SQL SCHOOL

Premium Quality Training

Complete Practical, Real-time Job Oriented Training MSSQL & Python Training

Python Full Stack Developer

What is Python?

Python is a programming language used by Data Analysts, Business Analysts, Data Scientists and Programmers for handling ANY type of operations with respect to data in real-world. From Data Storage to Security, Analytics and Forecasts.

What is the role of Python in Data Analysis?

Using Python, we can perform Ch to Ch Data Analytics with ease. Very fast and easy to operate, implement. We can handle Big Data using Python Modules like Pandas, Numpy, etc.

What is the role of Python in Python Programming?

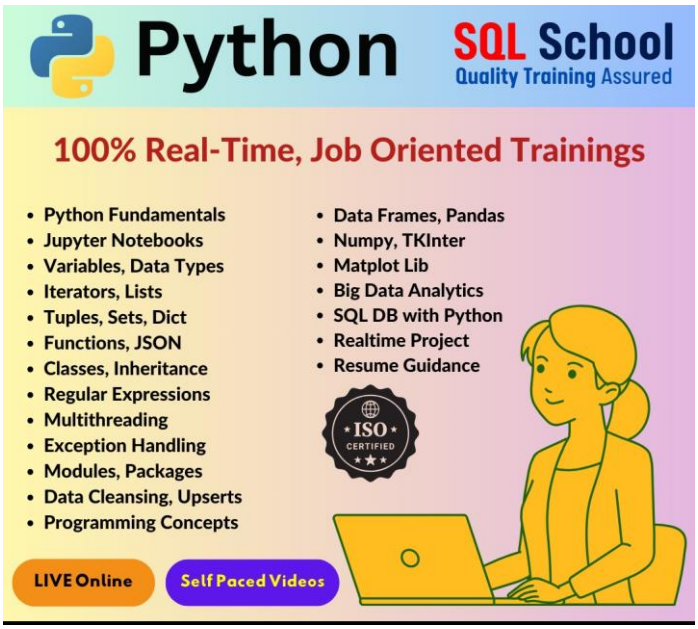
Using Python, we can perform Application Design and Programming to implement Business Logic. Python Programming is always in demand that needs good coding skills.

Who can join this course?

Anyone. We start the classes from scratch, right from Basics of Data, Database, Analysis.

Then proceed for Scenario based activities and job orientation with Realtime Project.

1.



Module-1 PYTHON PROGRAMMING

Chapter-1 Introduction

- ✓ Introduction to Programming
- ✓ Different job roles with Python
- ✓ Different Python IDEs
- ✓ Downloading and setting up the Python environment

Chapter-2 Basic Syntax

- ✓ Python input and output operations
- ✓ Comments
- ✓ Variables, rules for naming variables
- ✓ Basic data types in Python
- ✓ Typecasting in Python

Chapter-3 Operators

- ✓ Arithmetic operators
- ✓ Assignment operators
- ✓ Comparison operators
- ✓ Logical operators
- ✓ Identity operators
- ✓ Membership operators
- ✓ Bitwise operators

Chapter-4 Strings

- ✓ Creating strings
- ✓ String formatting
- ✓ Indexing
- ✓ Slicing
- ✓ String methods

Chapter-5 Lists

- ✓ Creating lists
- ✓ Properties of lists
- ✓ List indexing
- ✓ List slicing
- ✓ List of lists
- ✓ List methods
- ✓ Adding, updating, & removing elements from lists

Chapter-6 Tuples

- ✓ Syntax to create tuples
- ✓ Tuple properties
- ✓ Slicing on tuples
- ✓ Tuple methods

Chapter-7 Sets

- ✓ The syntax for creating sets
- ✓ Updating sets
- ✓ Set operations and methods
- ✓ Difference between sets, lists, and tuples

