

### Statically typed languages:

Each variable and expression is already known at compile time. Ex: Java, c, c++.

### Dynamically typed languages:

Variables can receive different values at runtime and their type is defined at run time.Ex:Python,Javascript.

### Difference between Programming Language and Scripting Language:-

Programming Language	Scripting Language
A programming language is a computer language that is used to communicate with computers using a set of instructions.	A scripting language is a type of programming language designed for a runtime system to automate the execution of tasks.
It is compiled language or compiler-based language.	It is interpreted language or interpreter-based language
It is used to develop an application or software from scratch.	It is used to combine existing components and automate a specific task.
It runs or executes independently and does not depend on the parent (exterior) program.	It runs or executes inside another program.
It uses a compiler to convert source code into machine code.	It uses an interpreter to convert source code into machine code.
As it uses a compiler, hence the complete program is converted into machine code in one shot.	As it uses an interpreter, hence the program is converted into machine code line by line.
These languages are required to be compiled.	There is no need for compilation.
It is comparatively difficult to write code in a programming language, and it requires numerous lines of code for each task.	It is comparatively easy to write code in the scripting language, and it requires few lines of code for each task.
The development time in programming languages is high as more lines are required.	The development time in a scripting language as a smaller number of lines are required.
There is the high maintenance cost.	There is less maintenance cost.
All programming languages are not scripting languages	All scripting languages are programming languages
It generates a .exe file.	It does not create a .exe file.
Usually, programming languages do not support or provide very little support for user interface designing, data types, and graphic designing.	Scripting languages provide great support to user interface design, data types, and graphic design.
Some popular examples are C, C++, Java, Scala, COBOL, etc.	Some popular examples are Perl, Python, JavaScript, etc.

## What is programming paradigm?

A programming paradigm is **the classification, style or way of programming**. It is an approach to solve problems by using programming languages.

## What are the two main types of programming paradigms?

**Imperative** in which the programmer instructs the machine how to change its state, procedural which groups instructions into procedures.

**Declarative** in which the programmer merely declares properties of the desired result, but not how to compute it.

## Why are programming paradigms important?

Paradigms are important because **they define a programming language and how it works**. A great way to think about a paradigm is as a set of ideas that a programming language can use to perform tasks in terms of machine-code at a much higher level.