Consed Installation Instructions for

Mac OS X

# Installing X11

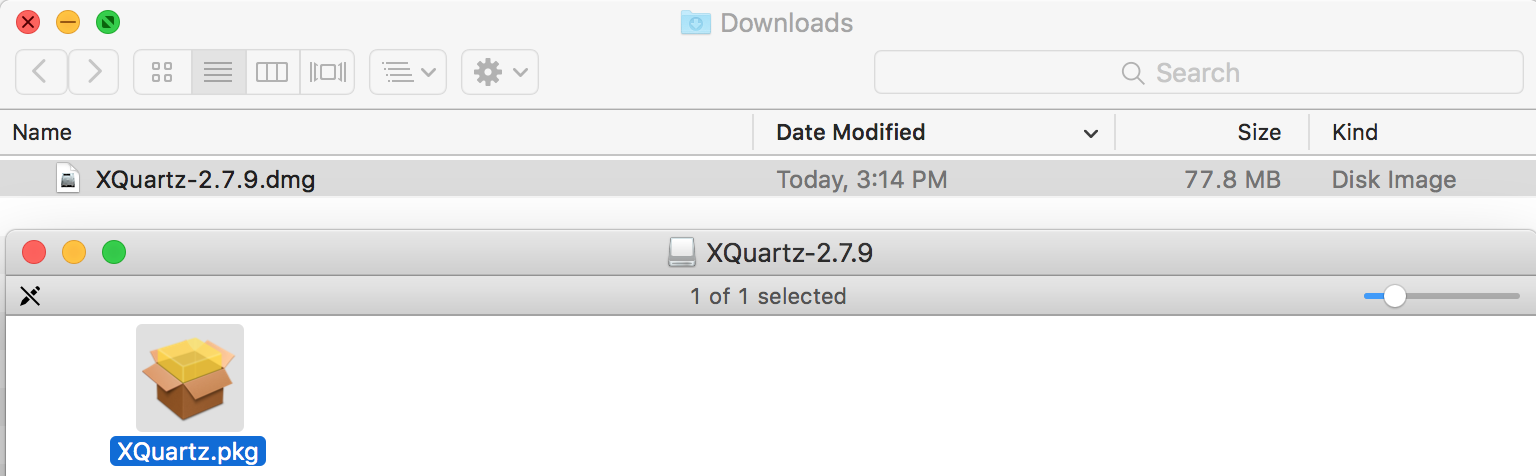
1. Because *Consed* relies on an application called X11 (also known as XQuartz), you will need to install X11 prior to installing *Consed*.
   1. Log into a user account with administrative privilege
   2. Open a web browser and navigate to <https://www.xquartz.org/releases/XQuartz-2.7.9.html>

Note that we are installing an old version of XQuartz because newer versions of XQuartz (*e.g.*, 2.7.11) are incompatible with *Consed*.

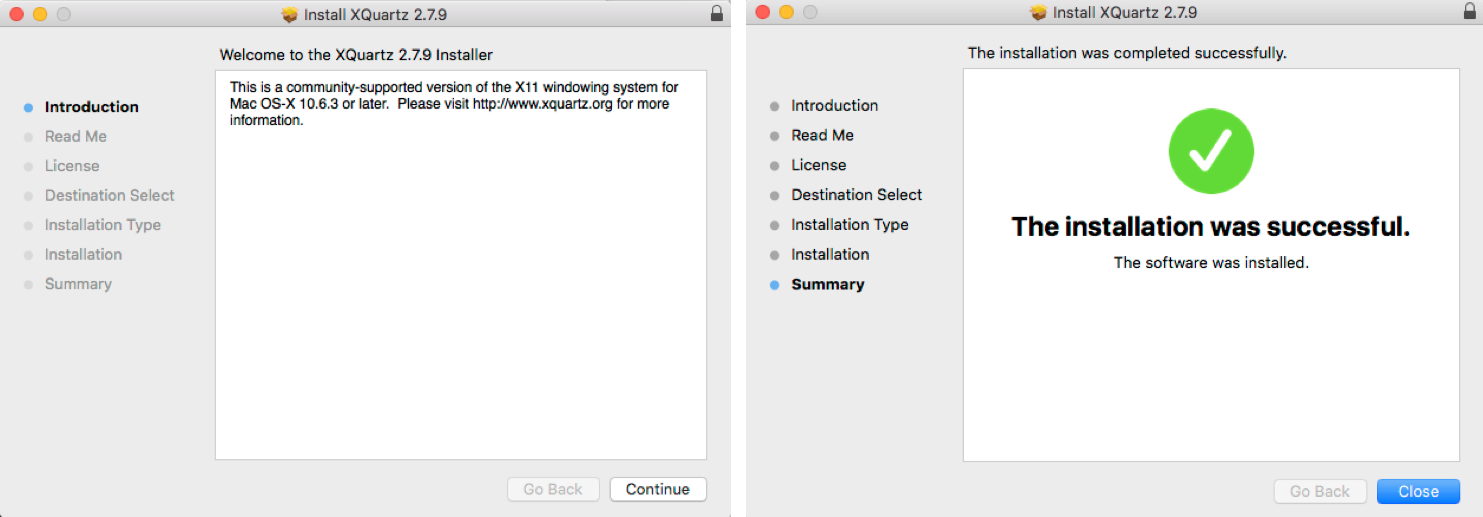
* 1. Click on the XQuartz-2.7.9 link to download the package.