Chapter-8 Dictionaries

- ✓ The syntax for creating dictionaries
- ✓ Storing data in dictionaries
- ✓ Dictionaries keys and values
- ✓ Accessing the elements of directories
- ✓ Dictionary methods

Chapter-9 Conditional Statements

- ✓ Setting logic with conditional statements
- ✓ If statements
- ✓ If-else statements
- ✓ If-elif-else statements

Chapter-10 Loops in Python

- ✓ While loop
- ✓ For loop
- ✓ Range
- ✓ Break
- ✓ Continue
- ✓ Pass
- ✓ Enumerate
- ✓ Zip
- ✓ Assert

Chapter-11 Functions

- ✓ What are functions
- ✓ Modularity and code reusability
- ✓ Creating functions
- ✓ Calling functions
- ✓ Passing arguments
- ✓ Positional arguments
- ✓ Keyword arguments
- ✓ Variable-length arguments (*args)
- ✓ Variable keyword length arguments (**kargs)
- ✓ Return keyword in Python
- ✓ Passing function as an argument
- ✓ Passing function in return
- ✓ Global and local variables
- ✓ Recursion

Chapter-12 Anonymous Function

- ✓ Lambda
- ✓ Lambda with filter
- ✓ Lambda with map
- ✓ Lambda with reduce

Chapter-13 Modules

- ✓ Creating modules
- ✓ Importing functions from a different module
- ✓ Importing variables from different modules
- ✓ Python built-in modules

Chapter -14 Exception Handling

- ✓ Syntax errors
- ✓ Logical errors
- ✓ Handling errors using try, except and finally

Chapter-15 Packages

- ✓ Creating packages
- ✓ Importing modules from the package
- ✓ Different ways of importing modules and packages

Chapter-16 Object Oriented Programming

- ✓ Creating classes & objects
- ✓ Attributes and methods
- ✓ Understanding_init_constructor method
- ✓ Class and instance attributes
- ✓ Different types of methods
- ✓ Instance methods
- ✓ Class methods
- ✓ Static methods
- ✓ Inheritance
- ✓ Creating child and parent class
- ✓ Overriding parent methods
- ✓ The super() function
- ✓ Understanding types of inheritance
- ✓ Single inheritance
- ✓ Multiple inheritance
- ✓ Multilevel inheritance
- ✓ Polymorphism
- ✓ Operator overloading

Chapter-17 Date and Time

- ✓ Date module
- ✓ Time module
- ✓ Datetime module
- ✓ Time delta
- ✓ Formatting date and time
- ✓ strftime()
- ✓ strptime()

Chapter-18 Regex

- ✓ Understanding the use of regex
- ✓ re.search()
- ✓ re.compile()
- ✓ re.find()
- ✓ re.split()
- ✓ re.sub()
- ✓ Meta characters and their use

Chapter-19 Files

- ✓ Opening file
- ✓ Opening different file types
- ✓ Read, write, close files
- ✓ Opening files in different modes

Chapter-20 working with packages

- ✓ Numpy
- ✓ Matplotlib
- ✓ Pandas

Chapter-21 Mini Projects

- ✓ Mini Project -1: covering the core topics
- ✓ Mini Project-2: Covering the advanced topics

Module-2 DATABASE (SQLSERVER)

Chapter-1: Introduction

- ✓ Database Introduction
- ✓ Types of Databases
- ✓ Need for & ETL, DWH
- ✓ BI Implementations
- ✓ SQL Server Advantages
- ✓ Version, Editions of MSSQL
- ✓ MSSQL Job Role

Chapter-2: Installations

- ✓ SQL Server 2019, 2017
- ✓ SSMS Tools Installation
- ✓ Database Engine (OLTP)
- ✓ SCM, Configuration Tools
- ✓ Instance Types, Uses
- ✓ Authentication Modes
- ✓ Collation, File Stream

