How to Launch Eclipse on Your Own Laptop/Desktop Computer

The easiest way to start using Eclipse on your own computer is to launch it remotely on the GRACE machines. To do this, you must be able to connect to the UMD wireless networks, you must have a GRACE account (see http://www.terpconnect.umd.edu/) and you must configure your system to be able to connect to GRACE. It is also possible to install Eclipse on computer (see "Installing Eclipse Locally"). After you have launched Eclipse for the first time, you have to configure it for ENEE 140.
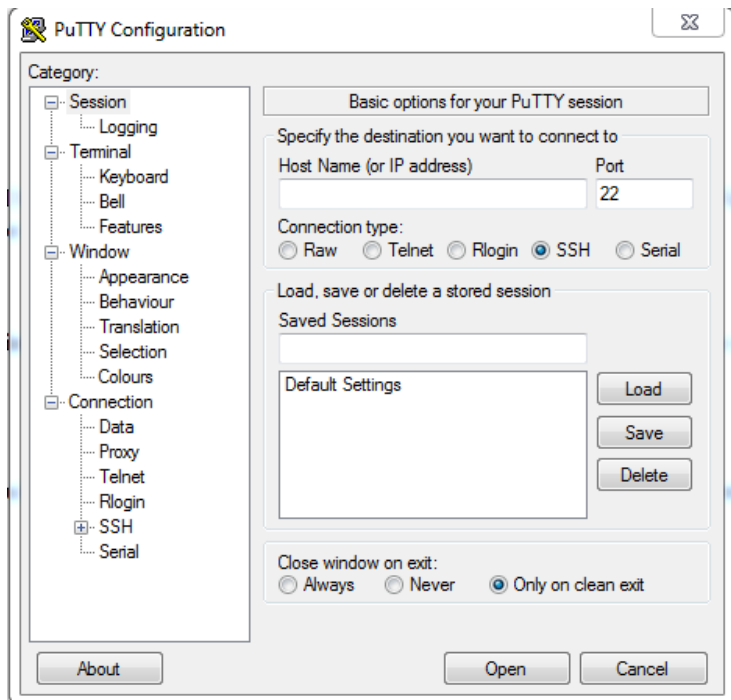
Table of Contents

1. Launching Eclipse

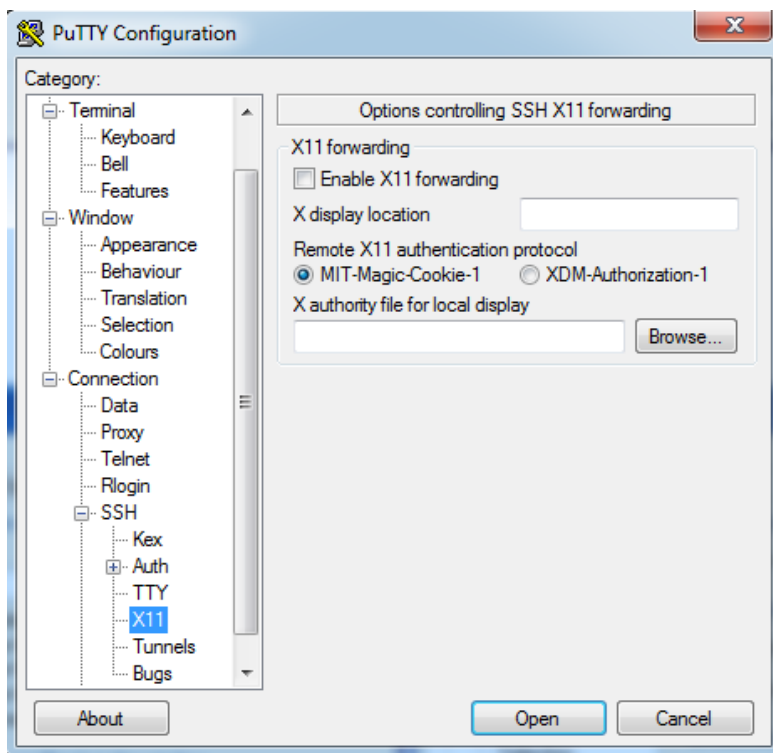## 1.1.   Launching Eclipse Remotely

To launch Eclipse in this way you must be connected to the network. You also need to configure your system appropriately; below are some instructions for Windows and Mac computers.