1. Most web browsers will save the package either in the **Downloads** folder or on the **Desktop** by default. Once the download is complete, double click on the **XQuartz-2.7.9.dmg** package to expand the installer package. Double click on the “**XQuartz.pkg**” file to launch the installer.



1. Follow the instructions from the XQuartz installer to install the package (i.e., Continue → Agree to the License Agreement → Install)



1. The installer might take a while to complete (particularly at the “Running package scripts…” stage), so be patient.
2. **Restart your computer** once the XQuartz application has been installed successfully

# Installing Consed

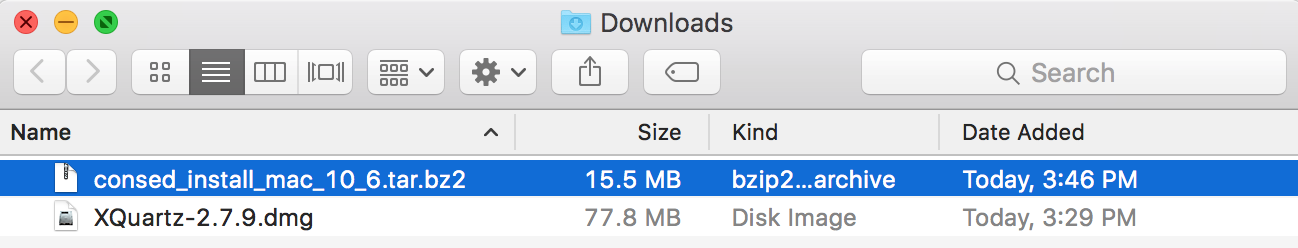
1. Log in to your administrative account. Open a web browser and download the *Consed* installation package at:

<https://wustl.box.com/v/consed25-mac-installer>

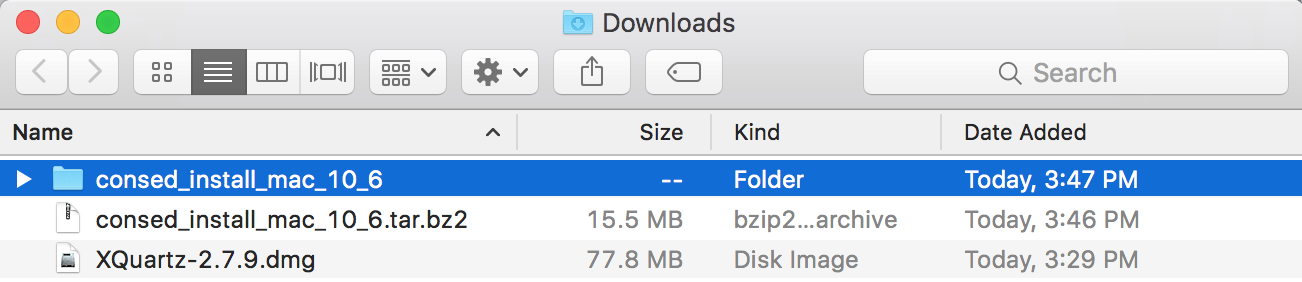
Please contact the GEP staff for the password required to download the installation package.

