

# Comprehensive process: Download and installation of OpenJava

## 1. Check for Java

### 1.1. Launch the Command Prompt:

- 1.1.1. Find the Windows search bar at the bottom left of your screen.
- 1.1.2. Enter "CMD" into the search bar.
- 1.1.3. Click "Command Prompt" in the search results to open it.

### 1.2. Execute the Java Version Command:

- 1.2.1. In the Command Prompt window, type the following command: `java -version`
- 1.2.2. Press the "Enter" key on your keyboard.

### 1.3. If the Command Prompt displays the following information, proceed to step 3 (Download and install Java).

Here's an example of what you might see:

'java' is not recognized as an internal or external command, operable program or batch file.

### 1.4. Review the Java Version Information:

- 1.4.1. Command Prompt will display information about your Java installation.
- 1.4.2. Look for lines that show the "java version," "Java (TM) SE Runtime Environment," and "Java HotSpot (TM) 64-Bit Server VM."

Here's an example of what you might see:

```
java version "23.0.2" 2025-01-21
Java(TM) SE Runtime Environment (build 23.0.2+7-58)
Java HotSpot(TM) 64-Bit Server VM (build 23.0.2+7-58, mixed mode, sharing)
```

## 2. Determine if Java is Up to Date:

### 2.1. If the version numbers match or are higher than the example above (23.0.2), your Java installation is current, and you do not need to install a new version.

### 2.2. If the version numbers are lower or mismatched without a valid business reason compared to the example, you may need to uninstall the current version of Java and install a newer one.

#### 2.2.1. Uninstall Java (If Necessary):

##### 2.2.1.1. Windows Settings

2.2.1.1.1. Access "Settings"

2.2.1.1.2. Click "Apps"

- 2.2.1.1.3. Scroll down to find Java™ SE Development Kit
- 2.2.1.1.4. Click the 3 dot (...) next to the file size
- 2.2.1.1.5. Click "Uninstall"

#### 2.2.1.2. Access Java Uninstall Instructions:

- 2.2.1.2.1. Open your web browser.
- 2.2.1.2.2. Visit the official Java uninstall instructions page:  
[https://www.java.com/en/uninstall/uninstall\\_instructions.html](https://www.java.com/en/uninstall/uninstall_instructions.html)
- 2.2.1.2.3. Follow the steps provided on that page to uninstall your current version of Java.

### 2.2.1.3. Alternatively, use the Java Uninstall Tool:

- 2.2.1.3.1. Visit the Java Uninstall Tool download page:  
<https://www.java.com/en/download/uninstalltool.jsp>
- 2.2.1.3.2. Download the "JavaUninstallTool.exe" file.
- 2.2.1.3.3. Run the downloaded tool and follow the on-screen instructions to uninstall Java.

### 3. Download and install Java:

The free and open-source version of Java under the GNU General Public License, version 2, with the Classpath Exception.

### Option 1 – OpenJDK from Microsoft – winget install:

1. Open PowerShell
2. Type the command `winget -v`
3. If you see `v1.10.340`
4. Type the command `winget search Microsoft.OpenJDK`
5. Type the command `winget install Microsoft.OpenJDK.21`
6. This command produces an output similar to the following:  
Found Microsoft Build of OpenJDK 21 [Microsoft.OpenJDK.21]  
This application is licensed to you by its owner.  
Microsoft is not responsible for, nor does it grant any licences to, third-party packages.  
Downloading <https://aka.ms/download-jdk/microsoft-jdk-21.0.0-windows-x64.msi>  
 160 MB / 160 MB  
Successfully verified installer hash  
Starting package install...  
Successfully installed
7. Restart the system.
8. Once the system is back online, check the Java version described in step 1.

### Option 2– OpenJDK from Microsoft – MSI install:

1. Open your web browser (like Chrome, Firefox, or Edge).
2. Visit the official OpenJDK website: <https://learn.microsoft.com/en-us/java/openjdk/download>
3. Click the microsoft-jdk-21.0.6-windows-x64.msi file from the list.
4. Download and save the file to the Downloads folder.
5. Double-click on the file to start the installation process.
6. Click the "Next" button on the Welcome screen
7. Check mark the box "I accept the terms in the License Agreement" once reading and comprehending.
8. Click the "Next" button on the End-User License Agreement screen.
9. Select "Install for all users of the machine" and click the "Next" button.
10. Click the dropdown arrow next to "Microsoft Build of OpenJDK and select the "Entire feature will be installed on local hard drive" option from the Custom Setup screen.
11. Click the "Install" button.
12. Click the "Finish" button to complete the installation.
13. Restart the system.
14. Once the system is back online, check the Java version described in step 1.