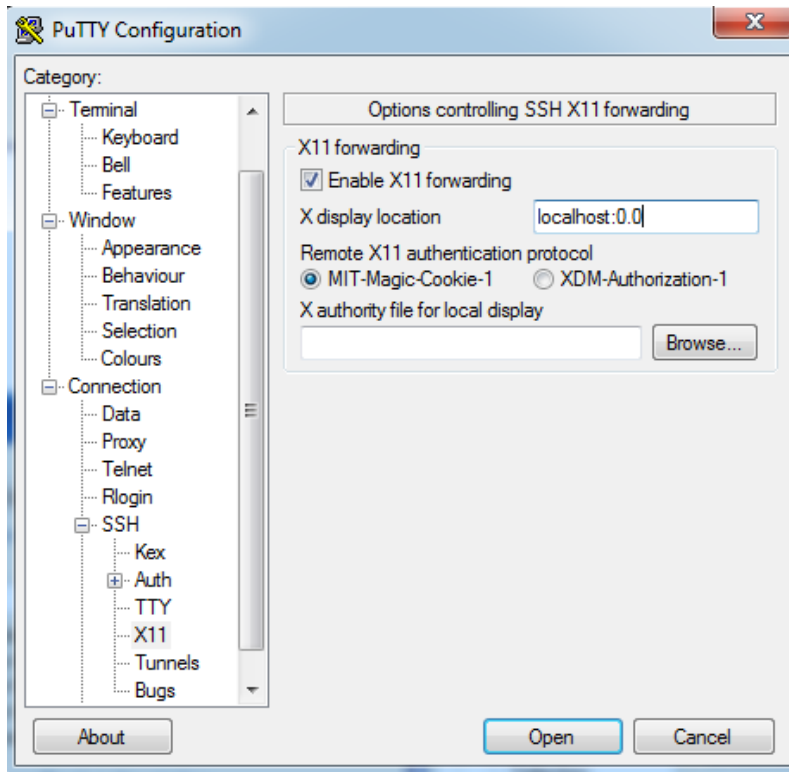### 1.1.1.   Installing and Configuring the Software Needed on Windows
1. Download an ssh client. Putty is recommended.
   a. http://www.chiark.greenend.org.uk/~sgtatham/putty/
2. Download and install Xming.
   a. http://sourceforge.net/projects/xming/files/Xming/6.9.0.31/Xming-6-9-0-31-setup.exe/download
3. Open Xming. It should run in the background.
4. Open Putty, you should see the following screen

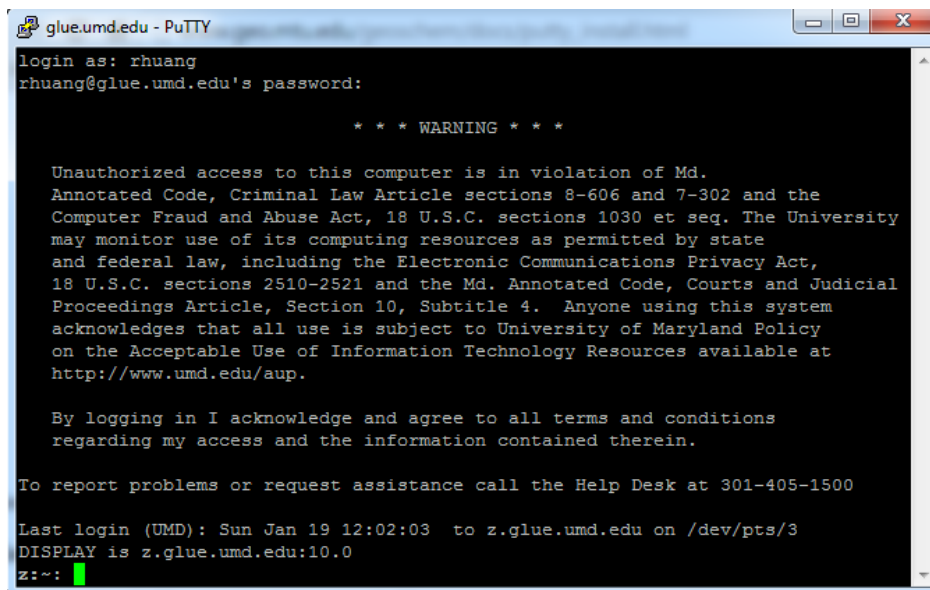5. In the Host Name (or IP address) box, type "grace.umd.edu"
6. Next, expand the "SSH" category on the left hand side and click on X11.

