Tutorial of Using General Server for Prolog

11/26/2013

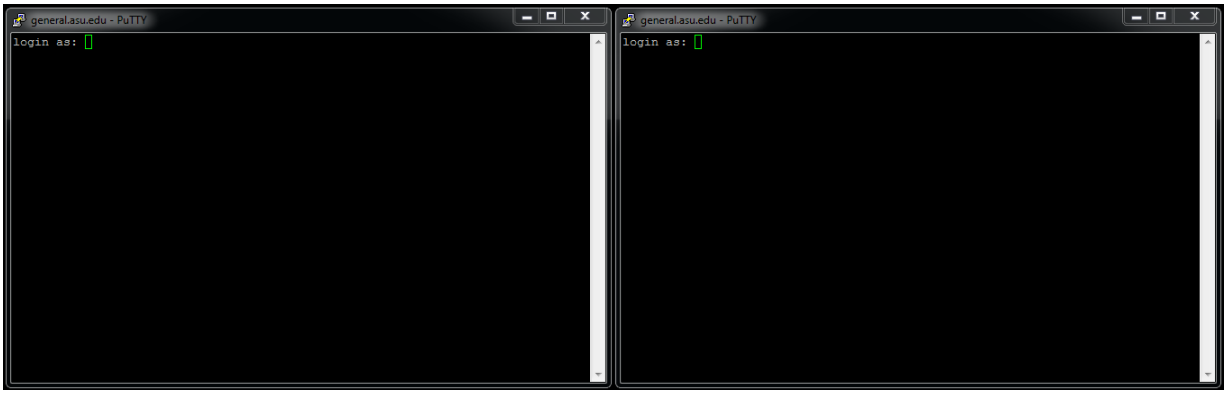
In previous documents, we discussed the basics of connecting to ASU's General server for the purposes of compiling and running C/C++ or prolog code. Please familiarize yourself with those instructions before proceeding. We assume you have already installed a SSH client and have saved the appropriate connection information for General.

In this document we will discuss the use of prolog (via gprolog) on General and a more advanced workflow for programming your assignments. Previously you had to alternate between opening gprolog and a text editor (e.g. nano), here we will demonstrate how to use two SSH connections to speed up this process.

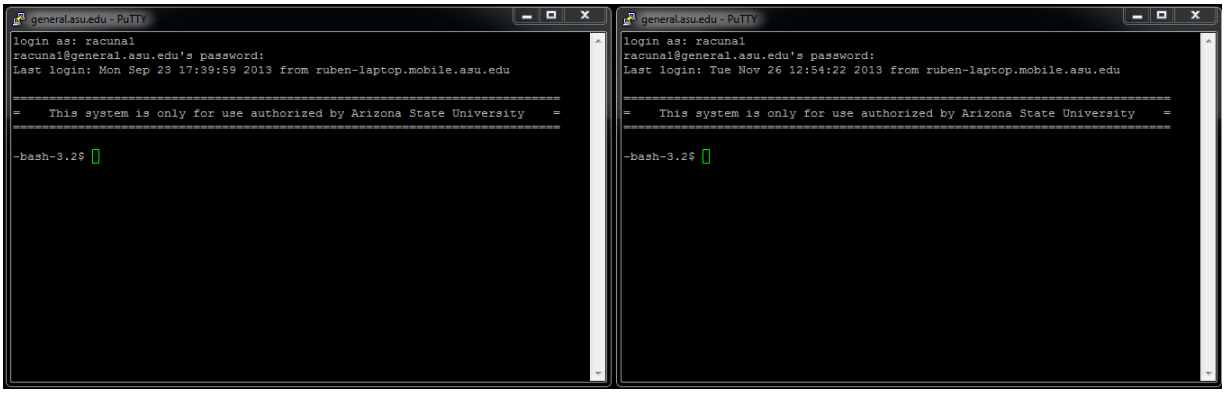
For this tutorial, we will be use PuTTY on Windows 7.

