

Java Setup Guide

This guide covers how to set up your computer for writing and running Java code with the Visual Studio Code IDE.

[Visual Studio Code](#)

[VS Code plugins](#)

[Java Development Kit \(JDK\)](#)

[Create a new Java project](#)

[Open an existing Java project](#)

Visual Studio Code


Visual Studio Code (not the same thing as Visual Studio), commonly called VS Code is a versatile and extremely popular IDE from Microsoft that works with just about any language. We will use it for Java and later for HTML, CSS, JavaScript, and TypeScript.

In order to install VS Code:

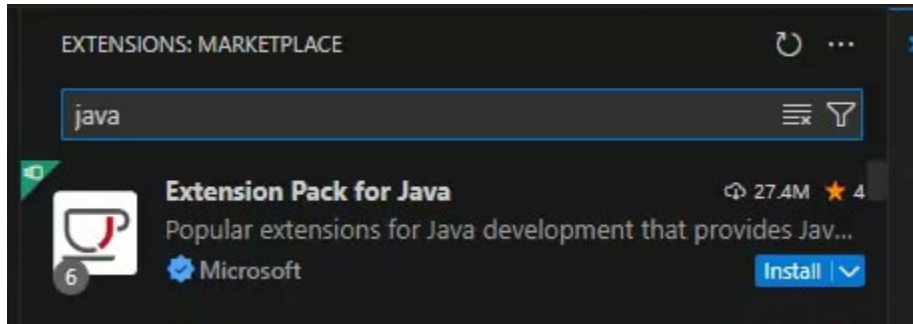
1. Head to the following link: <https://code.visualstudio.com/Download>
2. Select your operating system and then install the program

VS Code plugins

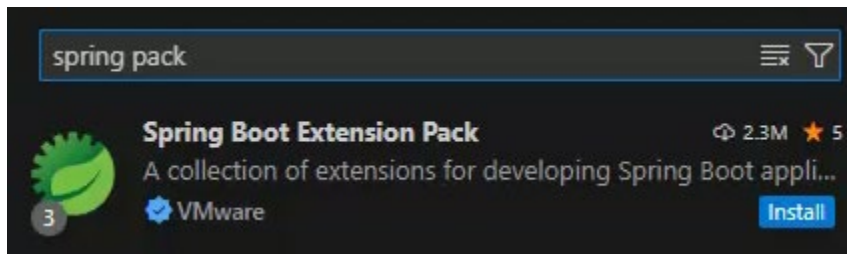
Visual Studio Code requires extensions to work with specific languages. Follow these steps to add support for Java programming.

1. Open VS Code
2. On the left, click the extensions button .

3. Search for and install the "Extension Pack for Java" by Microsoft. This pack includes multiple extensions we will use for working with Java.



4. You should also install the "Spring Boot Extension Pack" by VMware, which we will use later in the course.



Java Development Kit (JDK)

There are two main installations you might do for Java. One is the **Java Runtime Environment (JRE)**. This is what people ordinarily do when they install Java. The Java Runtime Environment is required to run a Java program.

But that's not what we want. We want the **Java Development Kit (JDK)**. The Development Kit allows us not only to run Java programs but also to create Java programs as software developers.

To summarize:

- Java Runtime Environment (JRE) - run Java programs
- Java Development Kit (JDK) - create Java programs

We can easily install Java with the help of VS Code.

1. After installing the Extension Pack for Java, the following welcome screen should appear in VS Code. (If it does not, see the next step.)

Get Started with Java Development

Your first steps to set up powerful Java tools in a lightweight, performant editor!

☒ **Get your runtime ready**

The Extension Pack for Java requires at least one Java runtime to be installed.

[Install JDK](#)

- ☐ Explore your project
- ☐ Launch, debug and test
- ☐ Extensions for additional tools and frameworks
- ☐ Explore more Java resources

✓ [Mark Done](#)

Install JDK

If you don't have JDK installed on your machine, you can install it by clicking on [Install JDK](#).

