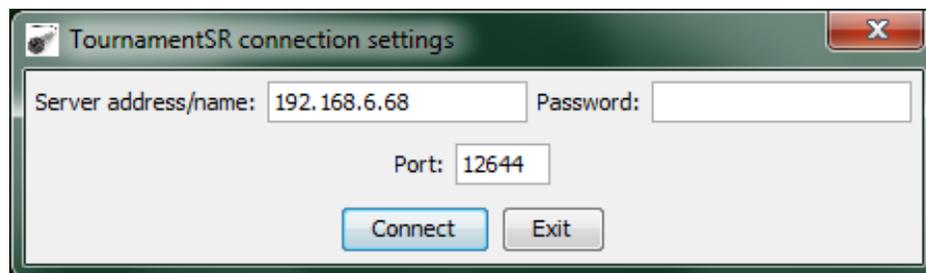# Ensuring your computer has Java

TournamentSR and all of its support programs require the Java Standard Runtime Environment (JRE). This is a free program that can be downloaded and installed from the Internet.

Testing if your Windows, Mac, or Linux computer already has Java

To check if your computer has Java, perform the steps below. **If you're using a Chromebook**, jump to Getting Java programs to run on a Chromebook.

1. Download the AnnouncerSR program from the link below. The program will be saved in the "Downloads" folder of your computer.
   http://www.smartrunsys.com/TournamentSR/Documentation/AnnouncerSR.jar
2. Open the Downloads folder and double click the AnnouncerSR icon. The icon may include the ".jar" extension (e.g. "AnnouncerSR.jar").
3. If a window similar to the picture below appears, your computer already has Java and is ready to go. If nothing happens, or a different window appears, you will need to download and install Java[1].

Your computer doesn't have Java installed

If you need to download and install Java, follow the appropriate link below:

- For **Windows computers**, jump to Installing Java on a Windows computer.
  If you have installed Java on a **Windows computer** but TournamentSR and its support programs won't run, jump to Issues launching Java programs in Windows.
- For **Mac computers**, jump to Installing Java on a Mac. If you have a recent Mac that runs TournamentSR, but can't see files and folders on your computer, jump to Allowing Mac file and folder access.
- For **Ubuntu Linux** computers, jump to Installing Java on Ubuntu Linux.

Note 1 **Ubuntu Linux** won't allow you to run a newly downloaded program even if Java is installed. It must be marked "executable." Right mouse button click on the program's icon and select "Properties". In the resulting window, click on the "Permissions" tab and check the box titled "Allow executing file as program". Close the window and try running the program again.

Installing Java on a Mac

The latest Java version is 8. Apple recommends that systems running **OS X Sierra (10.12.x) and later (e.g. Catalina 10.15.x, Monterey 12.1)** install Java from Oracle: http://www.java.com. Follow the Detailed installation steps below.

Systems running **OS X Lion (10.7.x) through El Capitan (10.11.x)** should use Java version 6 from Apple's website: http://support.apple.com/kb/DL1572. Run the installer and follow its instructions.
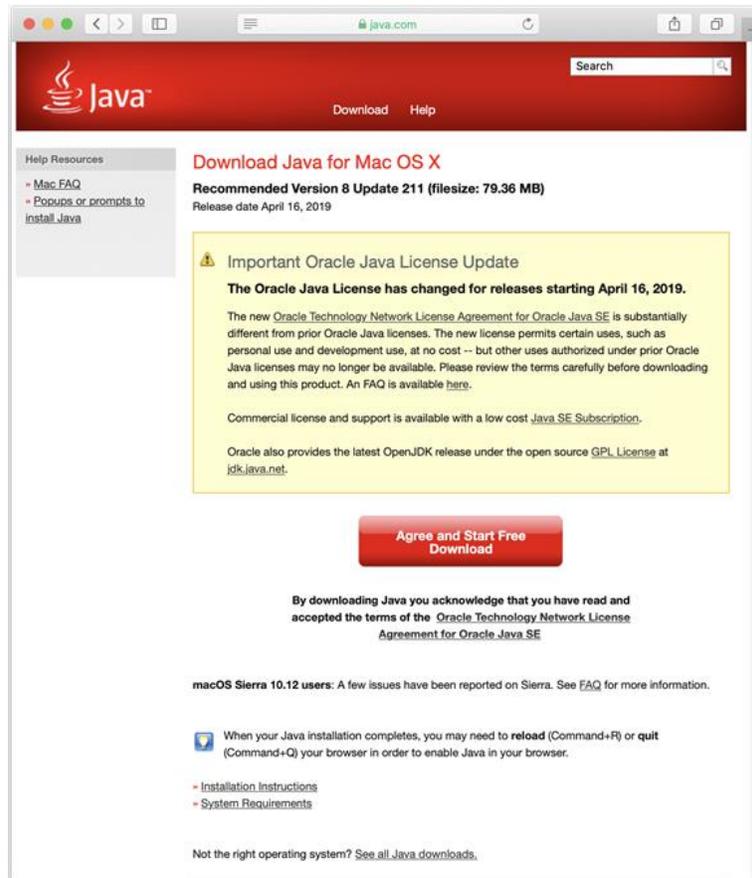
Macs running OS X **Snow Leopard (10.6.x)** and earlier already have Java installed. It is part of the base OS.

