# **Python Fullstack 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, PyCharam)
- 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

(while, for..in, while...else, for..in .. else)

25. Transfer control statements

( Break & continue )

- 26. Python strings
- 27. List
- 28. Tuple
- 29. Set
- 30. Dictionary
- 31. Functions
- 32. Definition and advantages of a function
- 33. Understanding scope
- 34. Default arguments
- 35. Keyword arguments
- 36. Variable length arguments
- 37. Lambda expressions
- 38. Documentation & Annotations
- 39. Types of arguments
- 40. Scope of variables
- 41. Global variables
- 42. Local variables
- 43. Nested functions
- 44. Lambda functions
- 45. Exceptions
- 46. Syntax errors vs Runtime errors
- 47. Handling, Raising exceptions
- 48. Built-in exceptions
- 49. MemoryError
- 50. NameError
- 51. ValueError
- 52. TypeError
- 53. User-defined exceptions
- 54. Clean-up actions

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## **PYTHON OOPS AND ADVANCED** CONCEPTS

55. Introduction to OOPS 56. OOPS principles 57. Classes and Objects 58. Instance variables 59. Instance methods 60. Class variables, 61. Class methods 62. Constructors 63. Inheritance 64. Abstract classes 65. Inner classes 66. Exception handling 67. Regular expressions 68. File handling 69. Accessing (reading / writing) files 70. Serialization 71. Multithreading 72. Introduction to Database 73. Python CRUD Connectivity 74. **Database** Operations with Database 75. Unit **Testing** 

76. Mini Projects Development

77. Debugging

#### Django Framework

78. Introduction to Web Development

79. Introduction to Django Framework

80. Features of Django

81. Django Installation

82. MVC Model

83. HTTP Concepts

84. Views

85. URL Mapping

**Templates** 

86. Django Template Language

87. Utilities of Templates

88. Creating Template Objects

89. Tags, Variables and Filters

90. Rendering Templates

91. Template Inheritance

#### **Django Forms**

92. Form Handling

93. Form Classes

94. Form validations and Error Messages

95. Form Display

96. Capturing Form data

97. Advanced Form Processing

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#### **Django Models**

98. Django Models

99. Model Fields

100. Model Inheritance

101. Primary keys and the Model

102. **Dynamic Webpages** 

103. **Toggle Hidden Content** 

104. JQuery and AJAX integration

105. Serialization and Deserialization

#### **REST API Development**

106. **Django REST Framework** 

107. **REST Principles** 

Serializer class 108.

109. **Model Serializers** 

110. REST APIS

111. JSON, parsing object to JSON and back

112. Swagger

POST MAN 113.

114. **REST Client Development** 

**REST Security** 115.

#### **Misc Discussion**

116. Page redirection Sending

**Emails** 117. Deploying Django

framework Generic views File 118.

uploading Cookie handling 119.

Session Management Mini 120.

121. **Projects Development** 

122.

123.

#### TOOLS

**Git HUB** 

Jenkins

