

C++ vs Java vs Python

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These three programming languages are the most popular among the coders in terms of competitive coding and programming. C++ as of today in its efficiency, speed, and memory make it widely popular among coders. Java is platform-independent. It continues to add considerable value to the world of software development. Python requires less typing, provides new libraries, fast prototyping, and several other new features.

Let's look at the comparison between these popular coding languages:

C++ Vs Java:

TOPIC	C++	Java
Memory Management	Use of pointers, structures, union	No use of pointers. Supports references, thread and interfaces.
Libraries	Comparatively available with low level functionalities	Wide range of classes for various high level services
Multiple Inheritance	Provide both single and multiple inheritance	Multiple inheritance is partially done through interfaces
Operator Overloading	Supports operator overloading	It doesn't support this feature
Documentation comment	C++ doesn't support documentation comment.	It supports documentation comment (/**.. */) for source code
Program Handling	Functions and variables can reside outside classes.	Functions and variables reside only in classes, packages are used.
Portability	Platform dependent, must be recompiled for different platform	Platform independent, byte code generated works on every OS.
Thread Support	No built-in support for threads, depends on libraries.	It has built-in thread support.

Python Vs Java:

Components can be developed in Java and combined to form applications in Python. Let's see some of the differences in these two popular languages:

TOPIC	Java	Python
Compilation process	Java is both compiled and interpreted language, which is first compiled and then interpreted into a byte code.	Python is an interpreted programming language
Code Length	Longer lines of code as compared to python.	3-5 times shorter than equivalent Java programs.
Syntax Complexity	Define particular block by curly braces, end statements by ;	No need of semi colons and curly braces, uses indentation
Ease of typing	Strongly typed, need to define the exact datatype of variables	Dynamic, no need to define the exact datatype of variables.
Speed of execution	Java is much faster than python in terms of speed.	Expected to run slower than Java programs
Multiple Inheritance	Multiple inheritance is partially done through interfaces	Provide both single and multiple inheritance

You can choose any language you want i.e. the one you are comfortable to work with. Technically it depends upon the job you want to accomplish. These 3 languages form the set of most popular languages among the college graduates' coders and developers. I would suggest you stick with one language and achieve perfection in that. These languages may help you to achieve the level of coding you want to reach. I hope one day a coder reading this article may get inspired to develop a language similar to these and make a breakthrough for coders all around the world.