

Python Course Content

Core Python

1. Introduction to python
2. History Of Python
3. Advantages & Disadvantages of Python
4. Introduction to Interpreter
5. Python Installation
6. Python Program Execution Flow
7. Python Syntaxes
8. Introduction to IDE (Eclipse, PyCharm)
9. Python Program Development
10. Identifiers, keywords
11. Basic data types
12. Dynamic Typing
13. Type conversion functions

14. Operators
15. Operator Precedence
16. input/output
17. Reading User Input
18. Displaying Output
19. Formatting Output
20. Variables, expressions
21. Operators
22. Selection control statements (if, if else)
23. range data type, indexing and slicing
24. Iterative control statements
25. (while, for.in, while...else, for.in else)
26. Transfer control statements (Break & continue)
27. Python strings
28. List

29. Tuple
30. Set
31. Dictionary
32. Functions
33. Definition and advantages of a function
34. Understanding scope
35. Default arguments
36. Keyword arguments
37. Variable length arguments
38. Lambda expressions
39. Documentation & Annotations
40. Types of arguments
41. Scope of variables
42. Global variables
43. Local variables
44. Nested functions
45. Lambda functions
46. Exceptions

- 47. Syntax errors vs Runtime errors
- 48. Handling, Raising exceptions
- 49. Built-in exceptions
- 50. Memory Error
- 51. NameError
- 52. Value Error
- 53. Type Error
- 54. User-defined exceptions
- 55. Clean-up actions

PYTHON OOPS AND ADVANCED CONCEPTS

- 1. Introduction to OOPS
- 2. OOPS principles
- 3. Classes and Objects
- 4. Instance variables
- 5. Instance methods

6. Class variables
7. Class methods
8. Constructors
9. Inheritance
10. Abstract classes
11. Inner classes
12. Exception handling
13. Regular expressions
14. File handling
15. Accessing (reading / writing) files
16. Serialization
17. Multithreading
18. Introduction to Database
19. Python Database Connectivity
20. CRUD Operations with Database
21. Unit Testing
22. Mini Projects Development
23. Debugging

Django Framework

1. Introduction to Web Development
2. Introduction to Django Framework
3. Features of Django
4. Django Installation
5. MVC Model
6. HTTP Concepts
7. Views
8. URL Mapping

Templates

1. Django Template Language
2. Utilities of Templates
3. Creating Template Objects
4. Tags, Variables and Filters
5. Rendering Templates
6. Template Inheritance

Django Forms

1. Form Handling
2. Form Classes
3. Form validations and Error Messages
4. Form Display
5. Capturing Form data
6. Advanced Form Processing

Django Models

1. Django Models
2. Model Fields
3. Model inheritance
4. Primary Keys and the Model
5. Dynamic Webpage
6. Toggle Hidden Content

7. JQuery and Ajax intergreation
8. Serialization and Deserialization

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TOOLS

1. Git HUB
2. Jenkins

