

## Java – Introduction

Java is a high-level, object-oriented programming language that was developed by Sun Microsystems in the mid-1990s. It is designed to be platform-independent, meaning that Java code can be run on any device or operating system that has a Java Virtual Machine (JVM) installed.

One of the key features of Java is its "write once, run anywhere" philosophy, which allows developers to create software that can be used across a wide variety of devices and platforms, including desktop computers, servers, mobile devices, and embedded systems. This is achieved through the use of the JVM, which serves as an interpreter for Java code and translates it into machine-readable instructions that can be executed on any platform.

Java also has a strong emphasis on security and reliability, with features such as automatic memory management (garbage collection) and strong type checking to prevent common programming errors.

Java has a vast ecosystem of libraries, frameworks, and tools that make it a popular choice for developing a wide range of applications, including web applications, mobile apps, desktop applications, games, and enterprise software. Some popular Java-based technologies include the Spring framework, Hibernate, JavaFX, and Android development.