Detailed installation steps

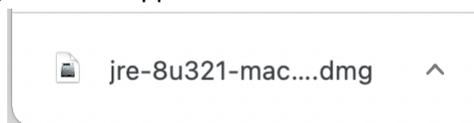The first page at the Oracle Java site is shown below:

Click the **[Java Download]** button and the following appears:

Click the red **[Agree and Start Free Download]** button. This causes a disk image file (.dmg) to be downloaded. What you do when the download completes depends on which browser you're using.

If you're using Google's Chrome browser
When the download completes, a bar will appear at the bottom left of the window:

Click the **^** symbol and select "**Open**" to display the disk image window.

If you're using Apple's Safari browser
When the download completes, an arrow inside a circle appears in the upper right corner of the window:
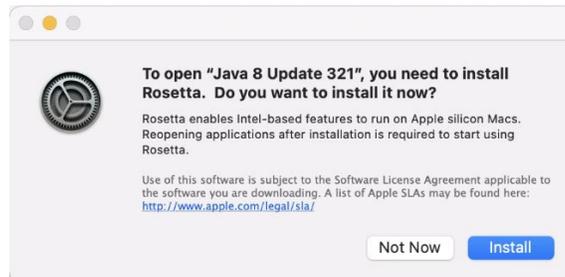

Clicking on the icon causes the installer file to appear (e.g. "**jre-8u211-macosx-x64.dmg**"). The installer file you see might be slightly different. Double click on the installer file to display the disk image window.

Java installation process

The disk image window looks similar to the picture below. Double click the "Java 8 Update …" icon to start the installer.

If you have an ARM-based Mac, you might see the following message:

If you see this message, click **[Install]** and follow the instructions. Once Rosetta is installed, you'll need to double click the "Java 8 Update …" icon again to proceed.

Recent Mac OS versions will display the following warning:

Click **[Open]**. Since the installer is for *all* users, you will be asked to provide your user name and password.

Enter your user name, password, and click the [OK] button. The following window will appear:

Notice the default button is [Remove], click the **[Install]** button. The next window shows Java being installed:

When installation completes, the window changes to the picture below:

