Python Syllabus

1 Python Introduction

- Python introduction
- Python Applications
- Python Features
- Python Setup

2 Python Basics

- Python variables
- Python Data types
- Python Keywords
- Python literals
- Python operators
- Python comments

3 Python Basics Program

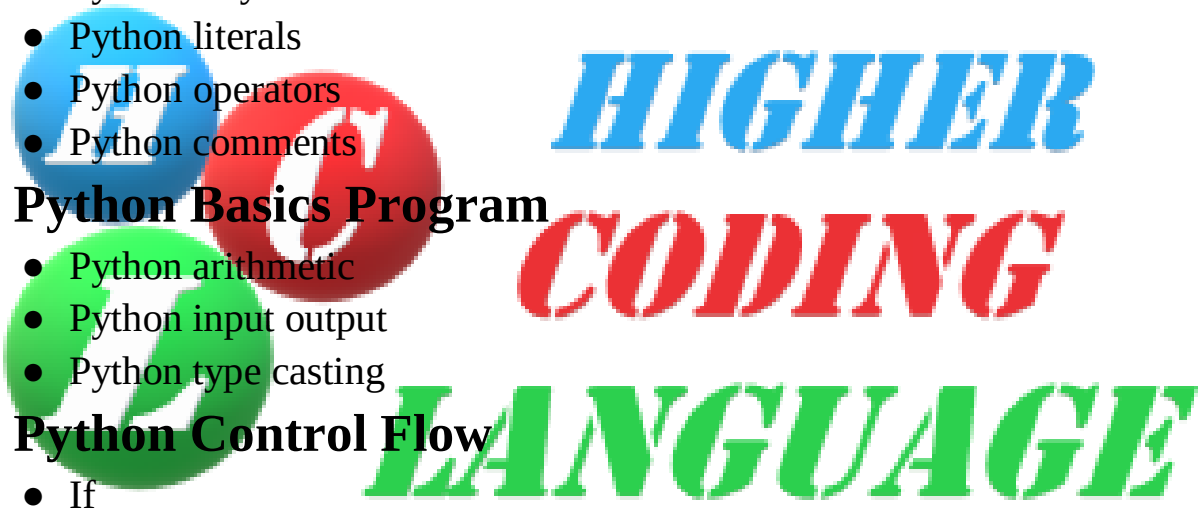
- Python arithmetic
- Python input output
- Python type casting

4 Python Control Flow

- If
- If else
- Loops
- For loop
- While loop
- Break and continue
- pass

5 Python String

- String Introduction
- String Slicing
- String immutability
- String Formatting



- String Functions

6 Python List

- List Introduction
- List Slicing
- List Properties
- List iteration
- List Operator
- List Functions

7 Python Tuple

- Tuple Introduction
- List vs Tuple
- Tuple Slicing
- Tuple Properties
- Tuple iteration
- Tuple Operator
- Tuple Functions

8 Python Set

- Set Introduction
- List vs Tuple vs Set
- List Slicing
- List Properties
- Set iteration
- Set Functions
- Set Operations
- Frozen Set

9 Python Dictionary

- Dictionary Introduction
- Dictionary Properties
- Dictionary iteration

10 Python Functions

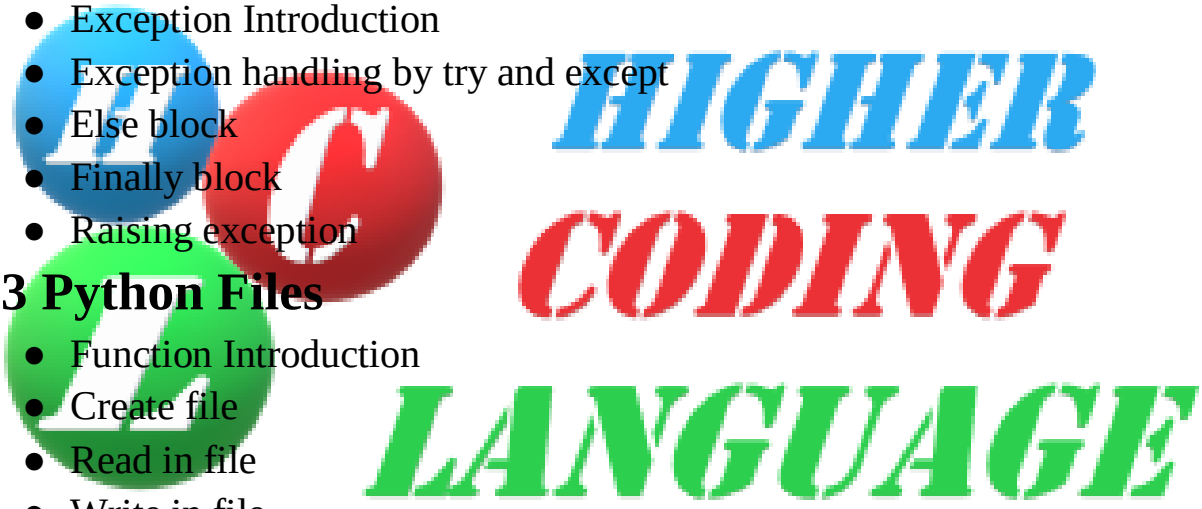
- Function Introduction
- Types of Function
- Types of variables
- Lambda functions