Chapter-3: SQL Basics – 1

- ✓ Need for Databases, Tables
- ✓ Need for SQL Commands
- ✓ DDL, DML & DQL Statements
- ✓ Database Creation @ GUI
- ✓ Data Operations @ GUI
- ✓ Session ID, SQL Context
- ✓ DB, Tables, Data @ SQL

Chapter-4: SQL Basics – 2

- ✓ DDL Variants in MSSQL
- ✓ DML Variants in MSSQL
- ✓ INSERT & INSERT INTO
- ✓ SELECT & SELECT INTO
- ✓ Basic Operators in SQL
- ✓ Special Operators in MSSQL
- ✓ ALTER, ADD, TRUNCATE, DROP

Chapter-5: Data Imports, Schemas

- ✓ Data Imports with Excel
- ✓ ORDER BY & UNION
- ✓ UNION ALL For Sorting Data
- ✓ Creating, Using Schemas
- ✓ Real-world Banking Database
- ✓ Table Migrations @ Schemas
- ✓ 2 Part, 3 Part & 4 Part Naming

Chapter-6: Constraints, Index Basics

- ✓ Need for Constraints, Keys
- ✓ NULL, NOT NULL, UNIQUE
- ✓ Primary Key & Foreign Key
- ✓ RDBMS and ER Models
- ✓ Identity Property, Default
- ✓ Clustered Index, Primary Key
- ✓ Non Clustered Index, Unique

Chapter-7: Joins & Views Basics

- ✓ JOINS: Purpose. Inner Joins
- ✓ Left / Right / Full Outer Joins
- ✓ Cross Joins, Query Tuning
- ✓ Creating & Using Views
- ✓ DML, SELECT with Views
- ✓ RLS: WITH CHECK OPTION
- ✓ System Views & Metadata

Chapter-8: Functions (UDF), Data Types

- ✓ Using Functions in MSSQL
- ✓ Scalar Value Functions
- ✓ Inline & Multiline Functions
- ✓ Date & Time Functions
- ✓ String, Aggregate Functions
- ✓ Data Types: Integer, Char, Bit
- ✓ SQL Variant, Timestamp, Date

Chapter-9: Stored Procedures,Models

- ✓ Stored Procedures & Usage
- ✓ Creating, Testing Procedures
- ✓ Encryption, Deferred Names
- ✓ SPs for Validations, Analysis
- ✓ System SPs, Recompilation
- ✓ Normal Forms & Types
- ✓ Data Models, Self-References

Chapter-10: Triggers, Temp Tables

- ✓ Need for Triggers
- ✓ DDL & DML Triggers
- ✓ Using Memory Tables
- ✓ Data Replication, Automation
- ✓ Local & Global Temp Tables
- ✓ Testing & Using Temp Tables
- ✓ SELECT .. INTO & Bulk Loads

Chapter-11: DB Architecture, Locks

- ✓ Planning VLDBs: Files, Sizing
- ✓ Filegroups, Extents & Types
- ✓ Log Files: VLF, Mini LSN
- ✓ Table Location, Performance
- ✓ Schemas, Transfer, Synonyms
- ✓ Transactions Types, Lock Hint
- ✓ Query Blocking Scenarios

Chapter-12: Cursors & CTEs, Links

- ✓ Cursors : Realtime Use
- ✓ FetChapter-& Access Cursor Rows
- ✓ CTEs for SELECT, DML
- ✓ CTEs: Scenarios & Tuning
- ✓ Linked Servers, Remote Joins
- ✓ Linked Servers: MSDTC, RPC
- ✓ Tuning Remote Queries

Chapter-13: Merge, Upsert & Rank

- ✓ Need for Merge in ETL
- ✓ Incremental Loads with SQL
- ✓ MERGE and RANK Functions
- ✓ Window Functions, Partition
- ✓ Identify, Remove Duplicates

Chapter-14: Grouping & Cube

- ✓ Group By & HAVING
- ✓ Cube, Rollup & Grouping
- ✓ Joins with Group By
- ✓ 3 Table, 4 Table Joins
- ✓ Query Execution Order