7. Check off the "Enable X11 forwarding", and type "localhost:0.0" in the "X display location" box.

8. If you want, you can save these settings by going back to the "session" category on the left hand side, typing your desired name into the "Saved Sessions" box, and pressing save.
9. Click open to bring up the command window.
10. Login using your directory ID (your username) and password (type your password followed by Enter, even if nothing is displayed on the screen). If the login is successful, you will see a screen that looks like this:

11. Note the line that starts with "DISPLAY is …". If you don't see that message, you won't be able to launch Eclipse remotely (you probably forgot to check the "Enable X11 forwarding" box in step 7 above).
12. Continue with the instructions under "Launch Eclipse on GRACE"

1.1.2. Installing and Configuring the Software Needed on Mac OS

1. Download and install XQuartz (which provides the same functionality as Xming on Windows).
   a. http://xquartz.macosforge.org/landing/
2. Launch XQuartz.
   a. A window with the title "xterm" should appear.
   b. If you don't see this window, press Command-N.
3. Type the following command in the xterm window

   ```
   ssh –X <YOUR_directoryID>@grace.umd.edu
   ```

   For example:

4. You will be prompted to enter your password (type your password followed by Enter, even if nothing is displayed on the screen)
5. If the login is successful, you should see a screen that is similar to the one from the Windows instructions
6. If you don't see a message that starts with "DISPLAY is …", you won't be able to launch Eclipse remotely (you probably forgot the –X flag when invoking ssh in step 3 above).
7. Continue with the instructions under "Launch Eclipse on GRACE"

