**Java** is a [high-level](https://en.wikipedia.org/wiki/High-level_programming_language), [class-based](https://en.wikipedia.org/wiki/Class-based_programming), [object-oriented](https://en.wikipedia.org/wiki/Object-oriented_programming) [programming language](https://en.wikipedia.org/wiki/Programming_language) that is designed to have as few implementation [dependencies](https://en.wikipedia.org/wiki/Dependency_(computer_science)) as possible. It is a [general-purpose](https://en.wikipedia.org/wiki/General-purpose_language) programming language intended to let [programmers](https://en.wikipedia.org/wiki/Programmer) *write once, run anywhere* (WORA),[[17]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-17) meaning that [compiled](https://en.wikipedia.org/wiki/Compiler) Java code can run on all platforms that support Java without the need for recompilation.[[18]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-design_goals-18) Java applications are typically compiled to [bytecode](https://en.wikipedia.org/wiki/Java_bytecode) that can run on any [Java virtual machine](https://en.wikipedia.org/wiki/Java_virtual_machine) (JVM) regardless of the underlying [computer architecture](https://en.wikipedia.org/wiki/Computer_architecture). The [syntax](https://en.wikipedia.org/wiki/Syntax_(programming_languages)) of Java is similar to [C](https://en.wikipedia.org/wiki/C_(programming_language)) and [C++](https://en.wikipedia.org/wiki/C%2B%2B), but has fewer [low-level](https://en.wikipedia.org/wiki/Low-level_programming_language) facilities than either of them. The Java runtime provides dynamic capabilities (such as [reflection](https://en.wikipedia.org/wiki/Reflective_programming) and runtime code modification) that are typically not available in traditional compiled languages. As of 2019, Java was one of the most [popular programming languages in use](https://en.wikipedia.org/wiki/Measuring_programming_language_popularity) according to [GitHub](https://en.wikipedia.org/wiki/GitHub),[[19]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-:0-19)[[20]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-20) particularly for [client–server](https://en.wikipedia.org/wiki/Client%E2%80%93server_model) [web applications](https://en.wikipedia.org/wiki/Web_application), with a reported 9 million developers.[[21]](https://en.wikipedia.org/wiki/Java_(programming_language)#cite_note-21)

Java was originally developed by [James Gosling](https://en.wikipedia.org/wiki/James_Gosling) at [Sun Microsystems](https://en.wikipedia.org/wiki/Sun_Microsystems) ([which has since been acquired by Oracle](https://en.wikipedia.org/wiki/Sun_acquisition_by_Oracle)) and released in 1995 as a core component of Sun Microsystems' [Java platform](https://en.wikipedia.org/wiki/Java_(software_platform)). The original and [reference implementation](https://en.wikipedia.org/wiki/Reference_implementation) Java [compilers](https://en.wikipedia.org/wiki/Compiler), virtual machines, and [class libraries](https://en.wikipedia.org/wiki/Library_(computing)) were originally released by Sun under [proprietary licenses](https://en.wikipedia.org/wiki/Proprietary_license). As of May 2007, in compliance with the specifications of the [Java Community Process](https://en.wikipedia.org/wiki/Java_Community_Process), Sun had [relicensed](https://en.wikipedia.org/wiki/Software_relicensing) most of its Java technologies under the [GPL-2.0-only](https://en.wikipedia.org/wiki/GNU_General_Public_License) license. Oracle offers its own [HotSpot](https://en.wikipedia.org/wiki/HotSpot_(virtual_machine)" \o "HotSpot (virtual machine)) Java Virtual Machine, however the official [reference implementation](https://en.wikipedia.org/wiki/Reference_implementation) is the [OpenJDK](https://en.wikipedia.org/wiki/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 October 2021, [Java 17](https://en.wikipedia.org/wiki/Java_version_history) is the latest version. Java 8, 11 and 17 are the current [long-term support](https://en.wikipedia.org/wiki/Long-term_support) (LTS) versions. [Oracle](https://en.wikipedia.org/wiki/Oracle_Corporation) released the last zero-cost public update for the [legacy](https://en.wikipedia.org/wiki/Legacy_system) version [Java 8](https://en.wikipedia.org/wiki/Java_8) LTS in January 2019 for commercial use, although it will otherwise still support Java 8 with public updates for personal use indefinitely. Other vendors have begun to offer [zero-cost builds](https://en.wikipedia.org/wiki/OpenJDK#OpenJDK_builds) of OpenJDK 8 and 11 that are still receiving security and other upgrades.