Click [Close] to exit the installer. The Java Update window can also be closed. The Java update disk icon (shown below as "Java 8 Update 211") can be dragged to the trash can. The browser window can be closed.
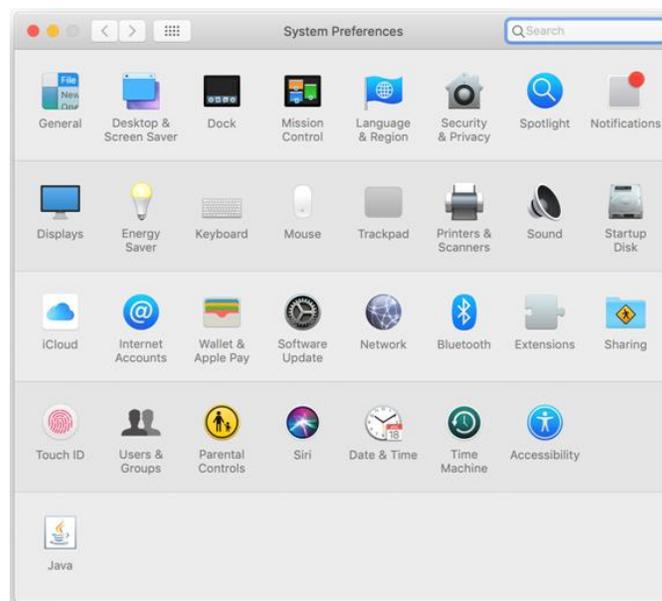
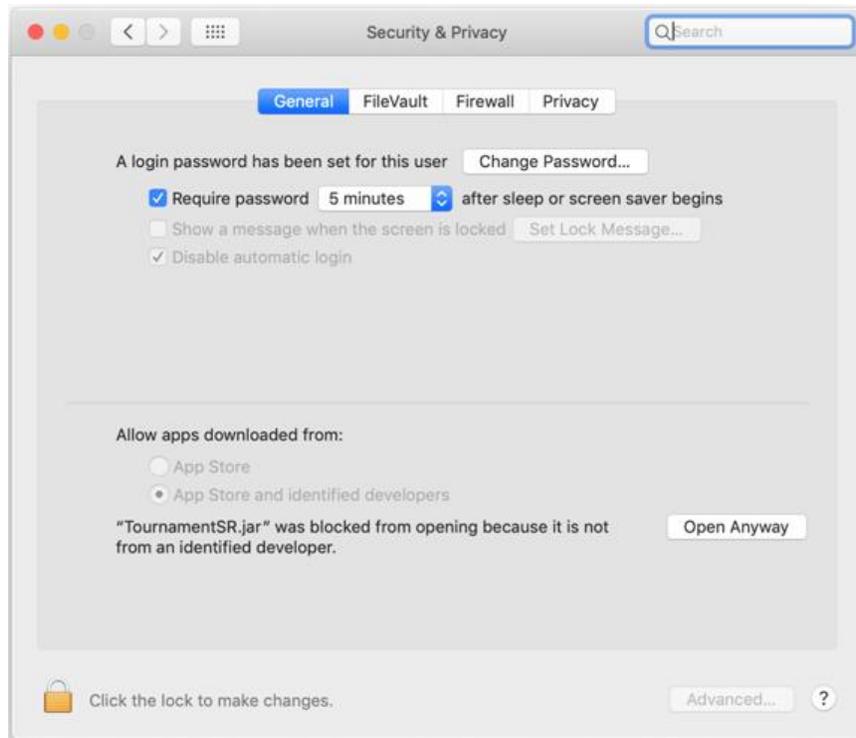## You see "TournamentSR can't be opened…"

The first time you run TournamentSR after download, you might see the following:

If you see this, Click **[OK]** and launch System Preferences:

Click on the house shaped icon titled "**Security & Privacy**".

At the bottom of the screen is the note "**TournamentSR was blocked from opening...**" Click **[Open Anyway]** and the following appears:
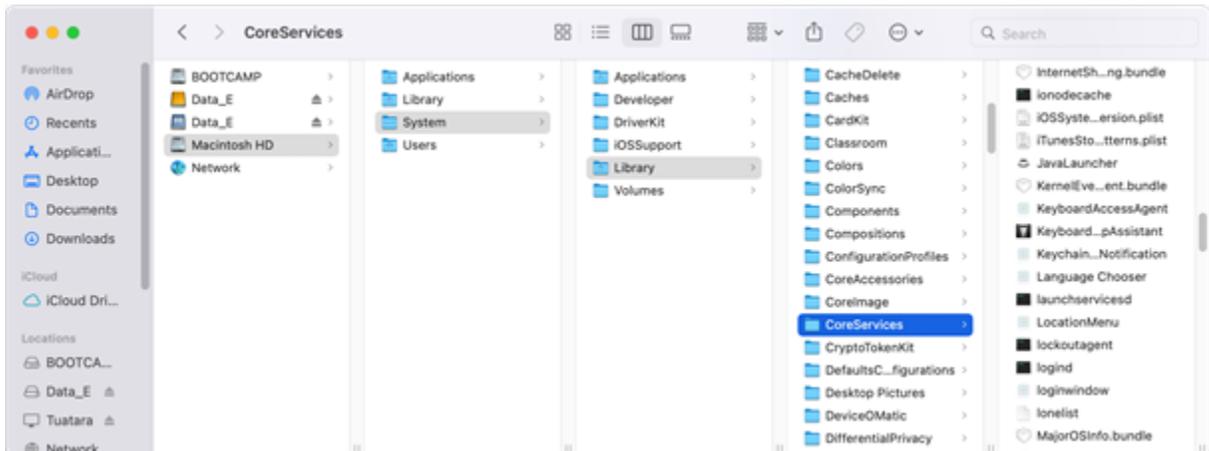