1. Navigate to the directory where you have saved the package

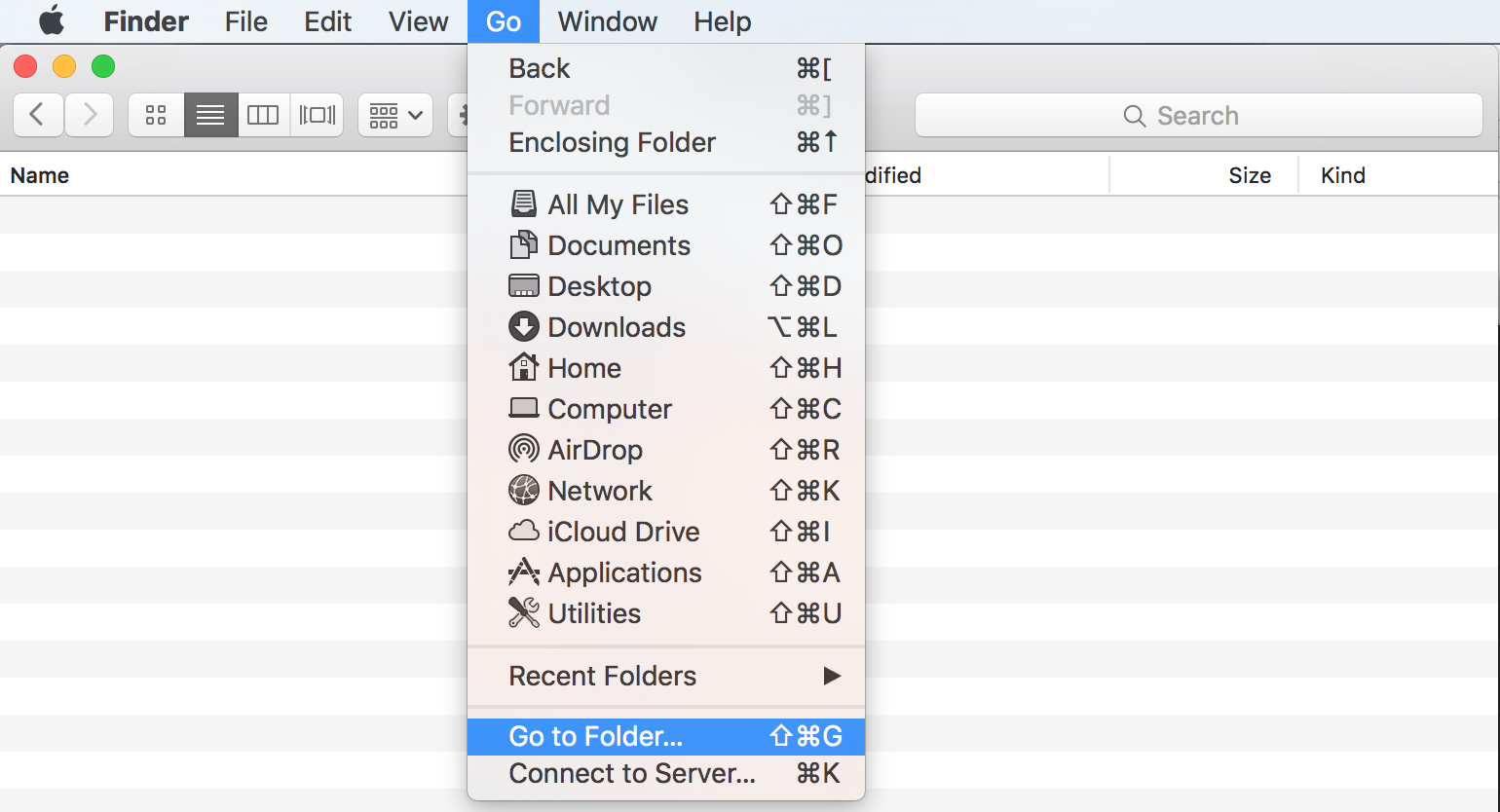
* 1. Most web browsers will save the file in the **Downloads** folder or on your **Desktop** by default. For this tutorial, we will assume that the package is available in the Downloads folder.



