

Java is a [high-level](#), [class-based](#), [object-oriented programming language](#) that is designed to have as few implementation [dependencies](#) as possible. It is a [general-purpose](#) programming language intended to let [programmers](#) *write once, run anywhere* (WORA),^[16] meaning that [compiled](#) Java code can run on all platforms that support Java without the need to recompile.^[17] Java applications are typically compiled to [bytecode](#) that can run on any [Java virtual machine](#) (JVM) regardless of the underlying [computer architecture](#). The [syntax](#) of Java is similar to [C](#) and [C++](#), but has fewer [low-level](#) facilities than either of them. The Java runtime provides dynamic capabilities (such as [reflection](#) and runtime code modification) that are typically not available in traditional compiled languages.

Java gained popularity shortly after its release, and has been a very popular programming language since then.^[18] Java was the third most popular programming language in 2022 according to [GitHub](#)^[19] and it is ranked fourth on [TIOBE index](#) as of October 2023.^[20] Although still widely popular, there has been a gradual decline in use of Java in recent years with [other languages using JVM](#) gaining popularity.^[21]

Java was originally developed by [James Gosling](#) at [Sun Microsystems](#). It was released in May 1995 as a core component of Sun Microsystems' [Java platform](#). The original and [reference implementation](#) Java [compilers](#), virtual machines, and [class libraries](#) were originally released by Sun under [proprietary licenses](#). As of May 2007, in compliance with the specifications of the [Java Community Process](#), Sun had [relicensed](#) most of its Java technologies under the [GPL-2.0-only](#) license. [Oracle](#) offers its own [HotSpot](#) Java Virtual Machine, however the official [reference implementation](#) is the [OpenJDK](#) JVM which is free open-source software and used by most developers and is the default JVM for almost all Linux distributions.

As of September 2023, [Java 21](#) is the latest version, which is also a [long-term support](#) (LTS) version. Java 8, 11, and 17 are previous LTS versions still officially supported.