Chapter-15: Self Joins, Excel Analysis

- ✓ Self Joins & Self References
- ✓ UNION, UNION ALL
- ✓ Sub Queries with Joins
- ✓ IIF, CASE, EXISTS Statements
- ✓ Excel Analytics, Pivot Reports

Chapter-16 DB-API

- ✓ Introduction to DB-API
- ✓ Accessing the database
- ✓ Altering DB using DB-API
- ✓ Inserting records into the table
- ✓ Inserting the records into the database
- ✓ Other ways connect python and mysql

Module – 3 FLASK & DJANGO

Chapter-1 Introduction

- ✓ Introduction to flask and its architecture
- ✓ Installing flask package
- ✓ Introduction to flask components
- ✓ Introduction to Virtual Environment
- ✓ Creating Virtual Environment and activating, deactivating it
- ✓ Introduction to routing in Flask
- ✓ Building sample flask application

Chapter-2 Building routes with Flask

- ✓ What is a dynamic route?
- ✓ Building dynamic routes with flask
- ✓ Redirection in Flask
- ✓ Dynamic URL building with url_for function
- ✓ URL converters in Flask
- ✓ int and string url converters
- ✓ request and response in Flask

Chapter-3 Introduction to Django

- ✓ Understanding web development frameworks
- ✓ Introduction to Django and its features
- ✓ Installing Django and setting up a development environment
- ✓ Creating a simple Django project and app

Chapter-4 Django Models and Database Integration

- ✓ Creating models and defining database tables
- ✓ Working with Django's Object-Relational Mapping (ORM)
- ✓ Performing database queries using Django's QuerySet API
- ✓ Migrations and database schema evolution

Chapter-5 Views and Templates

- ✓ Building views to handle HTTP requests
- ✓ Creating templates for dynamic HTML generation
- ✓ Routing and URL patterns in Django
- ✓ Passing data from views to templates

Chapter-6 Django Forms

- ✓ Creating HTML forms in Django
- ✓ Form validation and handling form submissions
- ✓ Customizing form behavior with Django form classes
- ✓ Integrating forms with models

Chapter-7 Django Admin Panel

- ✓ Utilizing the Django admin interface for content management
- ✓ Customizing the admin panel for specific models
- ✓ Adding custom actions and filters

Chapter-8 Authentication and Authorization

- ✓ Implementing user authentication in Django
- ✓ Managing user sessions and passwords
- ✓ Configuring permissions and authorization

Chapter-9 Django REST Framework

- ✓ Introduction to RESTful APIs
- ✓ Building APIs with Django REST Framework
- ✓ Serializers, views, and authentication for APIs
- ✓ Consuming APIs in Django applications

Chapter-10 Frontend Integration with Django

- ✓ Integrating frontend frameworks with Django
- ✓ Using static files and media in Django projects
- ✓ AJAX and asynchronous behavior in Django applications

Chapter-11 Testing and Debugging in Django

- ✓ Writing unit tests for Django applications
- ✓ Debugging techniques and tools
- ✓ Best practices for testing in Django

Chapter-12 Deployment and Scaling

- ✓ Preparing a Django application for deployment
- ✓ Choosing a hosting platform
- ✓ Configuring production settings
- ✓ Scaling Django applications

Module-4 UI/UX TECHNOLOGIES

Chapter-1 Introduction to frontend technologies

- ✓ Introduction to HTML, CSS and Java Script
- ✓ Hierarchy of HTML
- ✓ Basic HTML programs

Chapter-2 Bootstrap

- ✓ Introduction to bootstrap
- ✓ Understanding its working
- ✓ Building basic functions

Chapter -3 Java Script

- ✓ Introduction to Java Script
- ✓ Basic functions
- ✓ Script Validations

Chapter-4 Attaching External Script File

- ✓ Introduction
- ✓ Integrating Java Script to Python Environment.

