scripting language that can be used for development, coding websites and applications, processing images, scientific data, and more. The program can be found in action on the Google search engine, NASA, Disney, Pinterest, and more. It was built for ease of use and speed and is less complicated than Ruby and other similar object-oriented programming languages. Because it is open-sourced, the program has enjoyed popularity among developers and programmers, and it continues to be the base program for most websites in operation on the internet today.

Python software is free to download and can be accessed on virtually every type of operating system. It comes with a large standard library that will make programming simple tasks, such as reading and modifying files, connecting to web servers, and more, easy. companies such as Nokia, IBM, Google, and Disney were all searching for programmers with Python experience to help them with web applications and framework development; in this respect, Python works perfectly with Django, which functions as the base framework system that Python builds on. Python also enables programs to script professional-grade web-based products. From back-end to front-end development, full-stack, and web-based options, Python programmers continue to find more economic prospects as the use of the language grows to encompass all areas of software and web development.

Duration:

- 6 Days (or) 36 Hours.

Content:

S.No	Topics	Duration
1	Python Introduction	1 Hr
2	Literate Programming	1 Hr
3	Jupyter Notebook Environment	

4	Markdown format for documentation	
5	Python basics	1 Hr
6	Keywords in Python,Operators in Python	1 Hr
7	Conditional Statements	1 Hr
8	Iterations	
9	Jump Statements(Break,Continue with examples)	
10	continue(with example)	2 Hrs
11	Functions	
12	Arguements in Functions	2 Hrs
13	Strings	
14	String Functions,String Slicing	2 Hrs
15	Python Data Structures	
16	Lists	
17	List Methods	1 Hr
18	Tuples	
19	Tuple Methods	1 Hr
20	Dictionaries	
21	Dictionary Methods	2 Hrs
22	Sets	
23	Set Methods	1 Hr
24	Packages and Modules	
25	Regular Expression	2 Hrs
26	File Handling	2 Hrs
27	List Comprehension	1 Hr
28	Iterators,Generators	1 Hr
29	Functional Programming:	
30	Maps,Filters,Lambda	2 Hr
31	Object-Oriented Programming	3 Hrs

32	Classes,Objects,Constructors, inheritence	
33	Python Packages and modules using oop's.	
34	Python Libraries for Data Science	
35	NumPy,Nd arrays, Advantages of NumPy	2 Hrs
36	Pandas	
37	Data Structures in Pandas,Pandas Series	3Hrs
38	Data Frames	
39	Data Visualisation using Matplotlib library	3 hrs

Course Objectives:

- The course is designed to provide Basic knowledge of Python. Python programming is intended for software engineers, system analysts, program managers and user support personnel who wish to learn the Python programming language.

Learning Outcome:

Problem-solving and programming capability

Entry Requirements (Pre-requisites):

- Basic Knowledge of Computer

Eligibility :

- who are willing to Learn Python Programming language are eligible.

Hardware Requirements:

- i3 or above Processor is required
- 4 GB or above RAM is recommended
- Good Internet Connectivity
- OS-Windows 10 is Preferable