

# Python Advance

## Session 1 (Working with python Comprehensions)

- ✓ Introduction to list comprehensions.
- ✓ Introduction to dictionary comprehensions.
- ✓ Introduction to set comprehensions.
- ✓ Introduction to generator comprehensions.

## Session 2(Working with RegEx in Python)

- ✓ Introduction to RegEx in python
- ✓ Creating a Regex in Python and usage in Python.

## Session 3 (Working with Files I/O)

- ✓ Introduction to File, File Types
- ✓ File Manipulating using seek() and tell()
- ✓ Opening and Closing Files, File Opening Modes
- ✓ File and Directory Related Methods.

## Session 4(Working with PyQt)

- ✓ Introduction to Python PyQt
- ✓ Component and Widget of PyQt

## Session 5 (Working with Data structure and Algorithm)

- ✓ Introduction to DSA in Python.
- ✓ Sorting : Insertion, Selection, Bubble, heap, merge, quick
- ✓

## Session 6 (Coroutines and Tasks)

- ✓ Awaitables
- ✓ Running an asyncio Program
- ✓ Creating Tasks
- ✓ Sleeping
- ✓ Running Tasks Concurrently
- ✓ Timeouts
- ✓ Waiting Primitives

## Session 7 (Working with Network Programming)

- ✓ Introduction to Sockets, Client vs Server
- ✓ Server, Client and General Socket Methods
- ✓ Writing Client and Server code in Python
- ✓ Protocols used in Client/Server Architecture

## Session 8 (Working with Multithreading)

- ✓ Introduction to Threads and Process
- ✓ Different Types of Threads, Thread Modules
- ✓ Starting a New Thread, The Thread Modules
- ✓ Create Thread using Threading Module
- ✓ Thread Synchronization
- ✓ Multithreaded Priority Queue