1.1.3. Launch Eclipse on GRACE

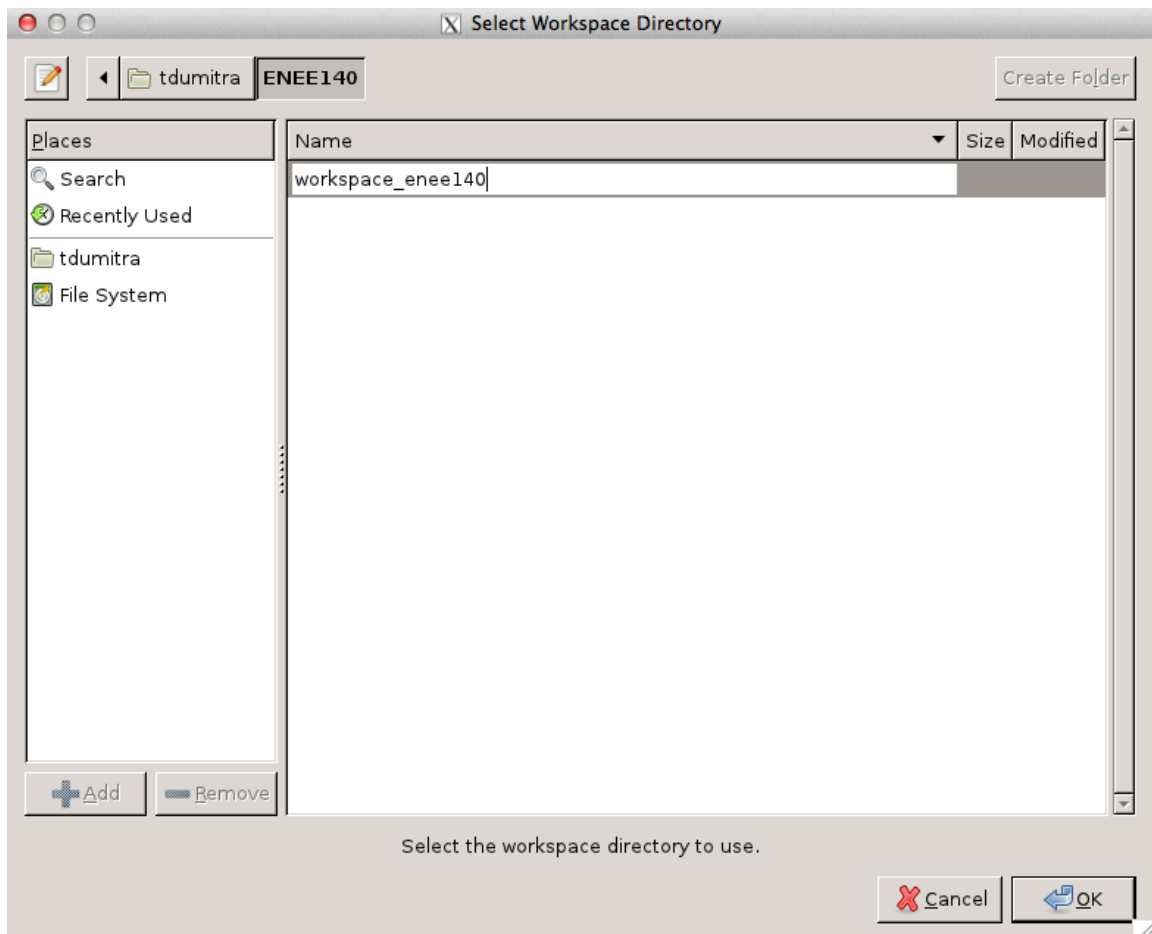1. Type in the following commands:

```
tap eclipse-new
eclipse &
```

The Eclipse window should open on your computer, and you can start programming. When you create new programs, they will be saved on the GRACE machines rather than on your computer.