Windows

1. Start by running two instances of PuTTY. We will use one for editing the file and the other for running it.

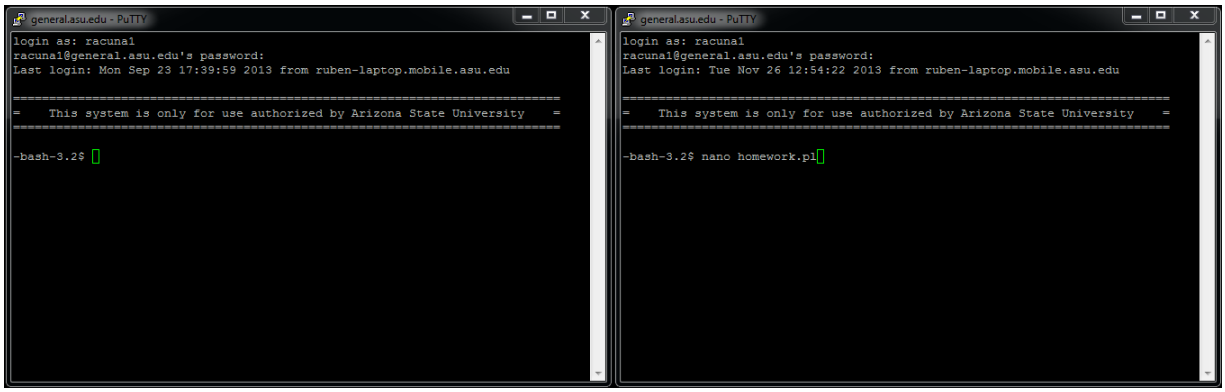


2. Log into each PutTTY instance – this will create two simultaneous connections to General.



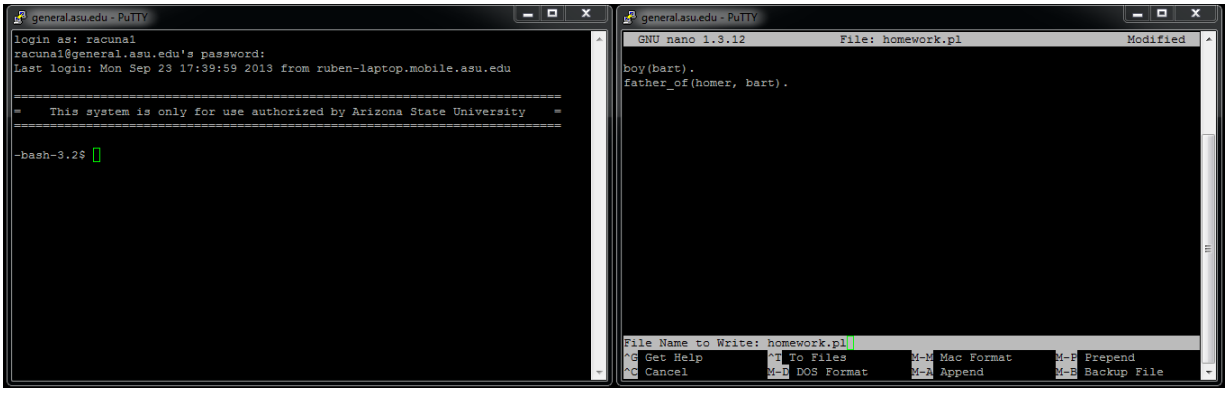
Now that we have logged on, we will write and query a few facts for a family tree program.

3. At the prompt (**-bash-3.2$**) of one of the windows type "**nano <filename>.pl"**, where **<filename>** is the name of a source file that exists or should be created. For example, we would type "**nano homework.pl"** to start editing a file called **homework.pl** – if it already exists it will be opened, otherwise it will be created. Be sure to type **nano** in lower case. The **nano** text editor will now open. In the following screen shot we have already typed in a short program:

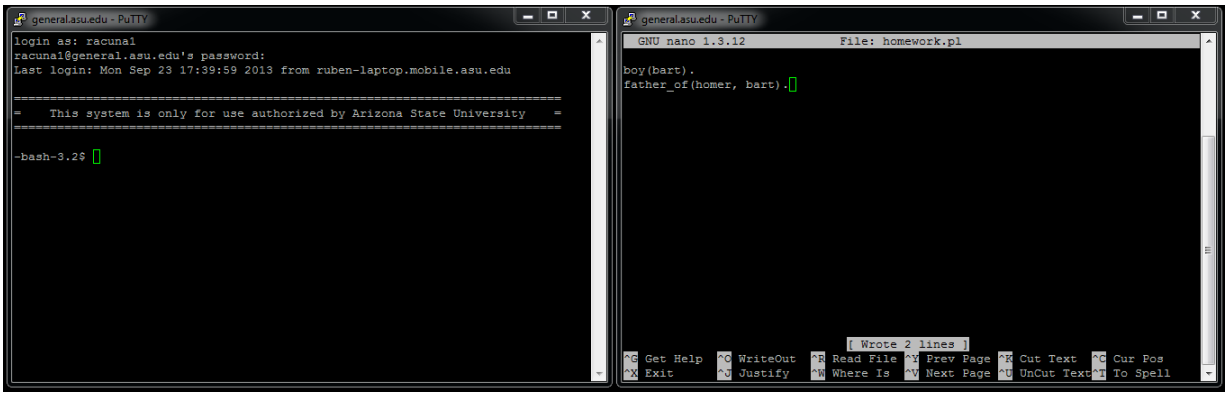


Note: The name we have selected for our program has no underscores – this is required.

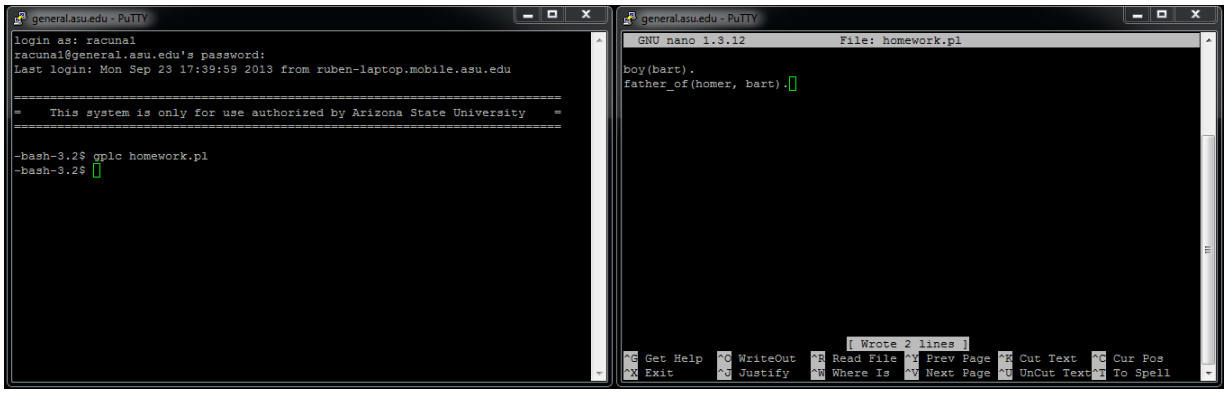
The nano text editor will now open. In the following screen shot we have already typed in a short program:



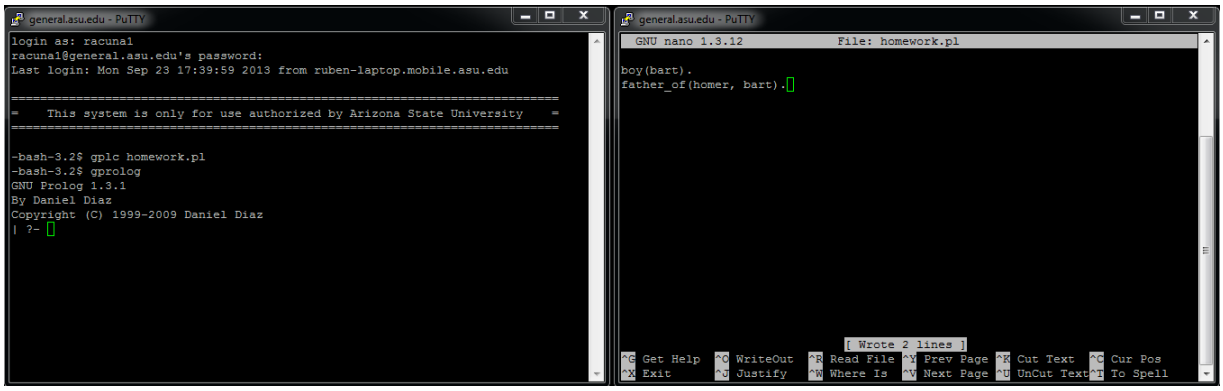
4. Press Ctrl-O to save. A new prompt will appear labeled **File Name to Write**. The filename you entered earlier will already be displayed so you can simply press enter. A status update will be shown which indicates how many lines were saved to the file.