Click **[Open]** and TournamentSR will start. You won't need to do this again until you download a new version of TournamentSR.
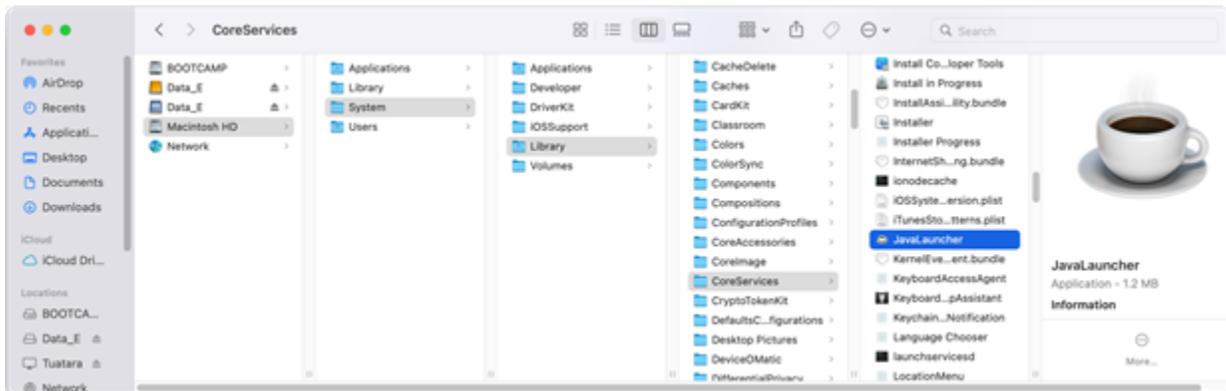
Allowing Mac file and folder access

Recent Mac OS versions can prevent Java programs from accessing files and folders. Perform the steps below if you can run TournamentSR, but can't read or write files.

Double click "Macintosh HD" or use Finder's "File" menu, "New Finder Window" option. Select "Macintosh HD" and navigate to "System", "Library", and "Core Services":
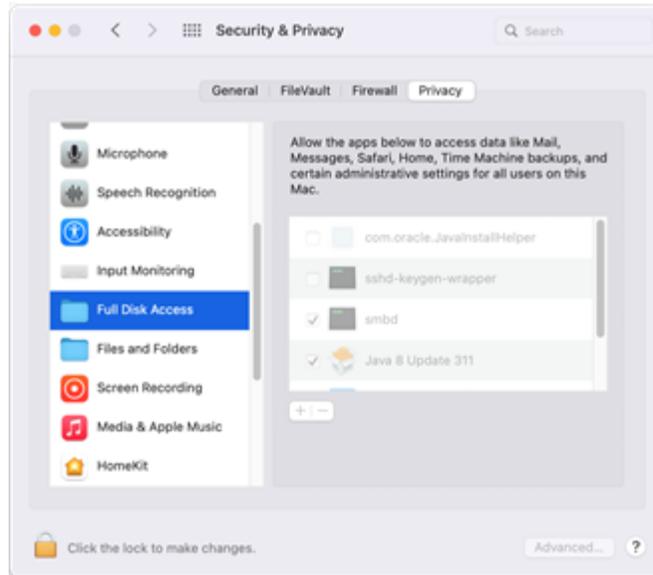

In the rightmost pane, scroll down to reveal "JavaLauncher" (highlighted in the picture below):

Leave this window open.

Use the Apple menu to launch System Preferences. Click on the "Security and Privacy" icon and select the "Privacy" tab. Scroll the left pane to reveal "Full Disk Access" as shown below:

If the lock icon is closed (as shown above), click on it and provide password or fingerprint to open it.

Drag the "JavaLauncher" icon from the Finder window to the right hand pane of the Security & Privacy window. When you release the mouse, JavaLauncher should be added to that pane.

If you previously opened the lock icon, click on it make it closed. You can now close all windows and run TournamentSR. You should have full access to read and write files in any directory.

