

## Pre-read: Foundations of Java Programming

### ■ Scope and Importance of Java language

With over one hundred programming languages to choose from, why is Java considered one of the most popular languages? In this article we'll discuss the origins of the Java programming language and what makes it unique.

The goal of Java was to be a powerful, yet simple object-oriented programming language that was platform-independent. Java can be found in video games, mobile applications, desktop applications, and more.

Java is one of the most popular programming languages for a good reason. It's a powerful language that can be used for a variety of programming applications and the Java Virtual Machine allows us to run the same Java code on multiple platforms and operating systems.

For more details kindly refer to the attached link–

<https://www.botreetechnologies.com/blog/what-does-the-future-of-java-web-development-look-like/>

## ■ Installation Guide for Java

Here is a step-by-step guide to installing Java on a Windows operating system:

### 1. Download and Install Java:

- Go to the website:
- <https://www.oracle.com/in/java/technologies/downloads/>
- Download the Java installer and run it.

### 2. Set the Environment Variables:

- a. Setting Path Variable:
  - Copy the path of the Java installation directory from Windows Explorer.
  - Open the Settings and go to System variables.
  - Edit the "Path" variable and add or modify the entry (e.g., C:\Program Files\Java\jdk-18.0.2.1\bin;)
- b. Setting JAVA\_HOME:
  - Create a new System variable called "JAVA\_HOME".
  - Copy the path of the Java installation directory (e.g., C:\Program Files\Java\jdk-18.0.2.1).
  - This variable is required for Spring Boot applications.

### 3. Check Java Version:

- Open the Command Prompt (CMD).
- Type the command "java -version" and press Enter.
- This will display the installed Java version.

By following these steps, you will be able to successfully install Java on your Windows operating system.

■ **For a detailed, step-by-step guide on installing Java, please refer to the following article**

The article provides a tutorial on how to install Java on Windows. It emphasizes the need to obtain the Java Development Toolkit (JDK) installation media, which includes the Java Runtime Environment (JRE) and Java Virtual Machine (JVM).

The installation process is divided into steps:

- downloading Java for Windows
- running the Java installer
- validating the JAVA\_HOME setting
- confirming the Java PATH variable
- and running a JDK command to verify the successful installation.

It provides instructions on each step, including downloading the JDK, customizing the JDK installation options, setting the installation directory, configuring the Java PATH and JAVA\_HOME environment variables, and verifying the installation by running a Java command.

<https://www.theserverside.com/blog/Coffee-Talk-Java-News-Stories-and-Opinions/How-do-I-install-Java-on-Windows>