## Python week-5

## Day1

- Python Introduction
  - Advantages and Disadvantages(interpreted, dynamically typed)
  - Working of Python Interpreter
- Python indentation and Comments
- Python Variables
- Python Data Types
  - o Int, Float, Complex
  - o List, Tuple, Range
  - o Dict
  - Set, Frozenset
  - o Bool
- Operators
- Python Condition, if and else Statement
- Python Loop(For and While)
- Practice Loop Questions

#### Day2

- <u>List</u>
  - Access list items
  - o Change list items
  - o Add List items
  - o Remove list items
  - o Loop Lists
  - List Comprehension
  - o Important List methods
  - Practice List Questions
- <u>Tuple</u>
  - Access Tuples
  - o Update
  - o Loop
  - Important List methods
- Python sets

- Access set items
- Add Set items
- o Remove set items
- Loop sets
- o Important set methods

### • Python Dictionary

- Access items
- Change items
- o Add items
- o Remove items
- Loop Dict
- o Important dict methods
- Practice dict Questions

#### • String

- Accessing
  - Slicing
  - Indexing
- Modify String
- Concatenate String
- Important string methods

### Day3

## • Python Functions

- Creating a function
- Calling a function
- o Arguments and number of arguments
  - Arbitrary arguments ,\*args
  - Keyword arguments
  - Arbitrary Keyword arguments ,\*\*kwargs
- Recursion- try yourself with examples
- <u>Lambda-</u> try yourself with examples
- Modules
  - Important modules-(ex:standard module,math module ect)
- <u>Decorators-</u> learn with Examples
- Iterators learn with Examples
- Generators- learn with Examples

# Day4 and 5

- Exception Handling(try,expect,else,finally)
  - Workout with examples
- Types of variables global and local
- Oops
  - \*\*Classes and Objects
    - Try with examples
    - Method and Constructor
    - Types of Variables
      - Instance, static, local variable
    - Types of Methods
      - Instance , class ,static
  - o Inheritance
  - o Polymorphism
  - o Abstraction
  - o Encapsulation
- Try questions on all topics till review

# **Extra Topics**

- File handling
- Filter function
- Map function
- Reduce function
- Magic methods
- Monkey patching