Installing Java on a Windows computer

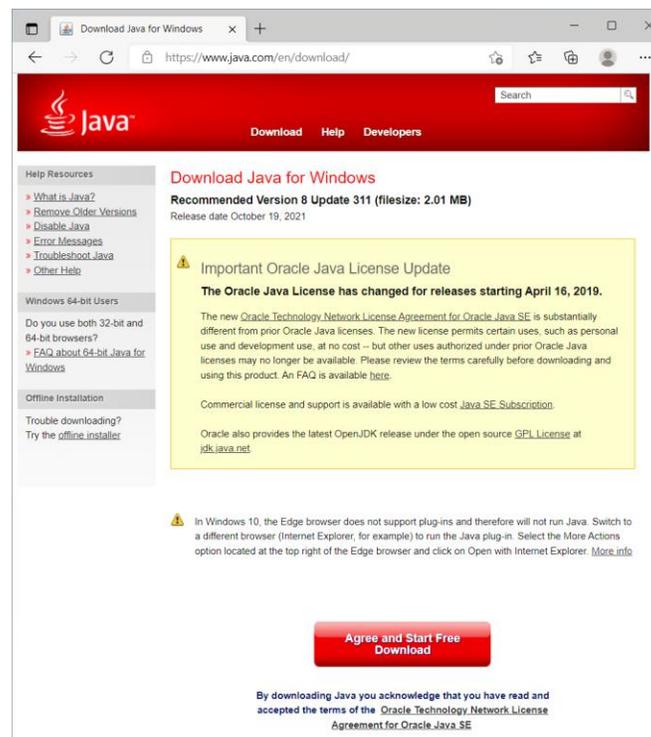Java for Windows is downloaded from Oracle's website using the link below:
http://www.java.com

The resulting web page will look similar to the picture below:

Click the red **[Java Download]** button causes the following window to appear:

Click the red **[Agree and Start Free Download]** button. What you do when the download completes depends on which browser you're using.

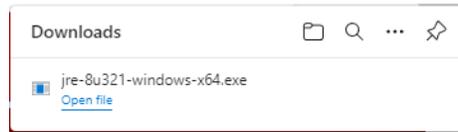### If you're using Google's Chrome browser
When the download completes, a bar will appear at the bottom left of the window:

Click the **^** symbol and select "Open" to start the installation process.

If you're using Microsoft's Edge browser
When the download completes, a bar will appear at the upper right corner of the window:

Click "Open file" to start the installation process.

If you're using some other browser
When the download completes, you may be presented with options to "Keep" or "Discard" the downloaded file. Select "Keep". You should then be presented with an option to "Open" or "Run" the file. Select that option to start the installation process.

Java installation process
The installer starts with an updated license terms window:

Notice [Remove] is the default. Click the **[Install]** button.

After several seconds, the installation window will appear:

When installation completes, the following window appears:

This indicates Java has been successfully installed on your computer. Click **[Close]** to exit the installer.

You should now be able to run TournamentSR. If not, consult the next section.

Issues launching Java programs in Windows

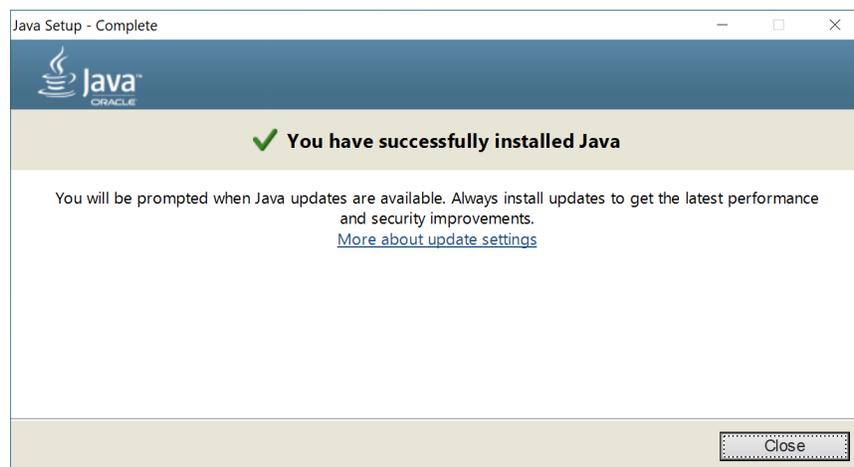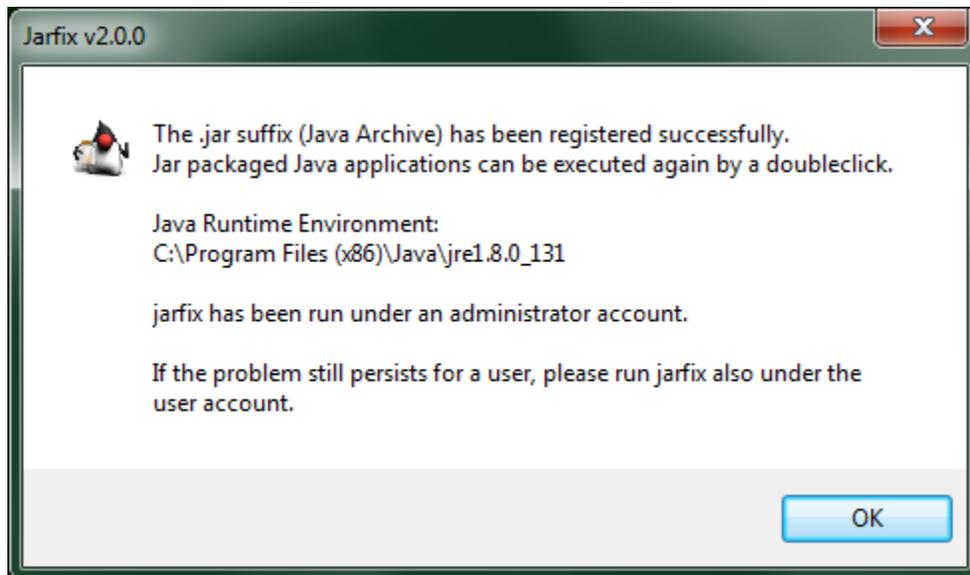**WARNING** – If you updated Java during 2019, you may have accidentally *removed* it. The update program default is [Remove] instead of [Install]. Always make sure to click [Install].

