Python Tutorial for Absolute Beginners – Introduction

This **Python for Absolute Beginners** page focuses on providing a **step-by-step** tutorial for learning the Python programming language. This will also help you learn how to program in Python, from the basics to more advanced topics.

The tutorial will help you understand Python programming concepts and show you how to apply them to your specific challenges.

What's Python Programming?

Python Programming is a **high-level**, **interpreted**, **object-oriented** programming language with **a lot of flexibility**. Python interpreter executes each line of code one by one, making it easy to debug.

Python has a **short**, **easy-to-learn syntax** that puts readability first. This reduces the cost of software maintenance. It works with modules and packages, which makes it easier to split up programs and reuse code. You can download and share the Python interpreter and its standard library for free on all major platforms.

By the way, Python has web development frameworks like Django, Flask, and Web2Py. If you want to know more about these frameworks you can check our Best Python Frameworks For Web and Software Development.

Python Programming Basics

Python programming employs new lines to complete a command, rather than using semicolons or parentheses like other programming languages. Python relies on indentation, employing whitespace, to specify a scope; such as the scope of loops, functions, and classes. Other programming languages typically employ curly brackets for this reason.

Why Learn Python Programming?

When you first start learning how to code, the number of programming languages you can learn may be too much for you to handle. So, why should you study Python rather than another language?

Learning Python Programming is the best choice for **beginners** and **experts** alike since it is **simple to use**, **strong**, and **versatile**. **Python** is considered one of the most **beginner–friendly** languages. Python is a wonderful language for beginners because it's understandable and does not have difficult syntax.

Python is used in advanced areas of computer science, like Artificial Intelligence, Machine Learning, Natural Language Generation, and Neural Networks. Furthermore, there are many career prospects for Python programmers because Python is one of the most in-demand programming languages.

Python Syllabus

This lesson is for people who want to learn how to program in Python. It covers the basics of the language, with examples specifically for beginners.

Lesson 1	**Python – Introduction**
Lesson 2	**Python – Overview** Know the history and the difference between Python 2 and Python 3.
Lesson 3	**Python – Environment Setup** Windows, Linux, and macOS installation.
Lesson 4	**Python – Basic Syntax** Create Your First Python Program and Learn the basics of Python.
Lesson 5	**Python – Variable Types** Learn how to assign variables and their types like numbers, strings, lists, etc.
Lesson 6	**Python – Operators** Learn the types of operators in Python, their syntax, and how to utilize them with examples.
Lesson 7	**Python – Decision-Making Statements** Learn the different types of decision-making statements with examples.
Lesson 8	**Python – Loops** Learn the different types of loops: for loops, while, and nested loops with examples.
Lesson 9	**Python – Numbers** If you want to know the mathematical, trigonometric, and random number functions.

Lesson 10	**Python – Strings** Learn the split, replace, join, reverse, uppercase, lowercase and etc.
Lesson 11	**Python – Lists** Learn how to use lists in Python and its functions and methods.
Lesson 12	**Python – Tuples** Learn what is a tuple and how to create, access, and update its values.
Lesson 13	**Python – Sets** Learn the set operations and their functions and methods.
Lesson 14	**Python – Dictionaries** Learn if the dictionary is mutable or immutable, and how to access its values.
Lesson 15	**Python – Built-in Functions** Learn how the built-in functions in Python work in an actual program.
Lesson 16	**Python – Module** Learn the differences between module, package, and library.
Lesson 17	**Python – File Handling** Learn how to handle the file in Python with examples.
Lesson 18	**Python Exception Handling** Learn what is exception and how to handle different errors in Python.

Characteristics of Python Programming

Here are some important **Characteristics of Python Programming**:

- It works with OOP as well as functional and structured programming.
- It can be used as a scripting language or compiled into byte code to build large applications.
- It has very high-level dynamic data types and supports dynamic type checking.
- It can operate on its own to gather trash.
- It is simple to connect to C, C++, COM, ActiveX, CORBA, and Java.

Hello World

To get you interested in **Python Programming**, I'm going to give you a simple **Hello World** program. If you are interested, you can also try our **Python Compiler**.

Example:

```
print(“Hello World!”)
```

Congratulations, you have just completed your first Python program.

As can be seen, this task was not particularly difficult. This is why the **Python programming language** is so great.

Advantages of Python Programming

I have a list of **advantages of Python programming**, and they are:

- **Easy-to-learn:** Simple to learn Python has a simple structure, few keywords, and a clear syntax.
- **Easy-to-read:** Python-written code is easier to read and comprehend.
- **Easy-to-maintain:** The source code for Python is pretty easy to keep up with.
- **A broad standard library:** Most of Python’s library is easy to move around and works on UNIX, Windows, and Macintosh.
- **Interactive Mode:** Python has a mode called “interactive” that lets you test and fix bits of code in real-time.
- **Portable:** Python can run on a wide range of hardware platforms, and all of them have the same interface.
- **Extendable:** Python interpreter can be extended with low-level modules. By doing so, programmers can customize their tools by adding to them or making changes to them.
- **Databases:** Python provides interfaces to all major commercial databases.
- **GUI Programming:** Python lets you create GUI programs that can run on Windows, Macintosh, and Unix.
- **Scalable:** Python is better at building and supporting large programs than shell scripting.

Audience

This tutorial in Python was developed for a specific target, namely software developers who are just starting out and wish to master the Python programming language. This **Python tutorial** will help you learn the **basics** of Python and move on to more **advanced topics.**

Prerequisites

You should be familiar with the language of computer programming. Having familiarity with any programming language, even at a fundamental level, is an asset. Therefore, if you already know these languages, picking up **Python programming** will be easy.

Summary

This Python lesson covers its characteristics, how to construct a “Hello World” program, and the target audience. You should now have a good understanding of what Python is and why it is useful.