



PYTHON



Course Curriculum

Basic + Intermediate +Advanced – 60 Hours

Python Basics

- Introduction to Python
- Get Started – Hello World program
- IDLE for Compiling & Running program
- Basic Data Types and Assignments
- Identifiers and Indentation
- Data Operations
- Sequence Types, Tuples, Lists
- Operators and Expressions
- Dictionary and Sets
- Control Structure
- Functions
- Variable Scope – Global, local and Non Local
- Logging and Debugging
- Modules and Packages
- Python execution environment & tools

Python Intermediate

- Lambda Functions
- Comprehensions - List, set and dictionary
- Extending Built-in Types
- Custom Collection classes
- Iterators
- Decorators
- Generators
- Streams
- Context Manager
- Functional Tools

Python Advanced

- Files Handling and Globbing
- Exception Handling
- Date, Time and Calendar API's
- Command Line Frameworks
- Regular Expressions and Parsing
- OOPS Concepts
- Classes and objects
- Instance and Instantiation
- User Defined Classes
- Member variables and Methods
- constructors and Destructors
- Super class
- Default Attributes and Methods
- Inheritance and Override methods
- Polymorphism
- Function and Operator Overloading
- Abstract Classes
- Multiple Inheritance
- Pseudo Private Attributes and Functions
- New `__getattribute__`
- Encapsulation and Intercepting Attribute Access
- Class and Static Method
- Properties and Descriptors

- Coding Style & Guidelines
- Unit Testing
- Documentation and Best Practices
- Distributing Applications

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- Assignment and Test
 - Open Discussion
 - Project