1. Double click on this file (consed\_install\_mac\_10\_6.tar.bz2) to expand the *Consed* installation package
   1. A new folder called **consed\_install\_mac\_10\_6** will appear in the Downloads directory

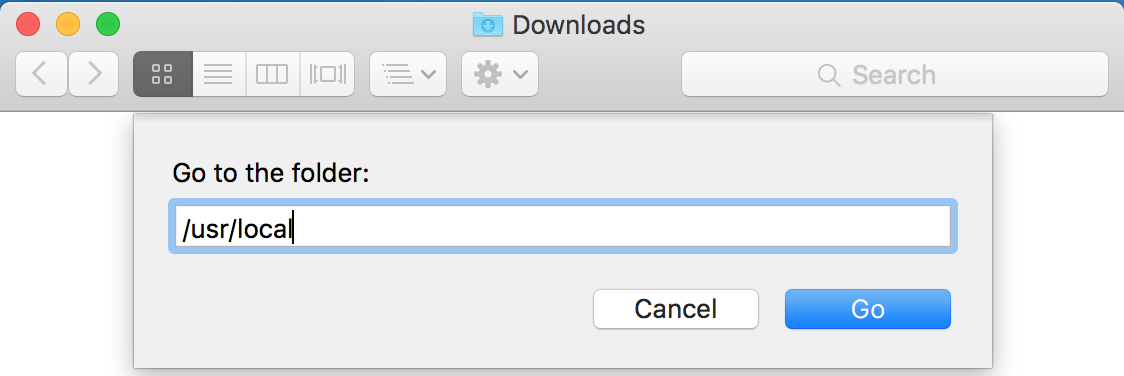


1. Open a new Finder window and select “Go” → “Go to Folder” on the main menu bar

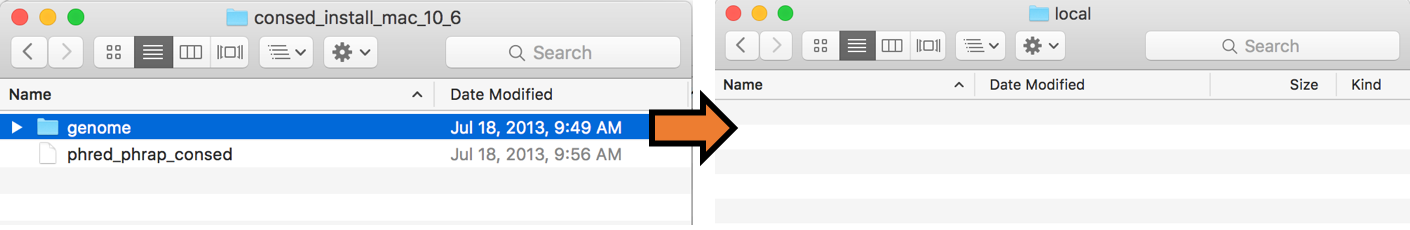


1. Copy and paste the following path into the dialog box and then click on the “Go” button

/usr/local

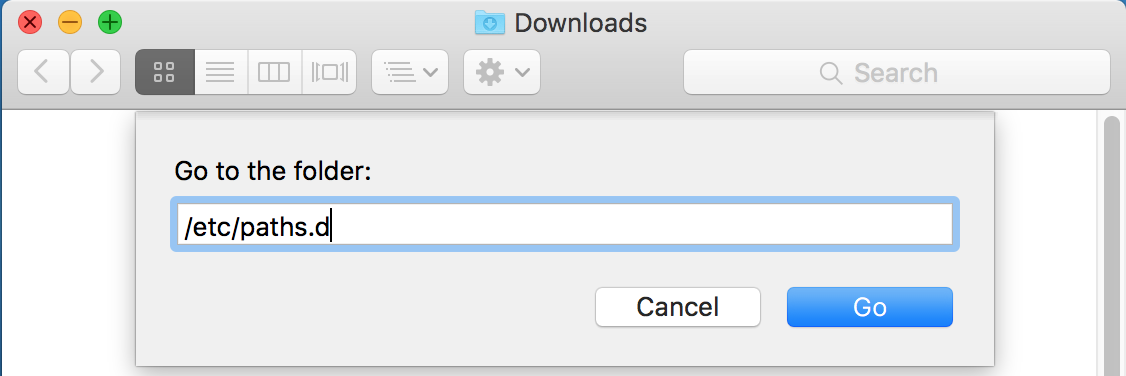


1. You should now have two Finder windows open: the first window contains the folder with the *Consed* installation package and the second window with an empty folder called **local**.
2. Double click on the consed\_install\_mac\_10\_6 folder, you should find a folder called **genome.** Drag the **genome** folder from the consed\_install\_mac\_10\_6 directory to the **local** folder.