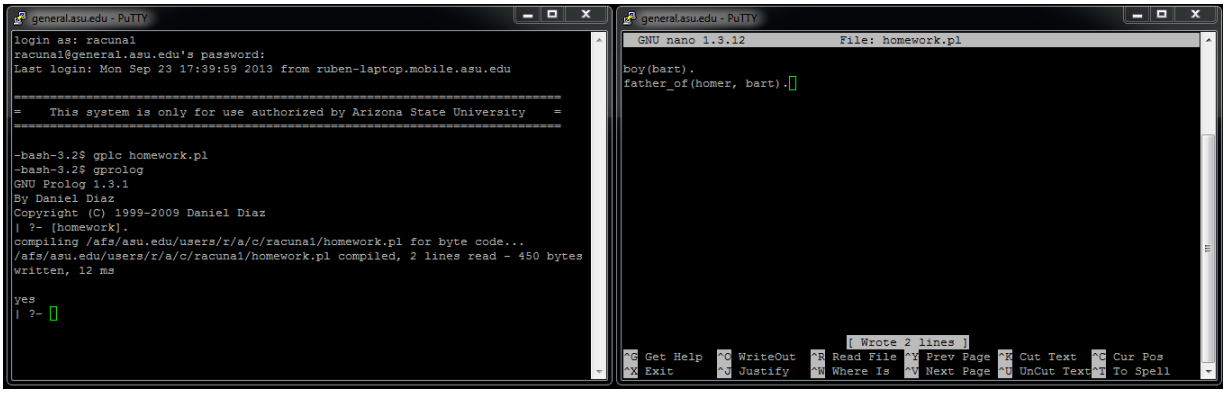
5. Since this is a Prolog program, we will use the **gplc** command to compile instead of **gcc** or **g++**. This is part of the gprolog programming environment installed on General. To compile a file, we will type: **"gplc <filename>.pl"** in the window that does not have **nano** open. For our example, type: **"gplc homework.pl"**. After running this command, a new prolog binary called **homework** will have been built from **homework.pl**. Unlike binaries built with gcc or g++, gprolog binaries must be run in a prolog interpreter.



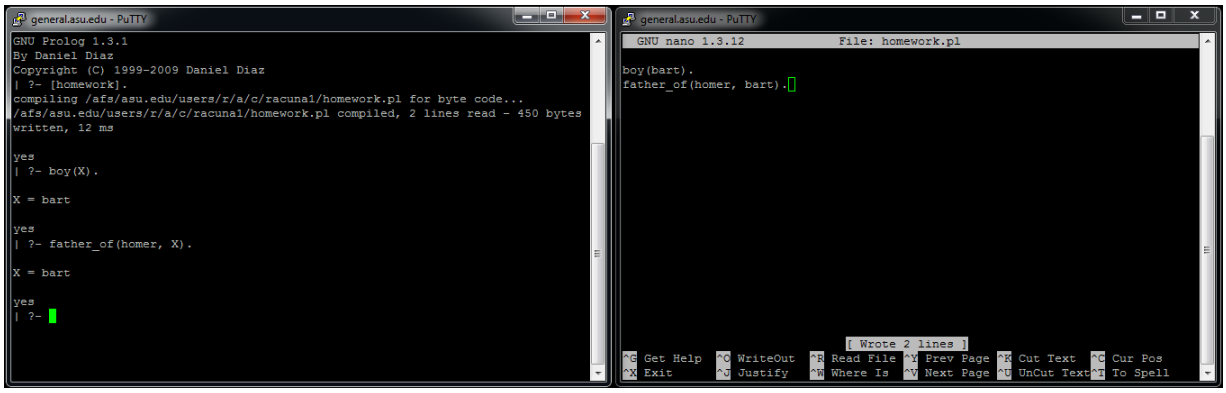
6. To start the gprolog interpreter, type **"gprolog"**.



