

Back End Developer:- Python, Django

PYTHON	
<u>INTRODUCTION TO PYTHON</u>	<u>BEGINNING PYTHON BASICS</u>
• What can Python do? • Why Python? • Good to know • Python Syntax compared to other programming languages • Python Install	• The print statement, Comments • Python Data Structures & Data Types • String Operations in Python • Simple Input & Output • Simple Output Formatting • Operators in python
<u>PYTHON PROGRAM FLOW</u>	<u>FUNCTIONS& MODULES</u>
• Indentation • The If statement and its' related statement • An example with if and it's related statement • The while loop, The for loop • The range statement • Break & Continue • Assert • Examples for looping	• Create your own functions • Functions Parameters • Variable Arguments • Scope of a Function • Function Documentations • Lambda Functions & map • n Exercise with functions • Create a Module • Standard Modules
<u>EXCEPTIONS HANDLING</u>	<u>FILE HANDLING</u>
• Errors • Exception handling with try • handling Multiple Exceptions • Writing your own Exception	• File handling Modes • Reading Files • Writing & Appending to Files • Handling File Exceptions • The with statement
<u>CLASSES IN PYTHON</u>	<u>GENERATORS AND ITERATORS</u>
• New Style Classes • Creating Classes • Instance Methods • Inheritance • Polymorphism • Exception Classes & Custom Exceptions	• Iterators • Generators • The Functions any and all • With Statement • Data Compression

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<u>DATA STRUCTURES</u>	<u>COLLECTIONS</u>
- List Comprehensions - Nested List Comprehensions - Dictionary Comprehensions - Functions - Default Parameters - Variable Arguments - Specialized Sorts	- namedtuple() - deque - ChainMap - Counter - OrderedDict - defaultdict - UserDict - UserList - UserString
<u>WRITING GUIS IN PYTHON (TKINTER)</u>	<u>PYTHON SQL DATABASE ACCESS</u>
- Introduction - Components and Events - An Example GUI - The root Component - Adding a Button - Entry Widgets - Text Widgets - Check buttons	- Introduction, Installation - DB Connection - Creating DB Table - INSERT, READ, UPDATE, DELETE operations - COMMIT & ROLLBACK operation - handling Errors
<u>NETWORK PROGRAMMING</u>	<u>DATE AND TIME</u>
- Introduction - A Daytime Server - Clients and Servers - The Client Program - The Server Program	- sleep - Program execution time - more methods on date/time
<u>FEW MORE TOPICS IN-DETAILED</u>	<u>REGULAR EXPRESSION</u>
- Filter, Map, Reduce - Decorators - Frozen set - Collections	- Split - Working with special characters, date, emails - Quantifiers - Match and find all - character sequence and substitute - Search method
<u>THREADS ESSENTIAL</u>	<u>ACCESSING API ESSENTIAL</u>

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• Class and threads • Multi-threading • Synchronization • Treads Life cycle • use cases	• Introduction • Facebook Messenger • Open weather
<u>DJANGO</u>	
• Django Overview • Django Installation • Creating a Project • Usage of Project In-depth Discussion • Creating an Application • Understanding Folder Structure • Creating a Hello World Page • Database and Views • Static Files and Forms • API and Security	

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