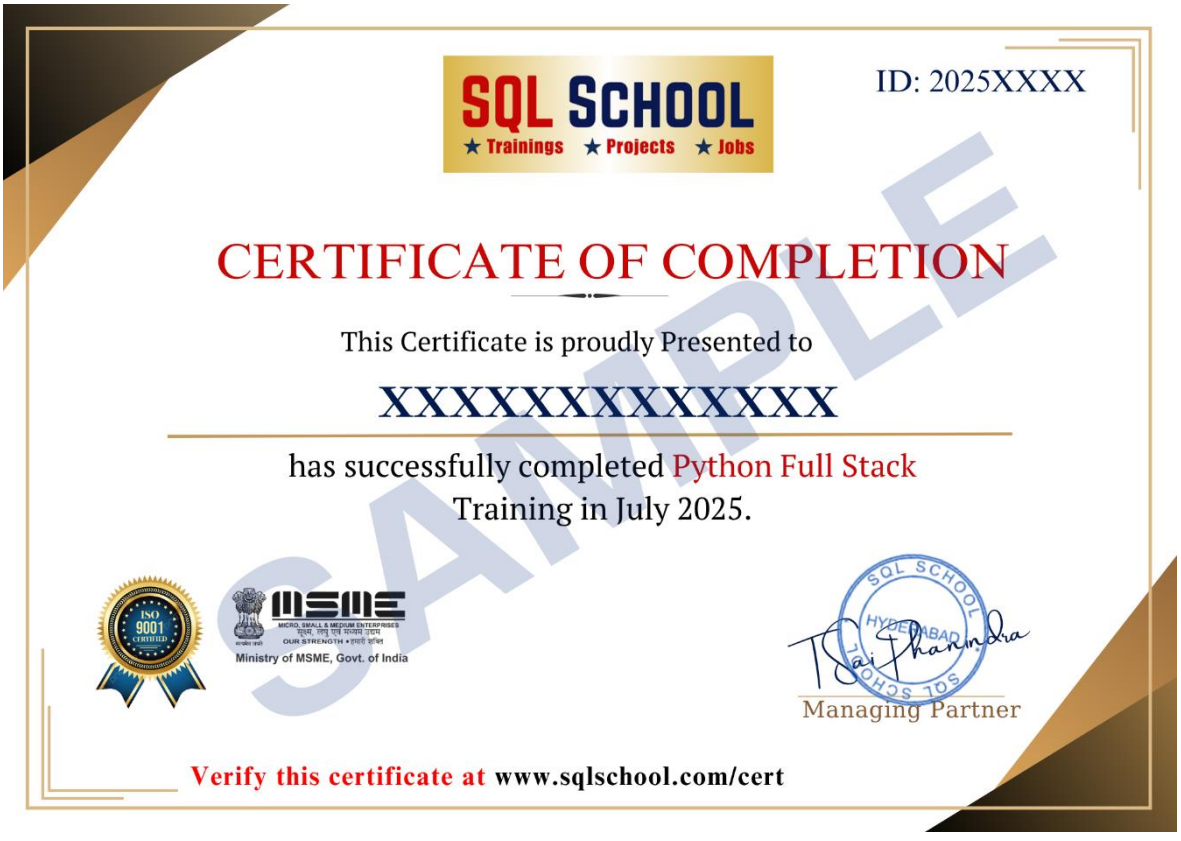
Chapter -5 DevOps Practises

- ✓ Introduction
- ✓ Waterfall Model Vs Agile Model
- ✓ Basic definitions
- ✓ Working
- ✓ Introduction to containers and container orchestration

Chapter-6 End to End Real time Project

- ✓ Real Time Project
- ✓ Resume Building Guidance
- ✓ Mock Interview

All sessions are practical, step by step. Kindly ensure on-time practice for best results.



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