11 Python Module

- Function Introduction
- Inbuilt module
- User define module

12 Python Exception Handling

- Exception Introduction
- Exception handling by try and except
- Else block
- Finally block
- Raising exception



13 Python Files

- Function Introduction
- Create file
- Read in file
- Write in file
- File functions
- Pickle

14 Python Database

- Sqlite database Introduction
- Database crud operations

15 Python OOPS

- OOPS introduction
- Class and object
- constructor
- Str method

- Inheritance
- Abstraction

16 Python Thread

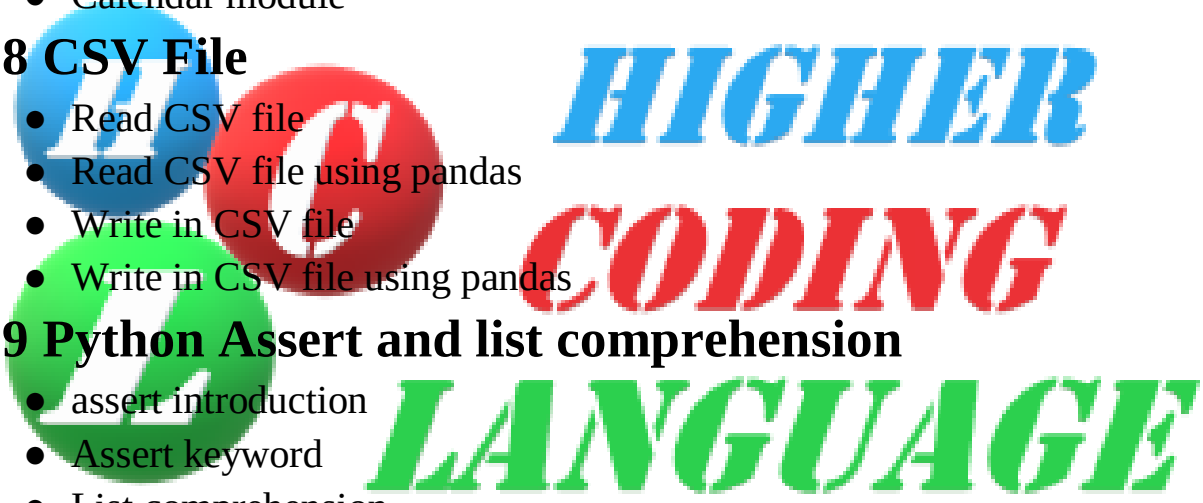
- thread introduction
- Single tasking using thread
- Multitasking using thread

17 Python Date and Time

- Time
- Sleep time
- Datetime module
- Calendar module

18 CSV File

- Read CSV file
- Read CSV file using pandas
- Write in CSV file
- Write in CSV file using pandas



19 Python Assert and list comprehension

- assert introduction
- Assert keyword
- List comprehension

20 Python inbuilt module

- Math module
- Os module
- Random module
- Statistics module

21 Python Array

- Array introduction
- Array iteration
- Array operations

22 Python JSON

- write json file
- Read json file

Hardware requirement: Min 16GB RAM 128 GB ROM

Software requirement: Windows 10, Python Installer or Pycharm

Duration	**10 days**
Amount	**1000 Rs**
Min Students	**50**

AI Syllabus

Chapter 1 – Preparatory Classes on Python for AI & ML and Linux

Chapter 2 – Git and GitHub

Chapter 3 – Python with Data Science

Chapter 4 – Data Wrangling with SQL

Chapter 5 – Story Telling

Chapter 6 – Machine Learning Models for Selection and Tuning

Chapter 7 – Machine Learning & Prediction Algorithms

Chapter 8 – Advanced Machine Learning

Chapter 9 – Software Engineering for Data Science

Chapter 10 – Data Science at Scale with PySpark

Chapter 11 – Artificial Intelligence and Deep Learning with TensorFlow

Chapter 12 – Natural Language Processing

Chapter 13 – Image Processing and Computer Vision

Chapter 14 – Deployment of Machine Learning Systems to Production

Chapter 15 – Work with Large Datasets

Chapter 16 – Data Visualization with Tableau

Chapter 17 – Capstone Project