To verify it's installed, [create a new terminal](#) and try running the following command:

```
java -version
```





You should see something similar to the following:

```
java version "1.8.0_311"  
Java(TM) SE Runtime Environment (build 1.8.0_311-b11)  
Java HotSpot(TM) 64-Bit Server VM (build 25.311-b11, mixed mode)
```

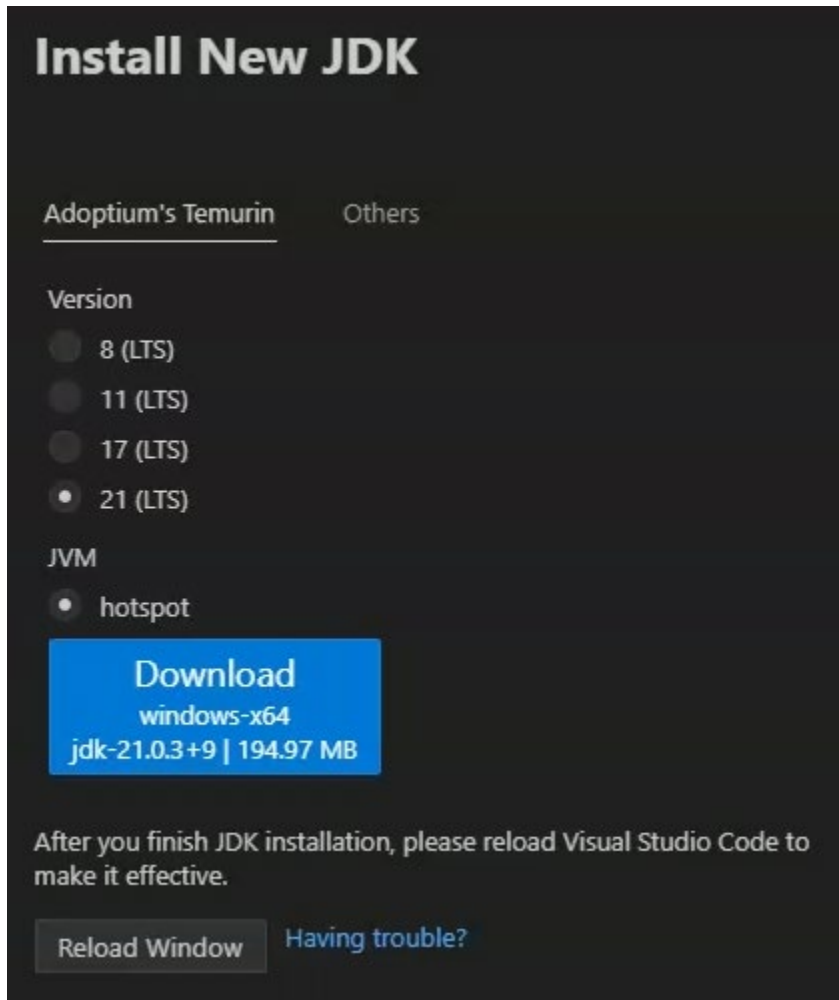
The detailed output will be based on the JDK you install.

- a. If you don't see the getting started screen above, you can open it. First select from the top menus Help > Welcome. In the Walkthroughs section, click "Get Started with Java Development".

Walkthroughs

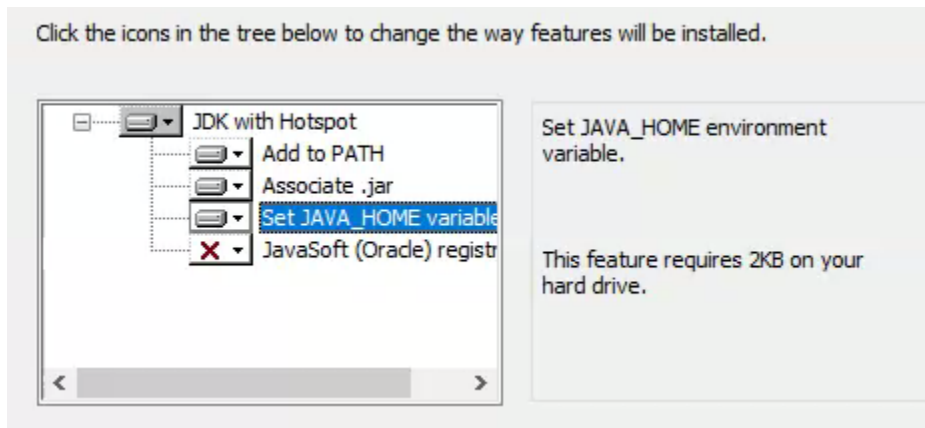
-  [Get Started with VS Code](#)
-  [Getting Started with Spring Boot in VS Code](#) [New](#)
-  [Get Started with Java Development](#) [New](#) ×
-  [Learn the Fundamentals](#)

2. On the "Get Started with Java Development" screen click the "Install JDK" button. The following screen should open:



3. Stick with the default options (e.g. the latest LTS version of Adoptium's Temurin). Click Download.
4. Step through the installation process. Keep all of the defaults, except we recommend that you turn on the Set JAVA_HOME environment variable option. This could be helpful in certain situations when working with Java from the

command line.

