

■ Introduction to Java & Setup Guide

Java is one of the most popular, secure, and powerful programming languages used for backend development, Android apps, web apps, enterprise systems, and more. In this guide, you'll learn: - What Java is and why it is widely used - How to install and set up Java on Windows - How to write and run your first Java program

Step 1: Download JDK 1. Go to the official Oracle JDK website or OpenJDK (AdoptOpenJDK). 2. Download the latest JDK (Java Development Kit) for Windows. 3. Install it by following the installer instructions. **Step 2: Setup Environment Variables** 1. Open Control Panel → System → Advanced System Settings → Environment Variables. 2. Under "System Variables", create a new variable: - Variable Name: JAVA_HOME - Variable Value: Path to your JDK folder (e.g., C:\Program Files\Java\jdk-21) 3. Add "%JAVA_HOME%\bin" to the PATH variable. **Step 3: Verify Installation** - Open Command Prompt and type: java -version javac -version If you see version numbers, Java is installed successfully!

■ First Java Program

```
public class HelloWorld {  
    public static void main(String[] args) {  
        System.out.println("Hello, World!");  
    }  
}
```

How to Run: 1. Save the file as HelloWorld.java 2. Open Command Prompt in the same folder. 3. Compile: javac HelloWorld.java 4. Run: java HelloWorld ■ Output will be: Hello, World!