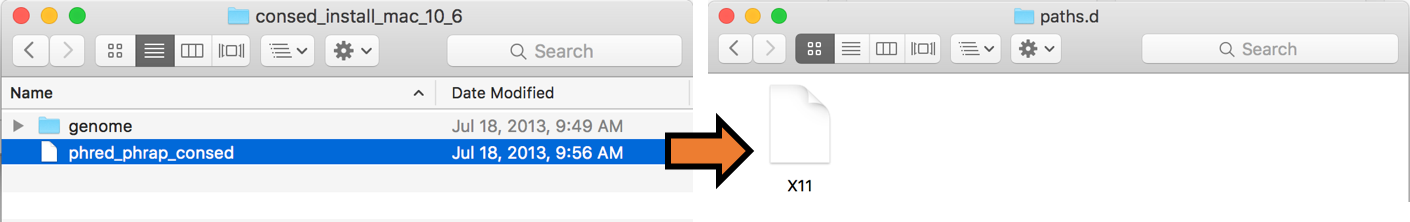


1. Because the */usr/local* folder is a protected folder in Mac OS X, you will need to click on the **Authenticate** button and then enter the username and password of your **administrator account** in order to copy the genome folder into */usr/local*
2. If all goes well, the genome folder should appear in the */usr/local* folder.
3. *Consed* is now installed on your computer. However, in order to allow us to more easily access *Consed* from the command line, we will setup a shortcut to *Consed*.
4. Select the Finder window for the */usr/local* folder and select “Go” → “Go to Folder” in the menu bar again. Copy and paste the following into dialog box and click “Go”

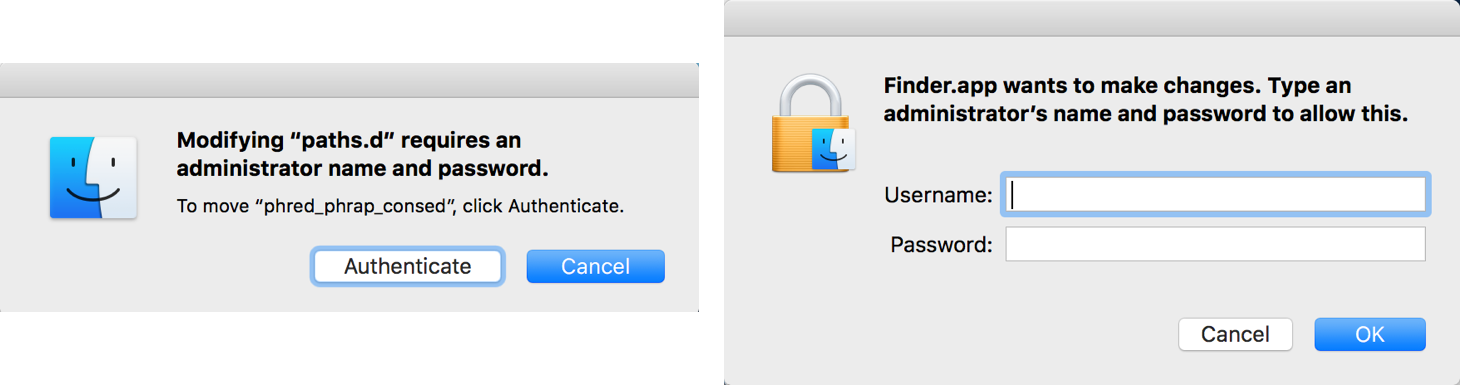
/etc/paths.d



1. A folder called **paths.d** will appear which contains a single file called **X11**. Select the **phred\_phrap\_consed** file in the consed\_install\_mac\_10\_6 folder and move it to the *paths.d* folder



1. Like the */usr/local* folder, */etc/paths.d* is a protected folder in Mac OS X. You will need to click on the **Authenticate** button and then enter the username and password for your **administrator account** in order to copy the *phred\_phrap\_consed* file into */etc/paths.d*