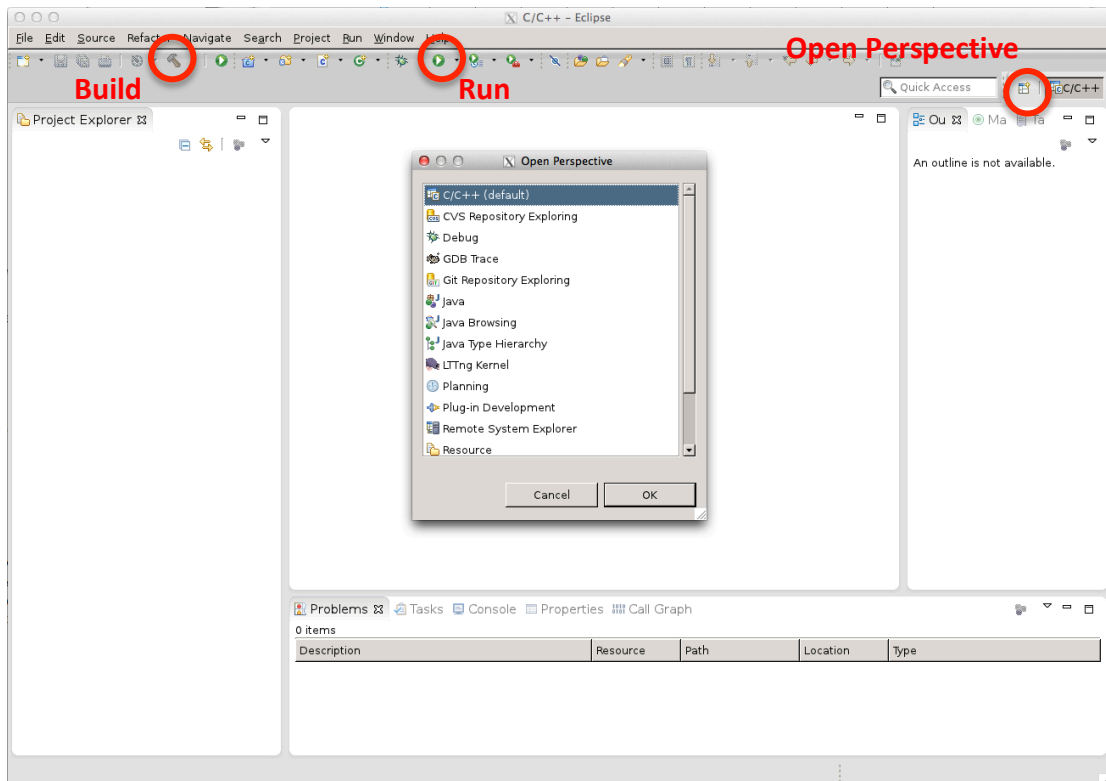## 1.2. Installing Eclipse Locally

It is also possible to install Eclipse and all the related tools on your laptop. This approach has the advantage that you can program in Eclipse even when you are not connected to the Internet. However, setting up the C programming environment for Eclipse on a Windows or Mac computer requires installing several software packages and is a bit challenging for students new to programming. If you would like to try it, the TAs can give you some pointers and provide assistance.
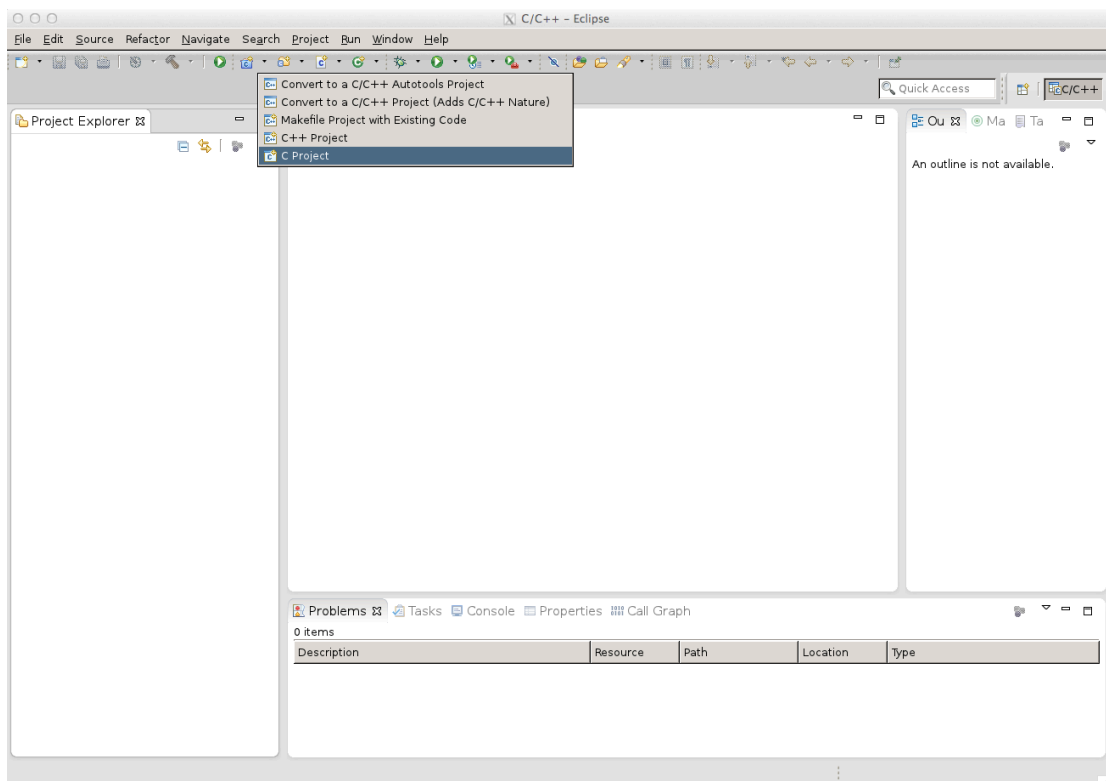
2. Configuring Eclipse for ENEE 140

