



Python 3.* - Comprehensive

Duration: 40 Hours

Price: INR 6999/-

Here is a detailed syllabus for learning Python 3 and above:

1. Introduction to Python:
 - History and features of Python
 - Setting up the development environment
 - Running Python code
 - Basic Python syntax and structure
 - Writing and running simple Python scripts
2. Variables, Data Types, and Operators:
 - Variables and data types in Python
 - Numeric and string data types
 - Type conversion
 - Operators in Python
 - Mathematical and logical operators
 - Bitwise operators
 - Operator precedence
3. Control Structures:
 - Conditional statements: if, else, and elif statements
 - Loops: for and while loops
 - Loop control statements: break, continue, and pass
 - Iterators and generators
4. Functions and Modules:
 - Functions in Python
 - Function arguments and parameters

- Lambda functions
- Recursion
- Modules and packages
- Importing and using modules
- Creating and using your own modules
- 5. Strings, Lists, and Dictionaries:
 - Working with strings
 - String methods and operations
 - Lists in Python
 - List methods and operations
 - Dictionaries in Python
 - Dictionary methods and operations
- 6. Input and Output:
 - Reading and writing text files
 - Reading and writing binary files
 - Standard input and output
 - Formatting output using print() function
 - Command-line arguments
- 7. Object-Oriented Programming:
 - Introduction to Object-Oriented Programming (OOP)
 - Classes and objects
 - Attributes and methods
 - Encapsulation, inheritance, and polymorphism
 - Overriding methods and operators
- 8. Exception Handling:
 - Error handling in Python
 - Types of errors
 - Handling exceptions with try/except/finally blocks
 - Raising exceptions
- 9. Regular Expressions:
 - Introduction to regular expressions



- Regex syntax and patterns
 - Matching and searching with regex
 - Replacing and splitting with regex
10. Standout features of Python:
- List Comprehensions
 - Decorators
 - Lambda Functions
 - Generators
 - Context Managers
 - Metaclasses
11. Database Access:
- Relational databases and SQL
 - Connecting to databases with Python
 - Executing SQL queries with Python
 - Working with SQLite databases
12. Networking and Web Programming:
- Sockets and network programming
 - HTTP and web protocols
 - Web scraping with Python
 - Building web applications with Flask or Django
13. Advanced Topics:
- Multithreading and concurrency
 - Working with XML and JSON data
 - Debugging and profiling Python code
 - Testing Python code with Pytest



This is a comprehensive syllabus for learning Python 3 and above. By mastering these topics, you will have a solid foundation in Python programming and be able to build a wide range of applications, from simple scripts to complex web applications.

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