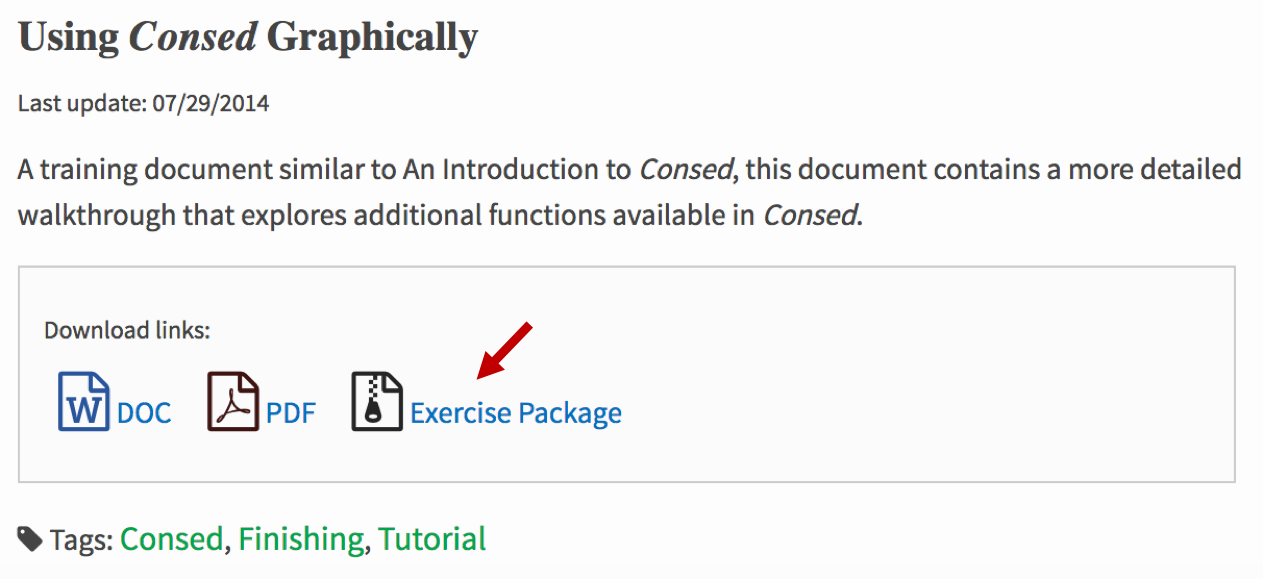


# Verify the Consed Installation

The *Consed* installation is now complete. Next we will download a sequence improvement project from the GEP web site so that we can use it to test our *Consed* installation.

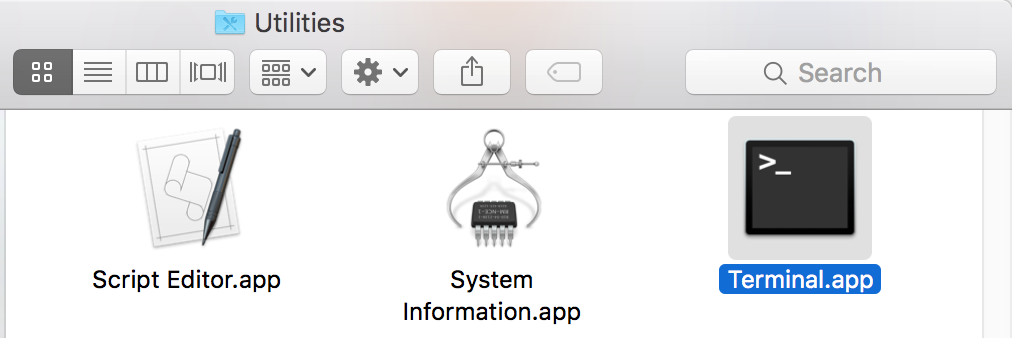
1. Open a web browser and download the sequence improvement package for the *Using Consed Graphically* tutorial at:

<http://gep.wustl.edu/curriculum/course_materials_WU/sequence_improvement/tutorials_and_walkthroughs>



1. Once the download is complete, double click on the file to expand the package. Move the folder (called **Standard3**) to your home directory.
   1. The home directory is the same as your account name by default.
2. Before we can launch *Consed*, we need to first launch the *Terminal* program.
   1. Navigate to the **Utilities** folder (inside the Applications Folder) and double click on the “**Terminal**” application.