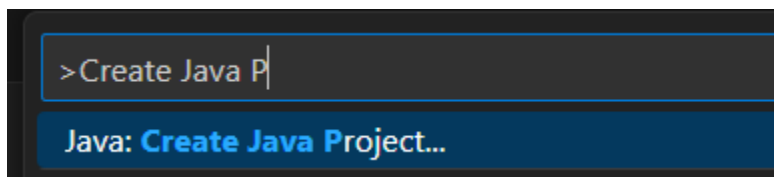


5. Complete the installation and restart VS Code.
6. To test for successful installation, open a command prompt and run `java -version`
Expect to see something like the following, but if it says 'java' is not recognized then something is wrong.

```
openjdk version "21.0.3" 2024-04-16 LTS
OpenJDK Runtime Environment Temurin-21.0.3+9 (build 21.0.3+9-LTS)
OpenJDK 64-Bit Server VM Temurin-21.0.3+9 (build 21.0.3+9-LTS, mixed mode,
sharing)
```

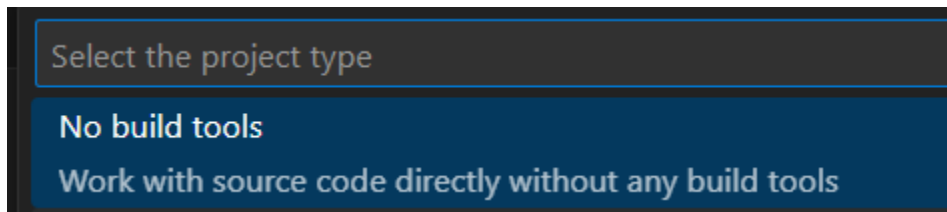
Create a new Java project

To create a Java project in VS Code, open the command palette (CTRL+SHIFT+P on Windows or start typing with a greater than sign ">" in the search bar). Then search for and select "Java: Create Java Project..."



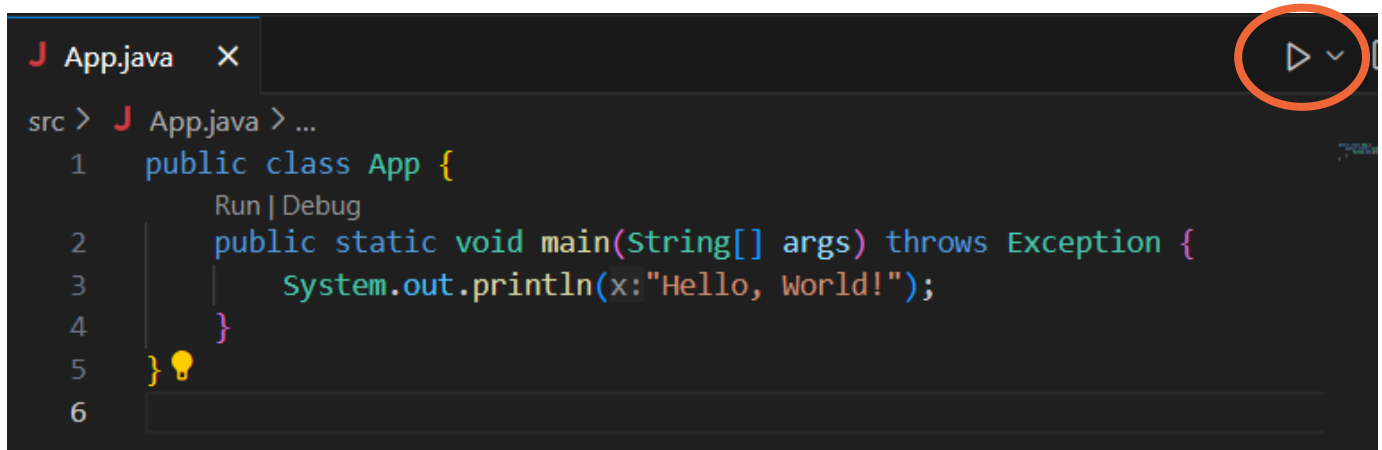
This will begin a series of questions that will help VS Code configure your new project.