### **Option 3 – OpenJDK from <https://jdk.java.net/>:**

1. Access the OpenJDK Download Page:
  - 1.1. Open your web browser (like Chrome, Firefox, or Edge).
  - 1.2. Visit the official OpenJDK website: <https://jdk.java.net/>
2. Select the Latest JDK Version:
  - 2.1. On the webpage, you will see a section labeled "Ready for use:".
  - 2.2. Locate and click on the most recent JDK version (e.g., "JDK 23").  
(This action directs you to the specific download page.)
3. Choose Your Operating System:
  - 3.1. Find the "Builds" section on the JDK download page.
  - 3.2. Select the build that matches your computer's operating system. For example, if you use a 64-bit Windows computer, click "Windows/x64".
  - 3.3. This will provide a zipped file link.
  - 3.4. Click on the zipped file link (e.g., openjdk-23.0.2\_windows-x64\_bin.zip)
4. Save the Downloaded File:
  - 4.1. Your browser will prompt you to save the file.
  - 4.2. Choose a location on your computer where you can easily find it, such as your "Downloads" folder (e.g., C:\Users\[YourUsername]\Downloads).
  - 4.3. Wait for the download to be completed.

5. Extract the Zipped File:
  - 5.1. Once the download is finished, navigate to where you saved the zipped file.
  - 5.2. Right-click on the zipped file (e.g., openjdk-23.0.2\_windows-x64\_bin.zip).
  - 5.3. Select "Extract All..." from the context menu.
  - 5.4. A window will pop up asking where to extract the files.
  - 5.5. Change the destination to C:\Users\[YourUsername]\Downloads\openjdk-23.0.2\_windows-x64\_bin\.
  - 5.6. Click "Extract".
6. Move the JDK Folder:
  - 6.1. Navigate to the extracted folder in your downloads folder.
  - 6.2. Right-click on the jdk-23.0.2 folder and select "Cut".
  - 6.3. Open your "Program Files" folder (usually at C:\Program Files).
  - 6.4. Create a new folder inside "Program Files" and name it "Java" (e.g., C:\Program Files\Java).
  - 6.5. Open the "Java" folder and right-click, then select "Paste" to move the JDK folder into it.
7. Rename the JDK Folder:
  - 7.1. Inside the "Java" folder, right-click on the jdk-23.0.2 folder.
  - 7.2. Select "Rename".
  - 7.3. Change the folder's name to "jdk-23" for simplicity (e.g., C:\Program Files\Java\jdk-23).
8. Copy the JDK's "bin" Folder Path:
  - 8.1. Open the "jdk-23" folder.
  - 8.2. Open the "bin" folder inside the "jdk-23" folder (e.g., C:\Program Files\Java\jdk-23\bin).
  - 8.3. Click on the address bar at the top of the File Explorer window to highlight the folder's path.
  - 8.4. Right-click and select "Copy" to copy the path.
9. Add the JDK to Your System's Path:
  - 9.1. Right-click on "This PC" (or "My Computer") on your desktop or in File Explorer.
  - 9.2. Select "Properties".
  - 9.3. Click on "Advanced system settings".
  - 9.4. In the "System Properties" window, click the "Environment Variables..." button.
  - 9.5. In the "Environment Variables" window, under "System variables", find the variable named "Path" and select it.
  - 9.6. Click the "Edit..." button.

9.7. Click "New"

9.8. Paste the path you copied earlier (e.g., C:\Program Files\Java\jdk-23\bin).

9.9. Click "OK" on all open windows to save the changes.

10. Create JAVA\_HOME

10.1. Click the "New..." button under "System variables",

10.2. For "Variable name:" type JAVA\_HOME

10.3. For "Variable value:" paste the path C:\Program Files\Java\jdk-23

10.4. Click "OK" on all open windows to save the changes.

10.5. Restart the system.

10.6. Once the system is back online, check the Java version described in step

1.