# Installation Guide: Java, Maven, IntelliJ IDEA, and PostgreSQL on Windows

## **1. Java Installation**:

Below are the step-by-step instructions for installing Java on Windows.

# Installing Java on Windows

## 1. Check Existing Java Installation

Before proceeding, verify if Java is already installed on your system:

* Open the **command prompt** by typing cmd in the Windows search bar.
* Enter the following command:
* If the system responds that "Java is not recognized as an internal or external command," it means Java is not installed.

## 2. Download Java for Windows 10

* Visit the [Oracle Java Downloads page](https://www.oracle.com/java/technologies/javase-jdk11-downloads.html).
* Select the latest JDK version (e.g., JDK 21).
* Access the **Windows tab** and click the **x64 Installer download link**. Wait for the download to complete.

## 3. Install Java

* Double-click the downloaded Java file to start the installation.
* Follow the prompts in the installation wizard:
  + Click **Next** on the welcome screen.
  + Choose the destination folder for the Java installation files (you can stick to the default path).
  + Once the installation is complete, you'll see a "Successfully Installed" message. Click **Close** to exit the wizard.

## 4. Set Up Environment Variables

To enable program compiling from any directory, set up Java environment variables:

* **Add Java to System Variables**:
  + Open the **System Properties** window (you can search for it in the Start menu).
  + Go to the **Advanced** tab and click **Environment Variables**.
  + Under **System variables**, find the **Path** variable and click **Edit**.
  + Add the path to your Java installation directory (e.g., C:\Program Files\Java\jdk-21\bin).
* **Add JAVA\_HOME Variable**:
  + Click **New** under **System variables**.
  + Set the variable name as JAVA\_HOME and the value as the path to your JDK installation directory (e.g., C:\Program Files\Java\jdk-21).

## 5. Test Java Installation

* Open a new command prompt and type: java -version
* You should see the version of the Java compiler, indicating that the installation was successful.

## **2. \*\*Maven Installation\*\*:**

**Download Maven**:

* + Visit the [Maven download page](https://maven.apache.org/download.cgi).
  + Get the **binary zip archive** (e.g., version 3.9.5).

**Extract Maven**:

* + Unzip the downloaded file to a directory (e.g., C:\Program Files\Maven\apache-maven-3.9.5).

**Set Environment Variables**:

* + Add MAVEN\_HOME system variable pointing to the Maven directory.
  + Edit the Path system variable and add %MAVEN\_HOME%\bin.

**Verify Maven Installation**:

* + Open a new command prompt and run: mvn –v

It has to display version of maven installed

## **3. \*\*IntelliJ IDEA Installation\*\*:**

**Download IntelliJ IDEA**:

* + Visit the [IntelliJ IDEA download page](https://www.jetbrains.com/idea/download/?fromIDE=).
  + Choose the **Community Edition** (free) or **Ultimate Edition** (paid).
  + Download the .exe installer.

**Run Installer**:

* + Double-click the downloaded installer.
  + Follow the wizard steps.

**Start IntelliJ IDEA**:

* + Launch IntelliJ IDEA from the Start menu.

## **4. \*\*PostgreSQL Installation\*\*:**

**Download PostgreSQL**:

* + Visit the [PostgreSQL download page](https://www.postgresql.org/download/windows/).
  + Download the **Windows installer**.

**Install PostgreSQL**:

* + Run the installer.
  + Follow the prompts (remember the password you set for the postgres user).

**Verify Installation**:

* + Open the command prompt and run: