# Python Basics

\* Introduction

=> Python Installation, History, Features, Applications, IDEs, I/O Basics

=> Variables and Memory [Management], Types of Variables, Expressions Introduction

=> Expressions (Contd..) [Precedence], Types of Operators

- Difference betweeen '==' and 'is'

\* Control Flow

=> Indentation, Iterators and Iteration, if, elif

=> for, while, range, break, pass

\* Data Structures

=> Strings

- Strings Operations, String Formatting and f-String

=> Tuples, Set, Dictionaries, List and their Operations.

\* Python Functions and Modules

=> Funtions

- Different types, difference b/w method and a function.

=> Functions [Adv]

- Lambda, Zip, Filter, Map, Reduce

=> Modules & Packages

- Importing a Module, Creating a Module, Renaming a Module, Difference b/w inbuilt and user-built modules

\* OOPS in Python

=> Introduction to OOPS in Python, Declaring Class, Class Variables, Instantiating a Class, Instance Variables

=> ‘self’ keyword, Magic Methods, Polymorphism, Overriding

=> Abstraction, Encapsulation

- How to access Private Methods/Members in Python

=> Method Overloading, Inheritance

\* Exception Handling

=> Introduction, Difference b/w Errors and Exception

=> Try, Catch, Except, Finally, Try...Else

\* File Handling

=> Different Types and Importing Files.

Generators, Decorators

\* Projects

- Snake and Laddder

- Bank Management System

- Tic Tac Toe