Some TournamentSR users have reported issues with Windows 10 and Java. Most often, Windows has associated ".jar" files with a program other than Java. The easiest way to resolve this is to run "jarfix" – another free program on the Internet.

You must run jarfix *after* installing Java. Make sure you have completed installing Java before performing the steps below:

1. Click on the following link:
   http://johann.loefflmann.net/en/software/jarfix/index.html#Download
2. In the resulting web page, locate "**Download from the author's website**" and click the "jarfix.exe" link on the next line. When asked, save the file.
3. Open your Downloads folder and double click "jarfix" (or "jarfix.exe"). If asked, allow the downloaded program to run.
4. The program runs very quickly. When done, it displays a window similar to the picture below:

5. Click the [OK] button to close the window.

You should now be able to run TournamentSR. We have had some reports that the jarfix changes don't take effect until Windows is restarted. Restart Windows if needed.

When jarfix doesn't fix the problem

While not common, some Windows 10 users report that the above procedure still doesn't solve their problem. This section covers how to ensure Windows 10 runs TournamentSR and its support programs using Java.

TournamentSR and its support programs are distributed as "Java Archive" files. While usually not displayed, the file names end in ".jar". If your Windows 10 or later computer doesn't launch TournamentSR properly, Windows thinks ".jar" files should be run using a program other than Java.

To fix this problem, click on the Windows taskbar icon and then click the "Settings" icon (looks like a gear). In the resulting window, click on the "**Apps**" icon; the window title changes to "**Apps & Features**". On the left side of the Window, click on "**Default apps**"; the window title changes to "Default apps".

Scroll to the bottom of the window and click on the link titled "**Choose default apps by file type**". After several seconds, the window title changes to "Choose default apps by file type". On the left side of the window is a long list under "**Name**" (e.g. ".386", ".3ga", ".3gp2"). The right side of the window has icons and program names under "**Default app**" (e.g. "Photos", "Movies & TV", "Paint 3D").

The list is sorted alphabetically. You must scroll down until "**.jar**" appears on the left. If ".jar" doesn't appear, you have not successfully installed Java. Repeat the steps in Installing Java on a Windows computer.

To the right of ".jar" will be the program currently used to launch such files. It will *not* be "Java(TM) 2 Platform Standard Edition binary" (it will likely be "Internet Explorer"). Click on the program's name to bring up a window titled "**Choose an app**". In the resulting list, click on "**Java(TM) 2 Platform Standard Edition binary**"; the window will automatically disappear. The program to the right of ".jar" will now read "Java(TM) 2 Platform Standard Edition binary".

You can close all windows and should be able to run TournamentSR.

Installing Java on Ubuntu Linux

Unlike Windows and Mac OS X, there are several suppliers of Java for Linux. The two most common are OpenJDK and Oracle. The OpenJDK version works well except for printing in landscape mode. Since ladders for display work best when printed in landscape mode, we recommend installing Oracle's Java.

No matter which version of Java you install, you will need root privileges (i.e. you must be able to run the sudo command).

Installing Oracle's Java

Oracle distributes Java for Linux, but a separate group developed the installer for Ubuntu Linux: http://www.webupd8.org. Open a terminal window and run the following command:

```
sudo add-apt-repository ppa:webupd8team/java
```

When prompted ("Press [ENTER] to continue or ctrl-c to cancel adding it"), press the <enter> key. The above command allows your computer to access the Java installer. Run the following commands to install Java:

```
sudo apt update
sudo apt install oracle-java8-installer
```

When prompted ("Do you want to continue? [Y/n]"), press the <Y> key and then the <enter> key. The installer will bring up another window asking to accept the Oracle license agreement. On the first page, press the <enter> key to proceed; on the second page, press the left arrow key to highlight "Yes" and then press the <enter> key to accept the agreement.

