



4. Web Development

4.5 Python

Prerequisites:

1. C/C++
2. HTML, CSS & JavaScript

Duration: 30 Lectures

Course Content:

1. Introduction

- 1.1. History
- 1.2. Features
- 1.3. Setting up path
- 1.4. Working with Python
- 1.5. Basic Syntax
- 1.6. Variable and Data Types
- 1.7. Operator

2. Conditional Statements

- 2.1. If
- 2.2. If- else
- 2.3. Nested if-else

3. Looping

- 3.1. For
- 3.2. While
- 3.3. Nested loops

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4. Control Statements

- 4.1. Break
- 4.2. Continue
- 4.3. Pass

5. String Manipulation

- 5.1. Accessing Strings
- 5.2. Basic Operations
- 5.3. String slices
- 5.4. Function and Methods

6. Lists

- 6.1. Introduction
- 6.2. Accessing list
- 6.3. Operations
- 6.4. Working with lists
- 6.5. Function and Methods

7. Tuple

- 7.1. Introduction
- 7.2. Accessing tuples
- 7.3. Operations
- 7.4. Working
- 7.5. Functions and Methods

8. Dictionaries

- 8.1. Introduction
- 8.2. Accessing values in dictionaries
- 8.3. Working with dictionaries
- 8.4. Properties
- 8.5. Functions

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9. Functions

- 9.1. Defining a function
- 9.2. Calling a function
- 9.3. Types of functions
- 9.4. Function Arguments
- 9.5. Anonymous functions
- 9.6. Global and local variables

10. Modules

- 10.1. Importing module
- 10.2. Math module
- 10.3. Random module
- 10.4. Packages
- 10.5. Composition

11. Input-Output

- 11.1. Printing on screen
- 11.2. Reading data from keyboard
- 11.3. Opening and closing file
- 11.4. Reading and writing files
- 11.5. Functions

12. Exception Handling

- 12.1. Exception
- 12.2. Exception Handling
- 12.3. Except clause
- 12.4. Try ? finally clause
- 12.5. User Defined Exceptions

13. Advance Python

- 13.1. OOPs concept
- 13.2. Class and object
- 13.3. Attributes



- 13.4. Inheritance
- 13.5. Overloading
- 13.6. Overriding
- 13.7. Data hiding

14. Regular expressions

- 14.1. Match function
- 14.2. Search function
- 14.3. Matching VS Searching
- 14.4. Modifiers
- 14.5. Patterns

15. CGI

- 15.1. Introduction
- 15.2. Architecture
- 15.3. CGI environment variable
- 15.4. GET and POST methods
- 15.5. Cookies
- 15.6. File upload

16. Database

- 16.1. Introduction
- 16.2. Connections
- 16.3. Executing queries
- 16.4. Transactions
- 16.5. Handling error

17. Networking

- 17.1. Socket
- 17.2. Socket Module
- 17.3. Methods
- 17.4. Client and server



17.5. Internet modules

18. Multithreading

18.1. Thread

18.2. Starting a thread

18.3. Threading module

18.4. Synchronizing threads

18.5. Multithreaded Priority Queue

19. GUI Programming

19.1. Introduction

19.2. Tkinter programming

19.3. Tkinter widgets

20. Sending email

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