Alternatively, you can simply type “Terminal” into Spotlight search to launch the Terminal application

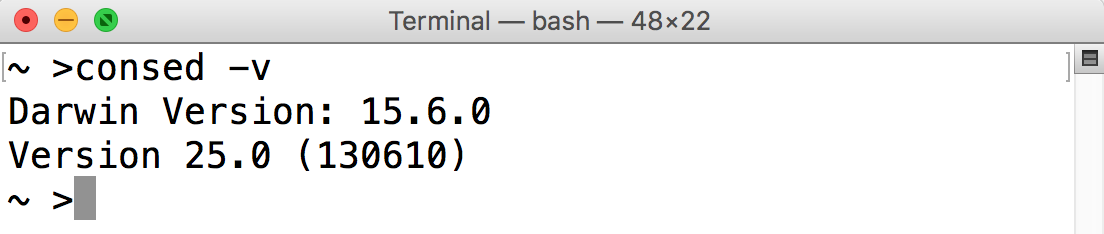


* + 1. You might want to drag the Terminal application into the Dock to make it easier to access this application in the future.

1. When you open the Terminalapplication, a new *Terminal* windowshould appear where you can enter commands. Type the following into the *Terminal* to verify that you can access *Consed*:

consed –v

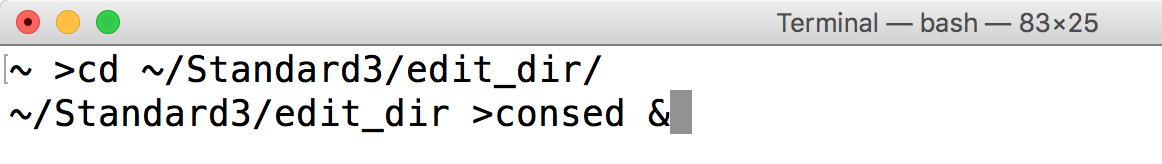
This command should report the version of *Consed* that has been installed (version 25.0 in this case). Note that the “**Darwin Version**” line might be different because it depends on the version of Mac OS X.



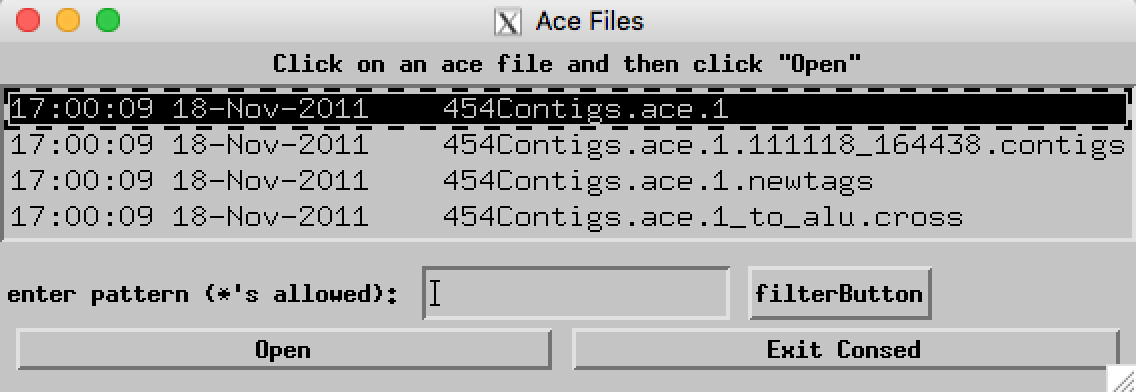
1. Next we will try to open a *Consed* project. Assuming that the Standard3 project is in your home directory (as described above), type the following into the *Terminal* to open the project:

cd ~/Standard3/edit\_dir/

consed &



1. If all goes well, *Consed* should launch and we can open the **454Contigs.ace.1** file



Note that a Software Update dialog may appear when you launch Consed. Click on the “**Skip This Version**” button because the current version of XQuartz (2.7.11) is incompatible with Consed.

At this point, you should work through the *Using Consed Graphically* exercise to verify that *Consed* has been installed correctly. In particular, you should verify that you can open and edit traces, run *cross\_match* in Assembly View, do tear and joins, and run MiniAssembly. Detailed instructions on how to accomplish these tasks are described in the *Using Consed Graphically* tutorial.