To execute the file we compiled earlier, we must type "**[<filename>].**" at the gprolog prompt. Notice that we do not include the .pl extension. In our example, our filename was homework.pl so we must type **"[homework]."**



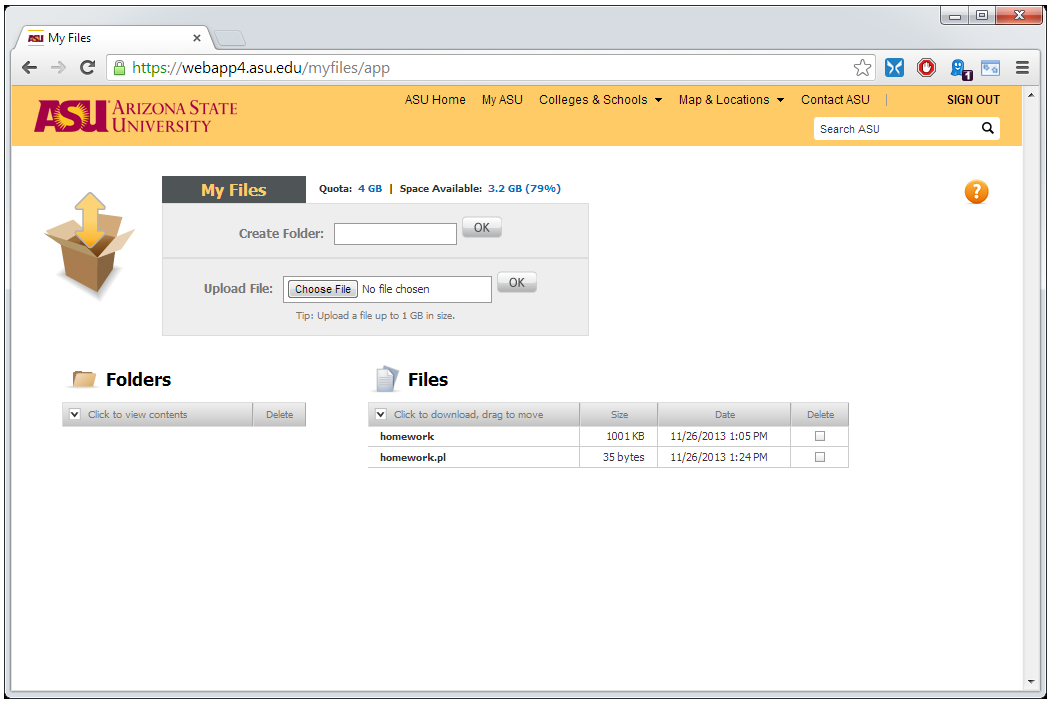
7. The program that was written in nano is now loaded and can be queried



To exit **gprolog**, you will need to enter "**halt.**" To exit **nano**, you will need to press **Control-X**.

8. To develop your program further, you will: edit in the nano window, save in the nano window, compile in the gprolog window, and then run in the gprolog window.

9. We will now briefly discuss accessing your files on General. Files can be accessed in a web browser by going to: https://www.asu.edu/myfiles/. Once you have logged in, you will be shown the following screen:



By clicking the **Choose File** button (by the **Upload File** panel), you can upload a file into the currently shown directory. To download a file, simply click its name in the **Files** list.

You may also retrieve files by connect using a SFTP client (such as WinSCP) to general.asu.edu.

Linux

The process is similar but you will be using multiple instances of Terminal.