

# Java

Since its creation Java **has been one of the most popular programming languages used for back-end development**. Moreover, Java is the most popular language for Android development **as it is the only language that can be used for this purpose**. Actually, it is not true since Google has announced that the preferred language for Android development now is Kotlin.

Java is an **object-oriented programming language** and it runs on a **virtual machine**, and therefore can be executed on any platform that has a VM implementation. **In comparison with C++ this programming language is way easier to learn**. It is not actually Java's merit, rather C++'s complexity.

## Why is Java so popular?

### It is object-oriented

First of all, Java is popular because it is an object-oriented programming language. And this programming paradigm is popular itself. Moreover, it is *the most* popular programming paradigm ever. The next most popular paradigm is functional programming and Java lately has adopted some of its features like lambda expressions and functional interfaces.

The object-oriented programming paradigm allows you to create strong abstractions using such techniques as abstract classes, interfaces, inheritance, encapsulation, and so on. This makes creating big and complex programs easier in comparison with, for example, procedural programming.

### It is cross-platform



The second big reason is because Java is cross-platform. I have stated earlier that Java runs on any platform that has a virtual machine. The Java compiler translates Java code into an intermediate language called the *byte code*, which the virtual machine eventually executes. Java's advantage of being cross-platform can be expressed using an iconic phrase about Java that you can see in the picture.

### It has a big standard library

Java has a really big standard library: socket network programming, XML data files parsing, handling low-level I/O, databases connection, and so on. It is worth mentioning that Java library API has been testing since the language birth, thus it is really secure and reliable.

It has a rich ecosystem

Java has an enormous number of different libraries, frameworks, and tools. For example, the most popular back-end development framework—Spring framework—is written in Java. And it is only a single example.

It also has such useful tools as package managers: Apache Maven and Gradle. These allow you to install the required package or library in a few seconds!

Java also has plenty of tools and IDEs: NetBeans, Eclipse, IntelliJ IDEA, Microsoft Visual Studio. It also has plugins for such text editors as VIM or Sublime Text.

It has good documentation

Another excellent quality of the language is that Java is well-documented. And it has plenty of tutorials which will help you to deal with some concrete problem you face while learning.

## Conclusion

Java is one of the most important programming languages ever. It has influenced almost all the *modern* programming languages. Java has rightly taken its place in The Programming Language Hall of Fame.