1. When you first run Eclipse, it will ask you to select a workspace.
2. In your home directory, create a new directory called ENEE140. Inside, create a directory called `workspace_enee140`. Click Ok (an Eclipse workspace will be created in that directory).
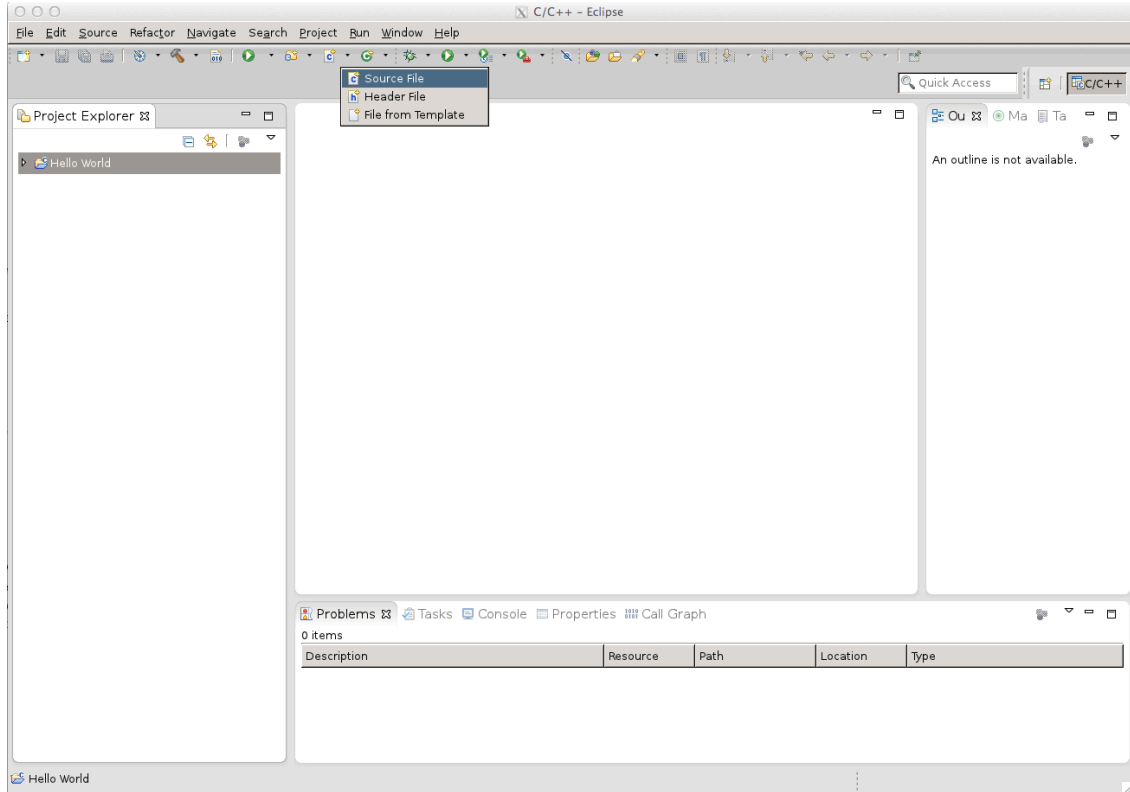
3. Click on "Workbench" to open the source code editor.
4. Click on the "**Open Perspective**" button near the top-right corner of the Eclipse window and select the C/C++ perspective.

5. Click on the "**New C/C++ Project**" and select "**C project**"

6. Name the project `hello_world` and select the "Linux GCC" toolchain. Click Finish.
7. Click on "**New C/C++ Source File**" and select "**Source File**".

8. Name the source file `hello_world.c` and click Finish.

You are now ready to start programming!

Type in the "Hello World" program from page 7 of the textbook. Click on the "**Build**" button (see the image from Step 4 above) to compile the program. Then click on the "**Run**" button (see the image from Step 4 above) to execute the program.