1. Select the project type: **No build tools**

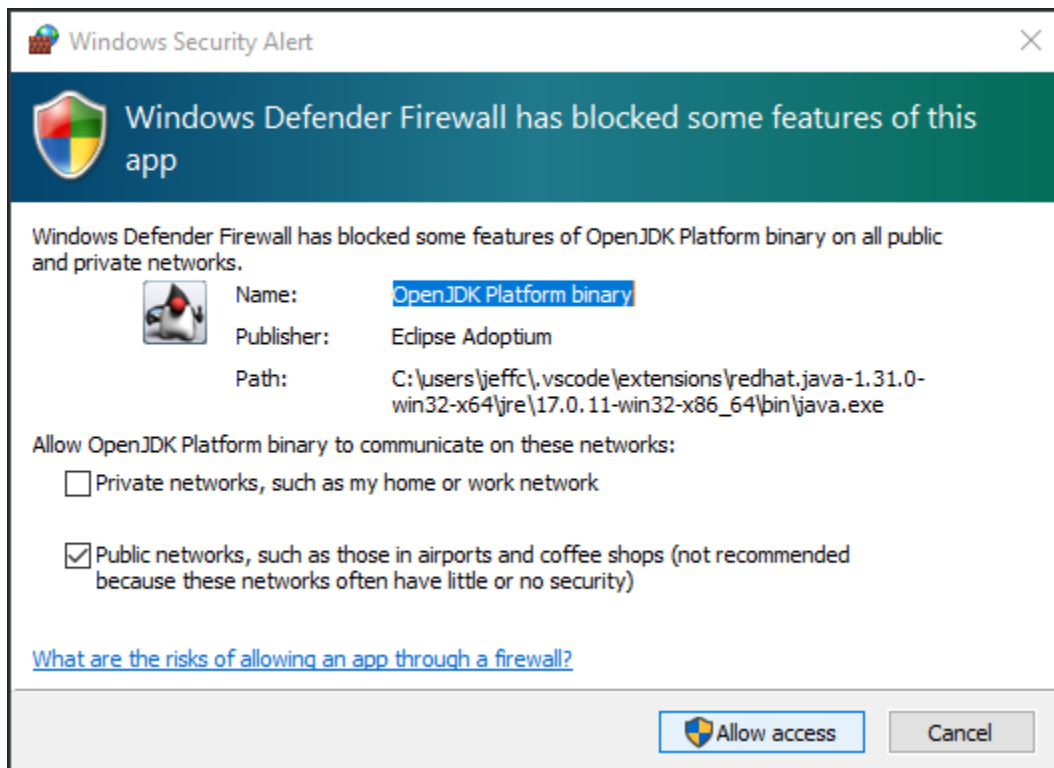


2. Select the parent folder where you want the project to be created.
3. Finally, enter a name for the project. A new folder with this name will be created.

Find App.java inside the src folder. This is the main file where your program will start. Click the small triangular "play" button in the top right corner to run the program.



Tip: On Windows, the first time you run your program, you might get a message from the Windows Defender; if so, click **Allow access**.



The output will be shown in a terminal below the long command that VS Code used to run it.

```
David.Wolverton@DISYS-D2FFV93 MINGW64 ~/edu/cs/CSBootcampCode/misc/java1 (main)
● $ /usr/bin/env C:\\Users\\David.Wolverton\\OpenJDK\\jdk-19.0.2\\bin\\java.exe -XX:+Sh
CodeDetailsInExceptionMessages -cp C:\\Users\\David.Wolverton\\edu\\cs\\CSBootcampCode
misc\\java1\\bin App
Hello, World!
David.Wolverton@DISYS-D2FFV93 MINGW64 ~/edu/cs/CSBootcampCode/misc/java1 (main)
○ $
```

Open an existing Java project

Open VS Code. You may find your project listed under File > Open Recent.

If not, choose **File > Open Folder**. Navigate to and select the folder that is your Java project—the folder should have the same name as your project.



A dexian Company