The installer takes a while to complete. It's installing both the Java Runtime Environment (needed to run TournamentSR) and the Java Development Kit (*not* needed to run TournamentSR). When the installer completes, you should be able to run TournamentSR and any of its support programs.

Installing OpenJDK's Java

As long as you remember to always print in portrait mode, OpenJDK's Java is OK. It is easier to install than Oracle's Java. Open a terminal window and run the following command:

```
sudo apt-get install openjdk-8-jre
```

When prompted ("Do you want to continue? [Y/n]"), press the <Y> key and then the <enter> key. When the installer completes, you should be able to run TournamentSR and any of its support programs.

Installing a PDF Printer

The PDF printer for Linux can be installed by running the following command:

```
sudo apt-get install cups-pdf
```

The name of the created printer is "PDF".

Getting Java programs to run on a Chromebook

Google allows some recent Chromebook computers to install and run programs for Debian Linux. This permits Java for Linux to be installed - which allows Chromebooks to run TournamentSR and all of the free support programs.

This section covers the steps needed to enable and install Linux. It then covers how to install Java and finally how to run TournamentSR and its support programs.

Enabling Linux on your Chromebook

Not all Chromebooks support Linux. The easiest way to find out if your computer supports it is to follow the instructions at the link below:
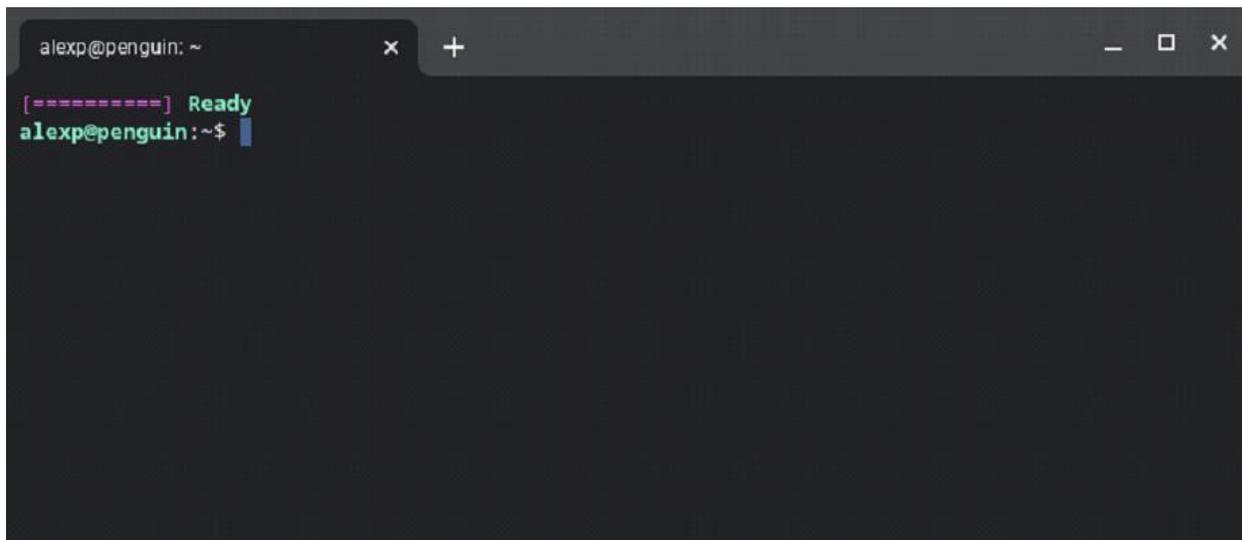
https://support.google.com/chromebook/answer/9145439?hl=en

If the option "**Linux development environment**" isn't listed, your Chromebook doesn't support it.

More detailed information about enabling Linux and additional features can be found at the following link: https://beebom.com/how-use-linux-chromebook.

