



Python

Who can join this course?

Anyone. We start the classes from scratch, right from Basics of Python.

What about the Lab? What are the System Requirements?

Any OS; 6 GB RAM; Any Processor. We shall guide you for Software Installation, Practice.

How to join the course?

For latest schedules, Free (LIVE) Demo or Video Demo : pls call us on +91 9666440801 or +91 9951440801 or visit: www.sqlschool.com/Register

Python Training Curriculum

Chapter 1 : Python Introduction

What is Python Programming? Characteristics of Python; History of Python; Python Versions; Python in Real-time Use; Job Roles; Python Installation and Implementation Options; Install Python with Diff IDEs ; Features of Python; Limitations of Python;

Chapter 2 : Python Implementation Modes

Python Basics; Python Scripting Concepts; Interactive & Script Mode ; Python File Extensions - Script Mode; SETTING PATH IN Windows - Clear Screen ; Learn Python Main Function ; Quit the Python Shell - Simple Calculator ; Order of operations - Multiline Statements; Python Path Testing ; Python Packages;

Chapter 3 : Python IDEs

PyCharm IDE - Components & Debugging; Anaconda - Coding Environments - Spyder Components ; General Spyder Features - Spyder Shortcut Keys ; Jupyter Notebook - What is Conda? ; Conda List - Jupyter and Kernals Environment ; Python PIP - Mutable Versus Immutable Objects ;

Chapter 4: Python Variables

What is Variable? - Variables and Constants; Variable names - Mnemonic Variable Names; Values and Types - What Does "Type" Mean? ; Multiple Assignment - Python Numerical types ;

Chapter 5: Python Operators and Data Types

Arithmetic Operators - Relational Operators ; Comparison Operators - Assignment Operator; Logical Operators or Bitwise Operators ; Membership Operators; Operator precedence; Python expressions in string ; Standard Datatypes - Operands ; Swap Variables ; Types Conversion - Python Math. ; Mutable Versus Immutable Objects ; Operator precedence - Evaluating Exp. ; Evaluating expressions in python ;

Chapter 6 : String Handling

what is String ? - String Operations - String indices ; String Functions - len , upper, lower,join,Split ; SwapCase(), Title(),find(), isupper(), islower(); Delete a string - Python Keywords ; String Multiplication and concatenation ; Python Identifiers - Python Literals ; string formatting operator in python ; Built-in String Methods - Data Structures; Indentation; Data Structure in Python Language; Reverse words;

Chapter 7 : Python Conditions

Control Structures - Sequential Control Structure ; Selective and Repetitive Control Structure ; How to use “if condition” in conditional ; control Structures in python ; if statement (One-Way Decisions) ; if .. else statement (Two-way Decisions) ; How to use “else condition” ; if .. elif .. else statement (Multi-way) ; When “else condition” does not work ; How to use “elif” condition ; How to execute conditional statement with ; minimal code - Nested IF Statement ; Nested IF Statement in python ;

Chapter: 8 Python Loops & Sequences

How to use While loop and For loop ; Break and Continue Statements in For loop ; Python Enumerate function for For Loop ; Strings - Unicode Strings ; Lists - Tuples - Sets - Dictionary - Xrange ; Accessing the List ; Updating a List - Deleting a List ; List indices - Traversal; List Operations - List Slices - List Methods ; Map, filter and reduce; Python Lists; List Function & Operations;

Chapter 9 : Python Tuple & Python Sets

Advantages of Tuple over List ; Packing and Unpacking - Tuples ; Creating Nested tuple - Examples ; Deleting Tuples - Slicing of Tuples ; Tuple Membership Test ; Built in Functions, Dotted Charts; Create/declare a set in python ; Python Methods ; Set Operations; Built-in Functions; python frozenset;

Chapter 10 : Python Dictionary

How to create a dictionary? ; PYTHON HASHING - Dictionary Methods ; Copying dictionary - Updating Dictionary ; Delete Keys; Sorting Dictionary - Dictionary len() ; Python Dictionary in-built Functions ; Variable Types - python List Cmp() ; Python List cmp() Method ; Python Dictionary Str(dict) ;

Chapter 11 : Python Functions

Python Function; Function Calls; Function Return Value; Types of Arguments; Default Arguments - Non Default Arg; Keyword Arguments; Arbitrary Arguments; Various Forms of Function Arguments; Scope & Lifetime of variables - Nested Fun; Call By Value, Call by Reference in Python; Anonymous Functions/Lambda functions ;

