ConstraintBASIC &
ADVANCED

Corporate Training with Certification Detailed Explanation with real time Examples

Live video Recording of every class

♦ Topic wise Exercises

♦ Assignments & Tasks

♦ Interview questions /Projects

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INTRODUCTION

- Overview of Python
- Python Features and Application areas
- Installing Python software's
- Difference between IDLE vs IDE
- Types of IDE's for Python
- Executing Python from the command line
- Executing Python from the IDLE
- Executing Python from the Editor (Pycharm IDE)

BASIC PYTHON SYNTAX

- Basic Syntax of Python Program and Rules
- Single & Multiline Comments
- Keywords in Python and Explanation
- Naming Conventions and Scope
- Variables declare and Assign values
- Type(),id() Function
- Del keyword with example

Python Standard Data Types (Intro)

- Numbers(Decimal,float,complex)
- Boolean
- Sequence type(String, List, Tuple)
- Set data types
- Dictionary Data Type

♦ INPUT/OUTPUT FUNCTIONS

- Input() Function
- Taking single input from console
- Taking Multiple input from console

(Using split(), List comprehension)

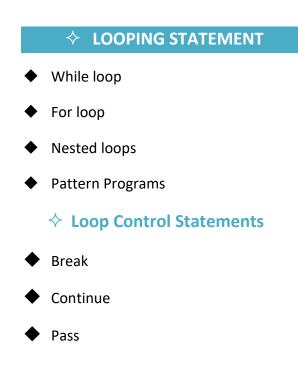
- Print() function
- Print data using end, sep parameters and differences.
- Print data using format() Method and Explanation.

♦ OPERATORS

- Arithmetic operators
- Relational operators
- Logical operators
- Assignment operators
- Short Hand Assignment Operators
- Bitwise Operators
 - ♦ Special Operators in Python:
- Membership operators
- Identity operators

♦ CONDITIONAL STATEMENT

- Simple if
- If...else
- if elif...ladder
- Nested if statement
- Single line if Statement



♦ STRINGS

- Introduction to Strings
- Accessing values in String
- Updating stings
- Escape Characters
- Triple Quotes, Unicode string
- String Special operators
- String Formatting Operators
- Built in String Functions and methods

> LISTS

- Introduction to Lists
- Accessing Values in Lists

- Updating List
- Deleting List Elements
- Basic List Operations
- Indexing, Slicing and Matrixes
- Nested lists
- Built in List Functions and methods

> TUPLES

- Introduction to Tuples
- Accessing Values in Tuples
- Updating Tuples
- Delete Tuple Elements
- Basic Tuple Operations
- Indexing, Slicing and Matrixes
- Built in Tuple Methods and Functions
- Difference Between Tuple Vs Llst

> SETS

- Introduction to Sets
- Accessing values of Sets
- Updating Sets
- Deleting Set Elements
- Basic Set operations
- Built in Set Functions and methods

> DICTIONARY

- Introduction to Dictionary
- Accessing values in Dictionary
- Updating Dictionary
- Delete Dictionary Elements
- Basic Dictionary Operations
- Properties of Dictionary Keys
- Built in Dictionary Function and Methods

♦ FUNCTIONS

- Defining functions
- Calling function
- Pass by Reference vs Value
- Types of functions
 - Function without Arguments
 - Function with Arguments
 - Function with keyword Arguments
 - Function with default Arguments
 - Function with variable length Arguments(*)
 - Function with keyword
 Variable Length
 Arguments(**)
- Return statement
 - ♦ Scope of variables

- Global variables
 Local variables
 Passing collections to a function
 Passing functions to function
 Lambda()Function
 Filter() Function
- Reduce() Function
- Iterators
- Generators
- Yield statement

> MODULES

- Usage of modules
- Creating user defined module
- Setting path
- Importing module
- From...import
- Creating alias name

♦ PACKAGES

- Creating a package
- Creating sub packages
- Usage of _init_.py file
- Importing packages
- Usage of packages
- Setting path

♦ STANDARD MODULES

- Math
- Random
- Date and time
- Os and sys
- String
- 🔶 Glob

♦ FILE HANDLING

- What is file
- Printing to the Screen
- Reading Keyboard Input
- Opening and Closing files
- Access modes in Files
- Writing data to files
- Reading data from files
- Renaming and Deleting Files.
- Inbuilt File Methods and Functions

ADVANCED - PYTHON

TUTORIAL

OBJECT ORIENTED

- Introduction to OOP Technology
- Creating classes
- Creating object
- Private and public properties and method
- Class attributes and methods
- Class variables
- ◆ Self-argument
- ♦ Constructor
- Parameterized constructor
- Destructor
- Inheritance
 - Single inheritance
 - Multiple inheritance
 - Multilevel inheritance
 - Hierarchal inheritance
 - Inheritance with constructors
 - Polymorphism
 - Function over loading
- Function over riding

♦ EXCEPTION HANDLING

- What is exception?
- Need of exception handling with Examples
- Predefined exception names
- Except, try, finally clause
- Handling multiple exceptions
- User defined exceptions
- Raise, assert statements

♦ MULTI-THREADING

- What is Thread?
- Need of Multithreading with Examples
- Starting a thread
- Threading module
- Synchronizing threads
- Multithreaded priority queue
- Thread Creations Types

♦ REGULAR EXPRESSIONS

- What is regular expression
- Importance of Regular Expressions with examples
- Regular Expressions(search, Match, findall)
- Built-in Functions (findall(), search(), split(), sub())

- Findall function()
- Match function
- Match function
 Methods(span(),.group(),.string())
- Search function
- Regular expressions re.search() Vs re.findall()
- Sub function
- Splitting a string
- Flags
- Email and Phone Number checking

Examples

♦ DATABASE

- Introduction
- Connections
- Executing queries
- Transactions

