

Python Online Class

NAVEEN KUMAR · MONDAY, MARCH 30, 2020 ·

Basic Python (Free)

Python Overview

- What is Python?
- The Birth of Python
- Features of Python
- Versions of Python

The Python Environment

- Installation of Python
- Python Documentation

- Getting Help
- Python Editors and IDEs
- Basic Syntax
- Running a Python Script
- Python Scripts on UNIX/Windows

Getting Started

- Keywords
- Data Types
- Variables
- Naming Conventions
- `print()`, `type()`, `id()` Functions
- `input()`, `raw_input()` functions

- Conversion functions
- Del Keyword

Operators

- Arithmetic Operators
- Relational Operators
- Logical Operators
- Assignment Operators
- Short Hand Assignment Operators
- Bitwise Operators
- Membership Operators
- Identity Operators

Flow Control

- About Flow Control
- Conditional Statements

(Simple if, if...else, if...elif...)

- Looping Statements (while loop, while ... else, for loop, infinite loop, nested loops)
- Break
- Continue
- Pass

Functions

- Defining a function
- Calling a function
- Function Parameters

- Returning Values
- Variables scope
- Call by value
- Call by reference
- Passing collections to a function
- Passing functions to function
- Lambda function

Modules

- What is a module?
- Creating user defined module
- Setting path
- The import statement

- Module search path From ... Import
- Module Aliases
- Dir function
- Working with Standard modules
(Math, Random, Date and time,Os and sys,
String,...)

Advance Python

Sequences

- About Sequences
- Lists
- Tuples
- Indexing and Slicing

- Iterating through a sequence
- Functions for all sequences
- Operators and keywords for sequences
- The range() function
- Nest sequences
- List comprehensions
- Generator expressions

Dictionaries and Sets

- About Dictionaries
- When to use dictionaries
- Creating Dictionaries
- Getting dictionary values

- Iterating through a dictionary
- Reading file data into a dictionary
- Counting with dictionaries
- About sets
- Creating sets
- Working with sets

String Handling

- What is String?
- Single-quoted string literals
- Triple-quoted string literals
- String Indexing
- String Slicing

- Working with String Functions
- Working with String Methods

OOPS

- **About OO programming**
- **Defining Classes**
- **Creating object**
- **Class methods and data**
- **Static methods**
- **Private methods**
- **Constructors**
- **Destructors**
- **Inheritance**

- **Types of inheritances**
- **Polymorphism (over loading & over riding)**

Errors and Exception Handling

- Syntax Errors
- What is Exception?
- Need of Exception handling
- Predefined Exceptions
- Predefined Exceptions Hierarchy
- Except, try, finally clause
- Handling Multiple Exceptions
- User defined Exceptions
- Raise, assert statements

File Handling

- Opening a file
- Closing a file
- Writing data to files
- Reading a data from files
- Tell(),Seek() functions
- Working with Directories
- Operations on Files

Regular Expressions

- What is regular expression?
- Wild card characters
- Forming regular expressions

- Character classes
- Quantifiers
- Greedy matches
- Grouping
- Match, Search functions
- Matching vs searching
- Sub function
- Splitting a string
- Replacing text
- Flags

Database Access

- Basics of database

- Connections
- Executing queries
- Transaction management

Extra

Introduction to **Numpy**

Introduction to **Pandas**

Using **MongoDB** in Python

Using **PostgreSQL** in Python

Using **Firebase** Database in python

Web Scrapping in Python