Installing Java on Linux

Linux programs are installed and run from the Terminal program:

Two commands are used to install Java. <u>Don't</u> type the "**$**" shown at the start of each line. Press the [Enter] key at the end of each line. The first command ensures you have all of the latest Linux programs. The second command installs the default version of Java:

```
$ sudo apt-get update
$ sudo apt-get install default-jdk
```

It can take a minute or two for each command to complete. To confirm Java has been installed, enter the command below:
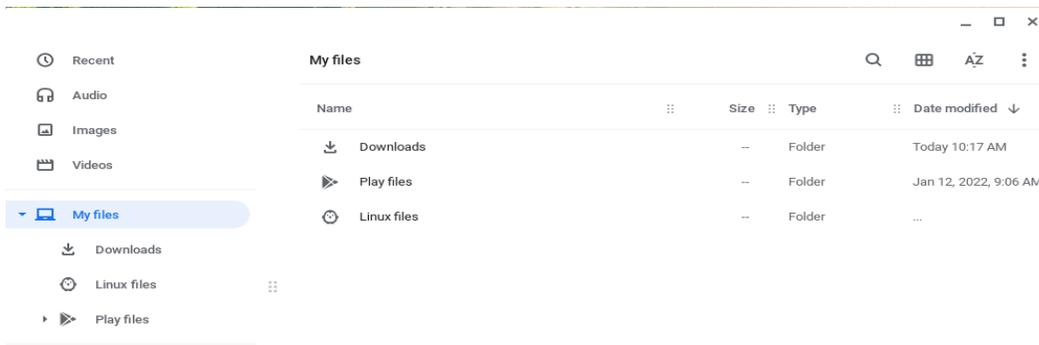
```
$ java -version
```

If you see several lines starting with "`OpenJDK` …", Java has been installed. If you see "`-bash: java: command not found`", Java hasn't been installed.
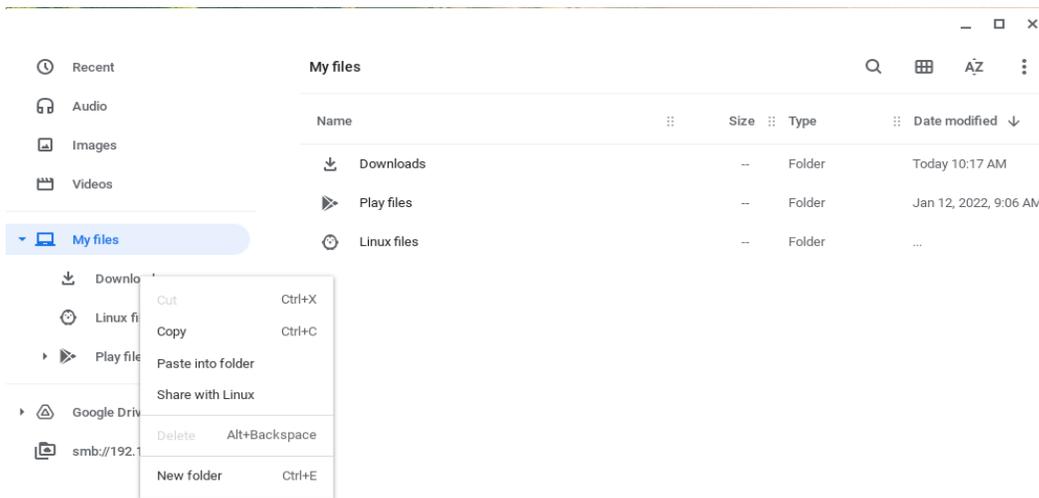
Sharing your Downloads folder

While TournamentSR and the support programs are run from the Terminal program, you download them using the Chromebook's browser. In order for Linux to access the downloaded files, you must share the Chromebook's "Downloads" folder.

Launch the Chromebook "Files" program. The display will look similar to the picture below:

Right mouse button click on the "Downloads" row under "My Files". A pop-up menu will appear.

Click on "Share with Linux" to share the folder. You can then close the Files window.

Running TournamentSR

When you download TournamentSR.jar (or any support program), it is placed in the "Downloads" folder of the Chromebook. In Linux, that folder has a much more complicated name: **/mnt/chromeos/MyFiles/Downloads**.

It's best to move the downloaded program to a location that's easier to type. Use the following command to move TournamentSR.jar from the shared Downloads folder to the default Linux folder. Note that last character is a tilde - not a dash.

$ **mv /mnt/chromeos/MyFiles/Downloads/TournamentSR.jar ~**

The above command only needs to be performed once after downloading the program. For support programs, use the above command but replace "TournamentSR.jar" with the support program's name (e.g. "BoutRunnerSR.jar", "AnnouncerSR.jar").

You run TournamentSR from the Terminal program using the following command:

$ **java -jar TournamentSR.jar**

For support programs, use the above command but replace "TournamentSR.jar" with the support program's name (e.g. "BoutRunnerSR.jar", "AnnouncerSR.jar").