Difference Between Perl and Python

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Key Difference - Perl vs Python

A computer program provides instructions for a computer to perform tasks. A set of instructions is known as a computer program. A computer program is developed using a programming language. High-level languages are understandable by programmers but not understandable by the computer. Therefore, those programs are converted to machine-understandable format. Perl and Python are two high-level programming languages. Perl has features such as built-in regular expressions, file scanning and report generation. Python provides support for common programming methodologies such as data structures, algorithms etc. The **key difference** between Perl and Python is that **Perl emphasizes support for common application-oriented tasks while Python emphasizes support for common programming methodologies.**

What is Perl?

Perl is general purpose high-level programing language. It was designed by Larry Wall. Perl stands for Practical Extraction and Reporting Language. It is open source and is useful for text manipulation. Perl runs on various platforms such as Windows, Mac, Linux etc. It is a multi-paradigm language that supports mainly procedural programming and object-oriented programming. Procedure Programming helps to divide the program into functions. Object Oriented programming helps to model a software or a program using objects.

Perl is an interpreted language. Therefore, each line is read one after the other by the interpreter. High-level language programs are understandable by the programmer, but they are not understandable by the machine. Therefore, the instructions should be converted into the machine-understandable format. Programming languages such as C and C++ converts the source code to machine language using a compiler. In Perl, the program is first converted into bytecode, and that bytecode is converted to machine instructions. So, Perl is slower language comparing to languages such as C and C++.

There are different ways to run Perl programs. It is possible to start coding in interactive mode from the command line. The programmer can also create Perl Scripts and run them or use an Integrated Development Environment (IDE) to build applications. Some common IDEs for Perl are Padre, Perl IDE and Eclipse Plugin EPIC – Perl Editor. Perl supports different data types. The scalar variable starts with $. It can store a string, integer or a reference. The array variable starts with @. It is used to store ordered list of scalars. The hash variables start with %. It is used to store key, value pairs.

Figure 01: Perl

It is easy to use Perl with web related technologies such as Hyper Text Markup Language (HTML), XML etc. Perl can be used to develop Graphical User Interfaces (GUI) too. It is also easy to integrate Perl with databases such as MySQL, Postgres etc. Perl is a language that can be used to develop a variety of applications such as web development, network programming and system administration.

What is Python?

Python is a general-purpose high-level programming language. It was designed by Guido van Rossum. It is a cross-platform and open source language. Python programs are easier to read, write and learn. Those programs are also easy to test and debug. Python is a preferred programming language for beginners because of its simplicity. Python is a multi-paradigm programming language. It mainly supports procedural and object-oriented programing languages.

Python is an interpreted language. Therefore, each line is read one statement after the other. Python programs are understandable by the programmer and not understandable by the machine. Therefore, the instructions should be converted into machine understandable format using the Python interpreter. First, the instructions are converted into bytecode then the bytecode converts to machine code. So, Python is slower than compiled languages such as C and C++.

Figure 02: Python

Programmers can run Python programs using Python interactive mode, Python Scripts or use an Integrated Development Environment(IDE). PyCharm and Eclipse are some common IDEs for Python development. Python supports data types such as Numbers, Strings, Lists, Tuples and Dictionaries. Python Language is used for developing a variety of applications such as web development, natural language processing and machine language.

What are the Similarities Between Perl and Python?

- Both supports procedural and object-oriented programing. They are multi-paradigm languages.
- Both are interpreted languages.
- Both are a high-level programming language.
- Both are open source and cross-platform.

- The speed of both languages is slower when comparing to compiler-based languages such as C, C++.
- Both are case sensitive programming languages.
- Both can be used to develop Graphical User Interfaces.
- Both can be integrated with databases such as MySQL, Postgres, Oracle etc.

What is the Difference Between Perl and Python?

Perl vs Python	
Perl is a high level, general-purpose, interpreted, dynamic programming language.	Python is an interpreted high-level programming language for general purpose programming.
Main Focus	
Perl emphasizes support for common application-oriented tasks such as report generation and file scanning.	Python emphasizes support for common programming methodologies such as data structure design and object-oriented programming.
File Extension	
Perl Scripts are saved with the .pl file extension.	Python Scripts are saved with the .py file extension.
Data Types	
Perl contains data types such as numeric, string, Scalars, Arrays, Hashes.	Python contains data types such as numeric, strings, lists, dictionaries, tuples.
Semi-colon	
In Perl, all statements should end with a semi colon.	In Python, it is not necessary to end the statements with a semi colon.
Statement Blocks	
Perl uses braces to mark statement blocks.	Python use indentations to mark statement blocks.
Designer	
Perl was designed by Larry Wall.	Python was designed by Guido van Rossum.
Testing and Debugging	
Perl programs are harder to test and debug than Python programs.	Python programs are easier to test and debug than Perl programs.

Summary - Perl vs Python

This article discussed the difference between Perl and Python. Python encourages programmers to write readable programs than Perl. The key difference between Perl and Python is that Perl emphasizes support for common application-oriented tasks while Python emphasizes support for common programming methodologies. Python is more popular for original application development than Perl.

Reference:

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