

SCRIPTING IN PYTHON

40 Hours

SYLLABUS

Unit 1 : Introduction To Python

4 Hours

- Short history
- Introduction
- Features of Python
- Python Interpreter
- How to Run Python
- Basic Syntax
- Input, Output Functions
- Comments

Unit 2 : The Basics

6 Hours

- Variable and Data Types
 - Numbers
 - Strings
 - Lists
 - Tuple
 - Set
 - Dictionary

- Operators
- Arithmetic Operations

Unit 3 : Conditional Statements

1 Hour

- if Statement
- if...else Statement
- If...elif...else Statement
- Nested if statement

Unit 4 : Looping

1.5 Hours

- For loop
- For loop with else
- While Loop
- While Loop with else statement
- Nested loops

Unit 5 : Control Statements

.5 Hour

- Break statement
- Continue statement
- Pass statement

Unit 6 : Comprehensions

1 Hour

- List Comprehensions
- Set Comprehensions
- Dictionary Comprehensions

Unit 7 : Functions

3 Hours

- Definition
- Function Calling
- Function Arguments
- Default Arguments
- Variable-length arguments
- Lambda functions
- Recursive functions
- Functions returning values

Unit 8 : Modules

2 Hours

- Creating Modules
- Import Statements
- Packages

Unit 9 : File Handling

2.5 Hours

- Opening a File
- Reading from a File
- Writing to a File
- Closing a File
- File Methods
- Renaming a File
- Deleting a File
- Directories in Python

Unit 10 : Exception Handling

1 Hour

- Handling Exceptions
- Exception with arguments
- Raising an Exception
- User-defined Exception
- Assertions in Python

Unit 11 : Object Oriented Programming with Python

2 Hours

- Overview of Classes and Objects
- Using Class
- Using Methods
- Use Object Data
- Inheritance
- Destructors
- Encapsulation
- Data hiding
- Method overriding
- Polymorphism

Unit 12 : Regular expressions

4 Hours

- Introduction
- match() function
- search() function
- search and replace
- regular expression modifiers
- regular expression patterns
- Character classes
- special character classes
- repetition cases
- findall() method
- compile() method

Unit 13 : Database Programming

7 Hours

- Connecting to a database
- Creating a Database
- Creating Tables
- Insert and Update Records
- Retrieve and Delete Records

- Transaction Control
- Disconnecting from a database.

Unit 14 : Data Visualization Python

4.5 Hours

- Introduction to Data Visualization
- Basic Plotting with Matplotlib
- Line Plots
- Visualization Tools
- Area Plots
- Histograms
- Bar Charts
- Pie Charts
- Box Plots
- Scatter Plots
- Bubble Plots
- Waffle Charts
- Word Clouds
- Seaborn and Regression Plots
- Introduction to Folium
- Maps with Markers
- Choropleth Maps

Our Facilities



Technovalley Software India Pvt. Ltd.,

Level 4, ATS Grand, Opposite Highway Garden, Bypass, Edappally, Ernakulam, Kerala, Pin: 682024

Tele: +91 484 4140100 – 111 Email: info@technovalley.co.in Web: internship.technovalley.co.in

