

Session Plan on Python Programming

Level :- Beginner

Duration – 5 Days/40 Hrs.

Sl.No	Topic	Sub Topic
Day-1	Python Refresher	Installation, Introduction, Data types Sequences – list, tuple, set, dictionary, Mapping types Program structure, Files and console I/O Conditionals, Loops Built-ins, Comparison Operations, The if Statement, The if Ternary Expression, The while Loop, The for Loop
Day-2	Python Programming	The Zen of Python, Common idioms, Lambda functions List comprehensions, Generator expressions, String formatting
	Functions	Defining the Function ❖ Function without Arguments ❖ Function with Fixed number of arguments ❖ Function with keyword arguments ❖ Function with Default arguments ❖ Function with variable length arguments ❖ Returning single/multiple values from the function
Day-3	Modules & Packages	Initialization, code, Namespaces, executing modules as scripts Documentation, Packages and name resolution Naming conventions, Using imports
	Classes	Defining classes, Instance methods and data Initializers, Class methods, Static methods, Inheritance, Multiple inheritance Pseudo-private variable
Day-4	OS	The OS module, Environment variables Launching external commands Walking directory trees, Paths, directories filenames Working with file systems
	Working with Data & Time, sys Module	Date , SYS and time modules, command line.....
	Regular Expression	Defining regular expressions, Compiling regular expressions Using regular expressions, Using match objects to extract a value Extracting multiple items, Replacing multiple items
Day-5	Database Access	Creating and executing a cursor, CURD operations.sqlite3, Postgresql etc
	CSV Modules	CSV Format,Creating the CSV Files,Writing the contents into the CSV Files,Reading the CSV File,Reading the Contents of CSV File using DictReader,Writing the Contents of CSV File using DictWriter,Other Delimiters instead of ‘,’
	Multithreaded Programming	Why use threads?,Threads are different,Variables are shared,Python threads modules

TRAINING PROGRAM 2021

Pre-Requisites

1. Basic knowledge of C Programming.
2. Eagerness to learn new innovative things.

Recommendation

It is strongly recommended to bring your own LAPTOP during the training so that you can easily practice the exercises at home.

Who Could Attend this Training?

- Anyone who have interest in this field and have pre-requisite knowledge.

Pre-requisites:

H/W: -

Processor – i3 or above.

RAM - 4GB or above

Software

Window – 10/7(Service Pack 1(mandatory (updated))), 64 bit

Version- Python-3.7 or above

Eclipse with pydev, Pycharm Community Edition

Test Cases

1. Understanding and Execution of Python scripts with python containers.
2. Understanding and Execution of Python scripts with conditional statements.
3. Understanding and Execution of Python scripts with loops.
4. Understanding and Execution of Python scripts with operators.
5. Read and write data into files based on conditions.
6. Schedules Python Scripts with system.
7. Create a GUI with Python.
8. Create executable files for scripting and GUI for windows.
9. Apply CURD operations on databases.
10. Read data from Xlsx and CSV..etc files using Pandas and prepare based on conditions(vlookup,join,search..etc.).
11. Export data into files after pre-processing using Pandas python.
many more etc.

Note: - All the Cases towards to Automation and Data Science. We will start session from scratch that cover all the required cases.