Chapter 12 : Python Modules

Python Module? The import Statement - The from... import st; import * Statement ; The Dir() Function in python ; User defined Modules ; Command line Arguments; Getting Python Module Search Path; What are modules and packages in Python? ; Python import statement? ; import <module_name> string python ; from <module_name> import <name(s)> ; from <module> import <name> as <name> ;

Chapter 13 : Packages in Python

What is a Package in Python? ; Introduction to Packages? ; py file - Creating a package ; Importing module from a package ; Creating Sub Package in Python ; Importing from Sub- Packages ; Most Popular Python Packages ; Libraries in Python? ; What is the difference between NumPy & SciPy? ; SciPy Concept; NumPy used? ; Python what is Seaborn? - Examples ; Is NumPy a Python framework? ;

Chapter 14 : Python Date and Time

How to Use Date & DateTime Class ; How to Format Time Output ; How to use Timedelta Objects ; Calendar in Python ; datetime classes in Python ; How to Format Time Output? ; Python Calendar Module, Time Module ; Python Text Calendar ; Python HTML Calendar Class; Unix Date and Time Commands ; Python strftime(); How strftime() works? ;

Chapter 15: Python OS Module & Python Exception Handling

Shell Script Commands in OS Modules ; Various OS operations in Python ; Python File System Shell Methods ; Different Python Modules ; os - math - cmd - csv - random ; Numpy (numerical python) ; Pandas - sys - Matplotlib - Datetime ; Common RunTime Errors; Abnormal termination, Python Custom Exception; Exception, Assertions ; Exception Handling, Try...Except...else, Try...finally ;

Chapter 16: Python-Data Base Communication

What is Big Data? Types of data? ; Oracle - SQLSERVER - MYSQL - DB2 ; Postgre SQL - DataBase Sample ; Executing the Queries - Bind Variables ; Executing DML Operations..!! ; Connecting to the Database ; Create a connection object. ; Create a cursor object to read/write. ;

Chapter 17: Data Analytics

Introduction to data Big Data? ; Introduction to NumPY and SciPY ; Introduction to Pandas and MatPlotLib ; Data Science ; What is Data Science in Python ; Data Science Life Cycle in python ; Data Analysis using Python ; what is Data Mining in Python ; Analytics vs Data Science in Python ;

Chapter 18: Python Class and Objects

Define Classes - Built in Class Attributes ; Creating Objects - Constructors ; Class variables and Instance Variables ; Object & Classes ; Access Modifiers - Self Variable; Python classes ; Python Namespace - Garbage Collections ; Single Inheritance - Hierarchical Inheritance ; Multilevel, Multiple, Hybrid Inheritance ; Overloading and Over Riding ; Polymorphism - Abstraction – Encapsulation ;

Chapter 19: Python Regular Expressions

Regular Expression? ; Regular Expression Patterns ; Literal characters - Repetition Cases ; Groups and Grouping; Example of w+ and ^ Expression ; Example of \s expression in re.split function ; Using regular expression methods ; re.match() in Regular Exp. ; Text Pattern (re.search()) ; Using re.findall for Text ;

Chapter 20: Multi-Threading

Multi-Threading ; Threading Module in python; Thread Synchronization ; Multiprocessing Vs Multithreading ; Python Gil? ; Thread Control Block (TCB): ; Thread Identifier in MultiThreading ; Stack pointer in multi-Threading ; Program counter, Thread State ;

Chapter 21: Python -Tkinter

Tkinter GUI Program ; Components and Events; Adding Controls in Tkinter form ; Entry Widget, Text Widget, Radio Button, ; Check Button in Tkinter forms ; List Boxes, Menus, ComboBox, Canvas, Entry ; What is Tk () in Python? ; What is Mainloop ()? ; What is the best GUI for Python ? ; Messagebox ,simpledialog ; messagebox tkinter methods ; showinfo(),showerror(), showwarning() ;

Chapter 22 : Introduction to Python Web & IoT

Python Web Frameworks ; Django ; Advantages of Django Web Framework ; MVC and MVT - Django ; Web Pages using python ; HTML5,CSS3; PYTHON Bottle & pyramid - Falcon ; smart_open in python;

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