
Python (Core & Advance) With Projects



1. Introduction To Python

- History Of Python
- Why To Learn Python
- How is Python Different From Other Programming Languages
- Installing Python & Path Setting
- How To Run Python Programs

2. Basics Of Python

- Variable
- Identifier
- Keywords
- Statements & Comments
- Indentation
- Data Types (Number, String, List, Tuple, Set, Dictionary)
- Static Typing Vs Dynamic Typing

3. Operators

- Arithmetic Operator
- Relational Operator
- Assignment Operator
- Logical Operator
- Bitwise Operator
- Membership Operator
- Identity Operator

4. Control Flow

- If Statement
- If-else
- If-elif-else
- Nested if-else

- While Loop
- For-in loop
- Nested Loop
- Loop with else
- Pass Statement
- Break & Continue

5. Functions

- Function Basics
- Defining Function
- Function Call
- Return Statement
- Function Parameters
- Call by Value or Call by Reference
- Local & Global Variable
- Recursion
- Anonymous (lambda) Function

6. Modules

- Defining Module
- How To Create Module
- Importing Module
- Dir ()
- Module Search Path
- Reloading A Module
- Sys Module
- Os Module
- Namespace

7. Packages

- Defining Package
- How To Create Package
- Importing Package
- Installing Third Party Packages

8. Numeric Types

- Numeric Type Basics

- Numbers
- Hexadecimal, Octal & Binary Notation
- Complex Numbers
- Type Casting
- Numeric Functions
- Random Number Generation

9. String

- Defining a String
- Different Ways To Create String
- Accessing Elements Of String
- Escape Sequence
- Raw String
- String Methods
- String Formating Expressions

10. List

- Defining A List
- Creating List
- Accessing List Elements Of List
- Deleting List
- List Methods
- Functions Used With List
- List Comprehension
- Implementation Of Stack & Queue Using List
- Use Of Zip ()
- Matrix Operations Like Addition, Multiplication Using List
- Numpy Array

11. Tuple

- Defining A Tuple
- Creating A Tuple
- Accessing Elements Of Tuple
- Immutability
- List Vs Tuples
- Tuple Methods
- Functions Used With Tuple

- Advantage Of Tuple

12. Dictionary

- Defining A Dictionary
- Creating A Dictionary
- Accessing Elements Of Dictionary
- Deleting A Dictionary
- Dictionary Methods
- Dictionary Comprehension

13. Set

- Defining A Set
- Creating Set
- Set Operations
- Set Methods
- Set Comprehension

14. File Handling

- Defining A File
- Types Of File
- File Operations
- Opening A File
- Closing File
- File Nodes
- File Attributes
- Writing To File
- Reading From File
- Appending To File
- File Positions
- Binary File
- Pickle Module

15. Exception Handling

- Defining An Exception ?
- Default Exception Handler
- Exception Handling Techniques
- Detecting Exception (try)

- Catching Exceptions (catch)
- Catching Multiple Exceptions
- Raising Exception (raise)
- Finally Block
- User Defined Exceptions

16. Object Oriented Programming

- OOP Concepts
- Defining A Class
- Creating Object
- Method Vs Functions
- Calling Methods
- Instance Attribute Vs Class Attribute
- Instance Method Vs Class Method
- Private attribute & Method
- Static Method
- Method Overloading
- Constructor
- List Of Objects
- Inheritance
- Method Overriding
- Operator Overriding
- Abstract Method
- Abstract Class

17. Multithreading

- Process Based Multi-tasking
- Thread Based Multi-tasking
- Creating A Thread Without Using Class
- Creating Thread Using Class
- Sleep () Method
- Join () Method
- Getting & Setting Name Of Thread
- Synchronization
- Lock Concept
- Is_Alive () Method
- Active_count () Method

- Enumerate () Method
- Current_thread () Method
- Daemon Thread

18. GUI Programming With Tkinter

- Introduction To Tkinter
- Creating A Window
- Tkinter Widgets
 - Label
 - Button
 - Entry
 - Message Box
 - List
 - Radio Button
 - Check Button
- Creating Frame
- Create A Random Number Picker
- Create A Calculator

19. Database Programming

- Introduction To SQLite Module
- Connecting To Database By Using sqlite3
- Creating Table By sqlite3
- Performing SQL Operations
- Introduction To MYSQL
- Creating Database Using MYSQL
- Connecting MYSQL Database From Python
- Creating Table
- Performing SQL Operations

20. Web Based Programming Using Flask / Django

- What Is Web Based Application?
- HTML
- CSS
- Java Script
- Basics Of FLASK / Django

21. Project

- ★ After Learning Python every student must do some Project. Projects will increase the problem solving ability of student. I will personally guide the students in doing project work.

Trainer Name	Er. Abhinash Nayak
Discounted Fee	₹ 12,999
Duration	6 Months