

# Python Course Content

## Week - 1

- Why Python & Its Features
- Python(Script,Language)
- Basics Installations(Install,Path)
- How to Write PyShell,File
- String Manipulation
- Data Types & Type Conversions
- Immutable & Mutttable Types
- Keywords, Features of Python
- Operators(Arithmetic,Relational,Logical)
- Operators(Sequential Logical)
- Input/Output Statements(print,raw\_input & input)
- Conditional Statements(if,switch)
- Looping Statements(while, for,range,xrange)
- Seq.Ctrl Statements (pass,break,continue)
- List Comprehensions(Conditional,Looping)
- Lists
- Tuples
- Sequences
- Dictionary
- Set
- Linked List Implementation
- Stack Implementation
- Queue Implementation

## Week - 2

- Local & Global variables
- Default Argument Values
- Returning Values
- Keyword & Positional
- Arguments
- Arbitrary Argument Lists
- Unpacking Argument Lists
- Documentation Strings
- Ref & Out
- Expression and Syntax
- Reduce(Concept,Incrementor, sort)
- Map( Concept & Examples)
- Filter( Concept & Examples)
- Why OOPs
- Classes & Objects
- Encapsulation & Abstraction
- Inheritances(Concept,Types)
- Polymorphism(Basics & Types)
- Polymorphism(Function Overriding)
- Polymorphism(Operators Overloading)

# Python Course Content

## Week - 3

### What is an Exception?

- Handling an exception
- try....except...else
- try-finally clause
- The argument of an Exception
- Python Standard
- Exceptions
- Raising an exceptions
- User-Defined Exceptions
- What are regular expressions?
- The match Function
- The search Function
- Matching vs searching
- Search and Replace
- Extended Regular Expressions
- Wildcard
- Concept of Module & Packages
- User Define Modules
- Calling Predefine Modules
- dir,help,logging & debugging
- Python
- Concept of Module & Packages
- User Define Modules
- Calling Predefine Modules
- dir,help,logging & debugging Python

## Week - 4

### Concepts & Need of Decorators

- Generators
- Static Rendering
- Dynamic Rendering
- Static JSON
- Querying JSON
- Database, Flat File System
- Query Language(SQL and NoSQL)
- SQLite Architecture
- Creating Database, Design Schema
- Real-Time Project Requirements & Design
- SQLite + Json +Flask App Design
- Cloud Flask Web API with Database Server
- Application Migration into Containerization
- Complete Interview Questions with Solutions
- AWS Cloud Computing