Python Tutorial - Learn Python Programming Language

Why to Learn Python?

- Requires fewer lines of code compared to other programming languages.
- Provides Libraries / Frameworks like Django, Flask, Pandas, Tensorflow, Scikit-learn and many more for Web Development, AI/ML, Data Science and Data Analysis
- Cross-platform, works on Windows, Mac and Linux without major changes.
- Used by top tech companies like Google, Netflix and NASA.
- Many Python coding job opportunities in Software Development, Data Science and AI/ML.

First Python Program

Here is a simple Python code, printing a string. We recommend you to edit the code and try to print your own name.

```
print("Hello World")
```

1. Python Basics

In this section, we'll cover the basics of Python programming, including installing Python, writing first program, understanding comments and working with variables, keywords and operators. These are essential building blocks to get started with Python coding.

2. Python Functions

Python Functions are the backbone of organized and efficient code in Python. Here, in this section of Python 3 tutorial we'll explore their syntax, parameter handling, return values and variable scope. From basic concepts to advanced techniques like closures and decorators. Along the way, we'll also introduce versatile functions like range(), map, filter and lambda functions.

3. Python Data Structures

Python offers versatile collections of data types, including lists, string, tuples, sets, dictionaries and arrays. In this section, we will learn about each data types in detail.

4. Python OOPs Concepts

In this section of Python OOPs, we'll explore the core principles of object-oriented programming (OOP) in Python. From encapsulation to inheritance, polymorphism, abstract classes and iterators, we'll cover the essential concepts that helps you to build modular, reusable and scalable code.

5. Python Exception Handling

In this section of Python Tutorial, we'll explore Python Exception Handling that how Python deals with unexpected errors, enabling us to write fault-tolerant code. We'll cover file handling, including reading from and writing to files.

6. File Handling

In this section, we will cover file handling, including reading from and writing to files.

7. Python Database Handling

In this section we will learn how to access and work with MySQL and MongoDB databases

- Python MongoDB Tutorial
- Python MySQL Tutorial

8. Python Packages or Libraries

Python is a huge collection of Python Packages standard libraries that make development easier. These libraries help with a wide range of tasks and can save you a lot of time by providing ready-to-use tools. Some commonly used types of libraries in Python include:

- Python Packages
- Built-in Modules in Python
- Python DSA Libraries
- Python GUI Libraries