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Introduction to Python

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Python is a general-purpose interpreted, interactive, object-oriented, and high-level programming language. It was created by Guido van Rossum during 1985–1990. Like Perl, Python source code is also available under the GNU General Public License (GPL). This tutorial gives enough understanding on Python programming language.

Why to learn Python?

Python is a high-level, interpreted, interactive and object-oriented scripting language. Python is designed to be highly readable. It uses English keywords frequently where as other languages use punctuation, and it has fewer syntactical constructions than other languages.

Python is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain. I will list down some of the key advantages of learning Python:

runtime by the interpreter. You do not need to compile your program before executing it. This is similar to PERL and PHP.

- **Python is Interactive** – You can actually sit at a Python prompt and interact with the interpreter directly to write your programs.
- **Python is Object-Oriented** – Python supports Object-Oriented style or technique of programming that encapsulates code within objects.
- **Python is a Beginner's Language** – Python is a great language for the beginner-level programmers and supports the development of a wide range of applications from simple text processing to WWW browsers to games.

Characteristics of Python

Here are some of the important characteristics of Python Programming:

- It supports functional and structured programming methods as well as OOP.

be compiled to byte-code for building large applications.

- It provides very high-level dynamic data types and supports dynamic type checking.
- It supports automatic garbage collection.
- It can be easily integrated with C, C++, COM, ActiveX, CORBA, and Java.

Hello World using Python

Just to give you a little excitement about Python, I'm going to give you a small conventional Python Hello World program.

You can try it by writing this code in our code editor.

```
print ("Hello, Python!")
```

Applications of Python

As mentioned before, Python is one of the most widely used language over the web. I'm going to list a few of the applications of python programming:

- Web Development
- Game Development
- Scientific and Numeric Applications

- Desktop GUI
- Software Development
- Enterprise-level /
Business Applications
- Education programs and
training courses
- Language Development
- Operating Systems
- Web Scrapping
Applications
- Image Processing and
Graphic Design
Applications

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Python – Basic

Basic Syntax
Variable types
Basic Operators

Python – Intermediate

Decision Making
Loops
Numbers
Strings
Lists

Python – Advanced

Date & Time

Functions

Modules

File I/O

Exceptions

Class & Object