Python Syllabus

1: Introduction To Python
- Installation and Working with Python
- Understanding Python variables
- Python basic Operators
- Understanding python blocks

2: Python Data Types
- Declaring and using Numeric data types: int, float, complex
- Using string data type and string operations
- Defining list and list slicing
- Use of Tuple data type

3: Python Program Flow Control
- Conditional blocks using if, else and elif
- Simple for loops in python
- For loop using ranges, string, list and dictionaries
- Use of while loops in python
- Loop manipulation using pass, continue, break and else
- Programming using Python conditional and loops block

4: Python Functions, Modules And Packages
- Organizing python codes using functions
- Organizing python projects into modules
- Importing own module as well as external modules
- Understanding Packages
- Powerful Lamda function in python
- Programming using functions, modules and external packages

5: Python String, List And Dictionary Manipulations
- Building blocks of python programs
- Understanding string in build methods
- List manipulation using in build methods
- Dictionary manipulation
- Programming using string, list and dictionary in build functions

6: Python File Operation
- Reading config files in python
- Writing log files in python
- Understanding read functions, read(), readline() and readlines()
- Understanding write functions, write() and writelines()
- Manipulating file pointer using seek
- Programming using file operations

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7: Python Object Oriented Programming – Oops
Concept of class, object and instances
Constructor, class attributes and destructors
Real time use of class in live projects
Inheritance , overlapping and overloading operators
Adding and retrieving dynamic attributes of classes
Programming using Oops support

8: Python Regular Expression
Powerful pattern matching and searching
Power of pattern searching using regex in python
Real time parsing of networking or system data using regex
Password, email, url validation using regular expression
Pattern finding programs using regular expression

9: Python Exception Handling
Avoiding code break using exception handling
Safe guarding file operation using exception handling
Handling and helping developer with error code
Programming using Exception handling

10: Python Database Interaction
SQL Database connection using python
Creating and searching tables
Reading and storing config information on database
Programming using database connections

11: Python Multithreading
Understanding threads
Forking threads
Synchronizing the threads
Programming using multithreading

12: Contacting User Through Emails Using Python
Installing smtp python module
Sending email
Reading from file and sending emails to all users addressing them directly for marketing

13: Python CGI Introduction
Writing python program for CGI applications
Creating menus and accessing files
Server client program

14: Sample Project