

# a1a

# tooling

# Environment Setup

## TCSS 305 Programming Practicum

### Important

If you intend to use your own computer, first install the current version of the Java Development Kit (JDK) as described below. After installing the JDK, install JetBrains IntelliJ and plugins.

## Install the Java Development Kit (JDK)

### Download

[Oracle JDK Downloads](#)

The site offers JDK 21 and **JDK 25**. Please use the latest **Long-Term Support (LTS)** version (**JDK 25**).

Download the JDK version appropriate for your operating system. There are tabs on the download page for selecting your operating system (Linux, macOS, or Windows). If you scroll to the bottom of the download page there is a link to installation instructions – refer to those if you have questions or issues during installation.

## Linux

### External Resource

[JDK Installation on Linux](#)

## macOS

Ensure you download the correct version for your hardware architecture:

- Older Intel processor-based Macs: **x64 DMG Installer**
- Newer Apple M1/M2/M3/M4/M5 processor-based Macs: **ARM64 DMG Installer**

#### Tip

To check your Mac's processor, click  → **About This Mac**. Look for "Chip" (Apple Silicon) or "Processor" (Intel).

#### External Resource

[JDK Installation on macOS](#)

## Windows

If you wish to compile and run Java programs from the command line:

1. During installation, note the location where the Java files are installed. Typically the default is something like: `C:\Program Files\Java\jdk-25`
2. Set the **PATH** environment variable:
  - a. Open Windows System Settings and then the Environment Variables dialog.
  - b. Add the location of the `bin` folder of the JDK installation to the PATH variable in the System Variables section.
  - c. Typical value to add: `C:\Program Files\Java\jdk-25\bin`
3. Set the **JAVA\_HOME** environment variable:
  - a. Under System Variables, click New.
  - b. Enter the variable name as `JAVA_HOME`.
  - c. Enter the variable value as the installation path of the JDK (without the bin sub-folder).
  - d. Click OK.

#### External Resource

[JDK Installation on Windows](#)


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## Install JetBrains IntelliJ

 **Link**

[JetBrains Free Educational License](#)

1. Sign up for your free student license for JetBrains products using the link above.
2. Once completed with the sign-up process, download and install **IntelliJ IDEA Ultimate**. Follow the posted instructions to complete the installation.
3. Install the following plugins:
  - **Checkstyle-IDEA** (Required)
  - **Grep Console** (Optional)

 **External Resource**

[Plugin Installation Instructions](#)

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## GitHub Registration

 **Link**

[GitHub](#)

1. Sign up for a GitHub account using your official UW email.

 **Important**

If you already have a personal GitHub account, please register a new one using your official UW email.

1. Sign up for the GitHub Student Developer Pack (Optional)

 **Link**

[GitHub Student Developer Pack](#)

# References

## Language Documentation:

- [Oracle JDK 25 Downloads](#) – Official Java SE Development Kit
- [Oracle JDK 25 Documentation](#) – Official Java SE reference
- [Oracle JDK Installation Guide](#) – Platform-specific installation instructions

## Tooling:

- [JetBrains IntelliJ IDEA](#) – Official IDE homepage
- [IntelliJ IDEA Installation Guide](#) – JetBrains installation documentation
- [JetBrains Free Educational Licenses](#) – Student license program
- [Checkstyle-IDEA Plugin](#) – JetBrains plugin marketplace

## Version Control:

- [GitHub Documentation](#) – Official GitHub guides and reference
- [GitHub Student Developer Pack](#) – Free developer tools for students

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*This guide is part of TCSS 305 Programming Practicum, School of Engineering and Technology, University of Washington Tacoma.*