Python

Over View of Python

• Introduction to Python
• Compiler vs Interpreter
• Pros and Cons
• Installing Python
• Playing with Python shell

Python Execution Model (running scripts)

• Structure of a Python Script
• Running Python script

Getting Started

• Variable and types
• Reading from keyboard (raw_input)
• Numbers and Strings
• Comments Docstrings
• Print Statement

Operators

• Assignment Operator
• Arithmetic Operators
• Relational Operators
• Logical Operator
• Bitwise operator

Control Statements
About Flow controls

Indentiation

If statements(if,ifelse,elif)

While loop

For loop

Break, continue

Range() function

Data Structures

• Lists
• Tuples
• Set
• Dictionaries

Functional Programming

• General Syntax
• Types of functions
• Function Arguments
• Global vs local variables

Package & Modules

• Introduction to Module
• Using module
• Importing predefined modules and usage(Sample modules)
• Creating your own modules
Python and Django

Course Content

- Package creation and Importing

**Some of Useful Modules**

- OS module
- Sys
- CSV
-Datetime
- Random
- PDB

**Working with Files**

- General Syntax
- Create and writing Files
- Reading Files

**Exception handling**

- Importance of Exception handling
- Try,Catch(except),Finally
- User Defined Exception

**Regular Exceptions**

- Matching vs Searching
- Parsing Data
- Re.sub

**Object Oriented Programming**

- Introduction OOPS
• Access Specifiers
• Instance Methods
• Inheritance
• Method Overriding
• Destructors

**Database:**
• Installing Postgresql
• Connecting to Database(Psycopg2)
• CRUD Operations (ADD, Delete, Fetch...)

**Advanced Concepts**
• Generators
• Decorators
• List comprehension(Map,Filter,Reduce)

**Django:**

**Course: Introduction Django**
• Introduction of Django
• Installing Django
• Explaining Architecture of Django
• Creating Django Project
• How to run Django Project
• Overview of Django Structure(Settings,manage,urls,init,wsgi)
• Django Admin overview
• How to Create APPS
• Models and Migrations
Python and Django

Course Content

- Playing with Django ORM API
- Creating Views
- Http Response, Render to Response
- Templates
- Forms and their validation
- Pagination, Sessions, Authentication
- Simple web app with CURD Operations