



## Curriculum Of Python

### MODULE 1: INTRODUCTION TO PYTHON

- What is Python and history of Python?
- Unique features of Python
- Python-2 and Python-3 differences
- Install Python and Environment Setup
- First Python Program
- Python Identifiers, Keywords and Indentation
- Comments and document interlude in Python
- Command line arguments
- Getting User Input
- Python Data Types
- What are variables?
- Python Core objects and Functions
- Number and Maths
- Week 1 Assignments

### MODULE 2: LIST, RANGES & TUPLES IN PYTHON

- Introduction
- Lists in Python
- More About Lists
- Understanding Iterators
- Generators, Comprehensions and Lambda Expressions
- Introduction
- Generators and Yield
- Next and Ranges
- Understanding and using Ranges
- More About Ranges
- Ordered Sets with tuples

### MODULE 3: PYTHON DICTIONARIES AND SETS

- Introduction to the section
- Python Dictionaries
- More on Dictionaries
- Sets
- Python Sets Examples

### MODULE 4: INPUT AND OUTPUT IN PYTHON

- Reading and writing text files
- writing Text Files



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- Appending to Files and Challenge
- Writing Binary Files Manually
- Using Pickle to Write Binary Files

### **MODULE 5: PYTHON BUILT IN FUNCTION**

- Python user defined functions
- Python packages functions
- Defining and calling Function
- The anonymous Functions
- Loops and statement in Python
- Python Modules & Packages

### **MODULE 6: PYTHON OBJECT ORIENTED**

- Overview of OOP
- Creating Classes and Objects
- Accessing attributes
- Built-In Class Attributes
- Destroying Objects
- Pillars of OOPS
- Inheritance
- Encapsulation
- Polymorphism, Abstraction

### **MODULE 7: PYTHON EXCEPTIONS HANDLING**

- What is Exception?
- Handling an exception
- try....except...else
- try-finally clause
- Argument of an Exception
- Python Standard Exceptions
- Raising an exceptions
- User-Defined Exceptions

### **MODULE 8: PYTHON REGULAR EXPRESSIONS**

- What are regular expressions?
- The match Function
- The search Function
- Matching vs searching
- Search and Replace



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### MODULE 9: ADVANCE FUNCTION

- Lambda function
- Syntax of lambda function
- Execution of lambda function
- Function
- Filter function -how it work with normal & lambda function
- Map function
- Reduce function

### MODULE 10: USING DATABASES IN PYTHON

- Python MySQL Database Access
- Install the MySQL dB and other Packages
- Create Database Connection
- CREATE, INSERT, READ, UPDATE and DELETE operation
- DML and DDL Operation with Databases
- Performing Transactions
- Handling Database Errors