

TO RUN MESQUITE ON WINDOWS

(For further questions, please feel free to post on the Mesquite Google group
<https://groups.google.com/g/mesquite-project>)

PREREQUISITE: JAVA

To start Mesquite, you need Java installed. We recommend Java 21 or later. Some functions will work only if you have Java 17 or later. The absolute minimum is Java 9. Download the **JDK version of Java**, available from [oracle.com](https://www.oracle.com/in/java/technologies/javase-downloads.html) (e.g., try searching "download java jdk oracle").

You should NOT try to run Mesquite from the .zip file that you downloaded. You should copy Mesquite_Folder to your storage drive and run it from there.

UNBLOCKING MESQUITE

Because Windows will likely put up a security block when you try to run Mesquite, you may want to unblock it.

On Windows 11 you can do that by right clicking on the executable "**Mesquite_Starter.exe**", choose Properties, and select Unblock under General.

STARTING MESQUITE

To start Mesquite, double click on the executable file:

Mesquite_Starter.exe

which is in Mesquite_Folder.

If this doesn't work for you, you could try the executable script

Mesquite_Starter.bat

which is in the RunningOptions folder. However, before using it, you will need to move it out of the RunningOptions folder and put it directly into Mesquite_Folder.

CUSTOMIZATIONS, including MORE MEMORY

It is possible that for large datasets, Mesquite_Starter.exe may not request enough memory. If you run into an OutOfMemoryError, you may want to try the alternative starters. Within the RunningOptions are a series of alternative executables, named "**Mesquite_Starter_#GB.exe**", where # is 8, 16, 32, 64, or 128. The number indicates the GB of memory that Mesquite will reserve for its use. For genomic datasets, e.g. 100 taxa and over 1,000,000 characters, you may need 32 GB or higher.

However, before using any of these alternative executables, you will need to move it out of the RunningOptions folder and put it directly into Mesquite_Folder.

You can also do other customization by editing the executable script Mesquite_Starter.bat.

WHAT IF MESQUITE DOESN'T START?

First, make sure you have java installed. One way to check is to go to the Terminal or Command Prompt, and type "java --version" to see if the installed version of java is shown.

Second, make sure you haven't moved the starter app. Starter apps can be run only if they are in Mesquite_Folder. These double-clickable apps do not hold all of Mesquite's working code; they just get the code started. The working code is distributed among various files in Mesquite_Folder.

Third, if you have an old Windows operating system or an old version of Java, you may need to use Mesquite 3.81 instead.

Fourth, there is a chance that Windows has changed since we released this version of Mesquite. Operating systems are constantly changing their security barriers, and it is difficult for us to keep up. If you are technically inclined, and find a way to build a starter app that bypasses whatever is the latest challenge thrown our way, please share it with the Mesquite community!