

# Difference Between Scripting and Programming Languages

Scripting and Programming languages convert high-level instructions or programs into machine language. The scripting language is usually short & snappy and is explained from the source or byte code. Programming language is a sequence of instructions written to achieve a given goal.

## Key Differences Between Scripting and Programming Languages

Scripting Languages	Programming Languages
This language uses a natural method to put code into a runtime environment.	Humans use this language to communicate with computers.
Scripting Languages are used for a particular runtime environment.	Programming languages are of three types -:  Low-level Programming language  Middle-level Programming language  High-level Programming language
Creations of dynamic web applications are used in Scripting languages.	Programming languages are used to create computer programs.
These languages contain different libraries.	These languages are high-speed languages.
Bash, Ruby, and Python are examples of Scripting languages.	C++, Java, and PHP High-level are examples of Programming languages.
These languages can be easily ported between various operating systems.	These languages are translation-free languages.

## Scripting and Programming Languages

Earlier software developers used programming languages to build PowerPoint, Microsoft Excel, Internet Explorer, Microsoft Word, etc. However, as the technology upgrades, the programming languages must be updated to combine additional functionalities and improve the programming interface. Thus, scripting languages came into the picture. Let us learn about Scripting and Programming Languages in detail.

## What are Scripting Languages?

The scripting language is a programming language designed specifically for runtime environments. This programming language automates the execution of tasks. These programming languages are used in games, system administration, web development, and creating plugins & extensions. These are interpreted languages that bring new functionalities to the applications. Mostly, scripting languages are supported by almost every platform, meaning there is no special kind of software required to run the languages, as these languages are the set of commands that runs without using a compiler.

There are two types of scripting languages-

- **Server-side scripting language:** These languages are used to create dynamic web pages and are executed at a web server. These programming languages perform backend operations. Examples- Node.js, PHP, Ruby, Python, and Pearl.
- **Client-side scripting language:** These languages are run off browsers and are considered front-end languages. Examples- jQuery, CSS, HTML and JavaScript.

## What are Programming Languages?

Programming languages have used computer interaction to create and develop websites, desktop, and mobile apps. Some examples of programming languages- are Java, C, C++, and Python. These Programming languages usually contain two components-syntax(form) and semantics(meaning), that are used to appoint algorithms and enable the system to perform actions.

Programming languages can be divided into three categories:

- **Machine language-** This is a low-level language that a computer can easily understand it contains instructions in binary or hexadecimal. This is also the elemental language of computers.
- **Assembly language-** This is also a type of another low-level programming language that is created for specific processors. Assembly language is just symbolic and human-understandable. An assembler is used to translate assembly language to machine language.
- **High-level language-** This language is used to construct user-friendly software and websites. The use of a compiler or interpreter is compulsory to convert the code written by the user to the machine language. The main advantage of this language is that it is simple to read, write, and maintain. Examples are Java, JavaScript, Python, PHP, C#, C++, etc.