

# Day 1

- 1) Introduction
- 2) Understanding of Python
  - a) What is python?
  - b) Interpreted languages
  - c) Advantages and disadvantages
  - d) Why python is required?
  - e) Python versions
  - f) Python documentation and help
- 3) Python Environment Set-up and Installation - Anaconda
- 4) Where to find documentation
- 5) Jupyter Notebook Overview
- 6) Python Basics
  - a) Using the interpreter interactively
  - b) Running standalone scripts under Unix and Windows - shebang line
  - c) Data Types
    - i) Numbers
    - ii) Strings
    - iii) Lists
    - iv) Dictionaries
    - v) Booleans
    - vi) Tuples and Sets

# Day 1 (Continued)

## 7) Operators

- a) Relational
- b) Logical

## 8) If, elif and else Statements

- a) Indentations
- b) If ...
- c) If ... else..
- d) If .... Else... if .. else ...
- e) If ... elif...else

## 9) Loops

- a) For ( Finite loop )
- b) While ( Infinite loop )
- c) Break
- d) Pass
- e) Continue

# Day 2

## 10) Python Sequences

- a) List
- b) Tuple
- c) Dictionary
- d) Set

## 11) List Comprehensions in Python

## 12) Working with Functions

- a) Overview of Function
- b) Function with parameters
- c) Positional arguments
- d) Keyword arguments
- e) Scope of variables

## 13) Working with Files

- a) Text file I/O overview
- b) Opening a text file
- c) Reading text files
- d) Writing to a text file
- e) Using the pickle module

# Day 3

## 14) Using Pandas Package in Python

- a) Introduction
- b) Installation of Python
- c) Series
- d) DataFrames
- e) Missing Data
- f) Exercises

## 15) Sorting

- a) The sorted() function
- b) Alternate keys
- c) Multiple keys - itemGetter
- d) Lambda functions

## 16) Working with Modules

- a) How import built modules
- b) Creating User defined Modules

## 17) Working with Exceptions

- a) Try
- b) Except
- c) Else
- d) Finally

## 18) Regular Expressions

# Day 4

## 19) Django Basics

- a) Overview and Basics
- b) Environment Setup
- c) Creating a Project
- d) Database Setup
- e) Lifecycle of Apps

## 20) Admin Interface

- a) Creating Admin Interface
- b) Explore the Admin Functionality
- c) Admin Form Customization

## 21) Templates

- a) Customizing Templates
- b) Creating Templates

## 22) Views

- a) What are Views?
- b) How to create views?

## 23) Django URL

- a) What is a URL
- b) How do URLs work in Django?
- c) URL Mapping
- d) URL Routing

# Day 5

## 24) Models

- a) Creating Models
- b) Create tables for models in database
- c) Activating Models

## 25) Page Redirection

## 26) Sending Emails

## 27) Form Creation

## 28) Customize App Look and Feel

## 29) Creating Django Web Application

- a) Starting a Project
- b) Creating an Application
- c) Create Data Model
- d) Design URLs
- e) Custom Views
- f) Create Application Templates
- g) Create Forms
- h) Schema Migration
- i) Image Field in Data Model