Python Programming

COURSE & CONTENT

Program Structure
Online Internship Program

Prerequisites of this program

Participants from CSE/IT/MCA/BCA/BSc IT/ECE background are eligible to join this program, even if any person who is planning to sit in placement drive(s) or planning to switch in Machine Learning / Data Science domain then this program will be very much helpful.

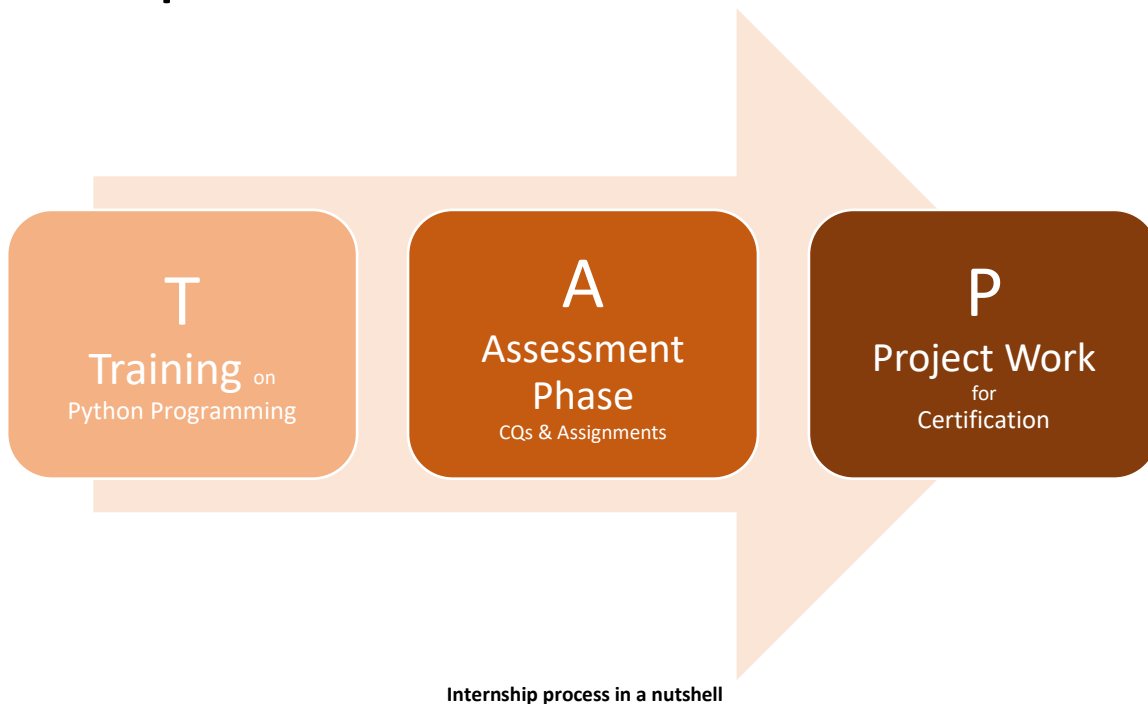## Technical Requirements

We expect participant(s) to have

1. A laptop with Microsoft Windows configuration with minimum 8GB RAM.
2. Laptop Charger/ Adapter for charging purpose.
3. Internet Connectivity.
4. Smartphone (4G/5G)

Internship Deliverables

Every participant will get all under mentioned deliverables

1. Offer Letter
2. 30 hours training by specialized trainer in self paced mode
3. Frequent Doubt Sessions live by trainer
4. Study Material / Classroom Material
5. LMS Access
6. Certificate of Internship
7. Guidance for Entrepreneurship in chosen field or employment support.
8. Chance to assist our trainer in our workshop(s) at IISc, IITs, NITs etc.

Internship Process in a nutshell

T
Training on
Python Programming

A
Assessment
Phase
CQs & Assignments

P
Project Work
for
Certification

Internship process in a nutshell

Course & Content

All of the sessions will be practical oriented, kindly look on the syllabus which we are going to cover during training days.

Python Programming Module

Session 1
Introduction
Why do we need Python?
How to Install Python?
Execution steps
Interactive Shell
User Interface or IDE
Creating Your First Python Program

Session 2
Memory Management and Garbage Collection
Object Creation and Deletion
Object Properties
Data Types and Operations
Numbers
String Operations

Session 3
List Tuple
Dictionary
Other Core Types

Session 4
Statements and Syntax
Assignments, Expressions and prints
If tests and Syntax Rules
While and For Loops

Session 5
File Operations
Opening a file
Using Files
Other File tools
Python Check If File or Directory Exists
Python COPY and PASTE File using shutil.copy()
Python Rename File and Directory using os.rename()
Python ZIP file with Example

Session 6
Functions
Function Definition and Call
Function Scope
Function Arguments

Session 7
Modules and Packages
Module Creations and Usage
Types of package in Python
Package creation
Importing packages

Session 8
Classes
Classes and Instances
Classes method calls
Class methods
Instance methods
Static methods

Session 9
OOPs concept
Abstraction
Encapsulation
Polymorphism
Types of Polymorphism
Inheritance
Types of inheritance

Session 10
Exception Handling
Default Exception Handler
Except Exceptions
Raise an exception
User defined exception

Session 11
Accessing Internet Data with Python
Manipulating XML with Python

	Project Discussion
Activities & Project Discussion **Activities** Installing different libraries of Python	**Project Discussion** Random Password Generator QR Code Generator Alphabetical Letter Pattern creation Sending Email or Whatsapp messages via Python code Speech Recognition Quiz Game File Handling Project

DISCUSSION ON FINAL PROJECT
Final project & report of the same will be made by participant(s) only.

Tools you may explore in future