

-- INTRODUCTION TO UNIX AND CYGWIN ENVIRONMENTS --

1. To begin this lab, create a new folder on your **Desktop**, name it **Lab7**.

*Note, today you will be doing all of your work in your Desktop\Lab7 folder, but before you leave today, you should **copy this entire Lab7 folder** over to your \\geobase username folder. You may want to mount the \\geobase server ahead of time, as you have in the previous labs.*

2. Launch the program **Cygwin**. Double click the Cygwin icon on your Desktop:



3. When you open Cygwin, a black window like the following should appear.

Type the following after the \$ prompt: **startxwin.bat**

```

Your group is currently "mkpasswd". This indicates that
the /etc/passwd (and possibly /etc/group) files should be rebuilt.
See the man pages for mkpasswd and mkgroup then, for example, run
mkpasswd -l [-d] > /etc/passwd
mkgroup -l [-d] > /etc/group
Note that the -d switch is necessary for domain users.

brkonter@geo409-123804 ~
$ startxwin.bat
startxwin.bat - Starting on Windows NT/2000/XP/2003

brkonter@geo409-123804 ~
$ _
    
```

4. Next a white window should appear with an X icon at the top. This is the primary window that you will be using. You may minimize the black window if you prefer.

```

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brkonter@geo409-123804 ~
$ █
    
```

5. In the white X window, type in the following commands:

```
$ cd ../../Doc*/brkonter/Desk*      (change directories to Desktop)
```

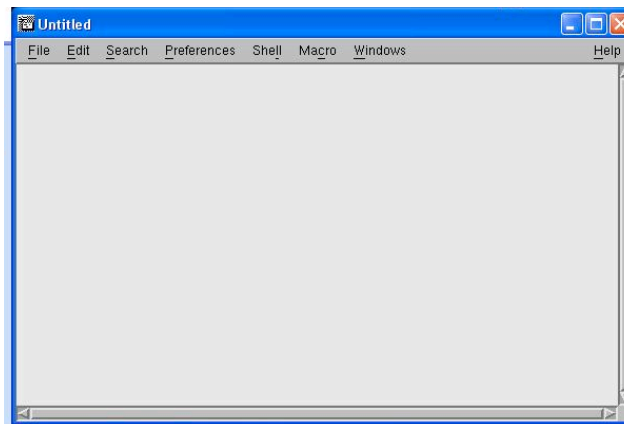
```
$ ls                                  (you should see a list of items, including your Lab7 folder)
```

```
$ cd Lab7                             (change directories to your Lab7 folder)
```

6. Now create/open an empty text file, using the text editor program **Nedit**. To do this, type the following:

```
$ nedit &
```

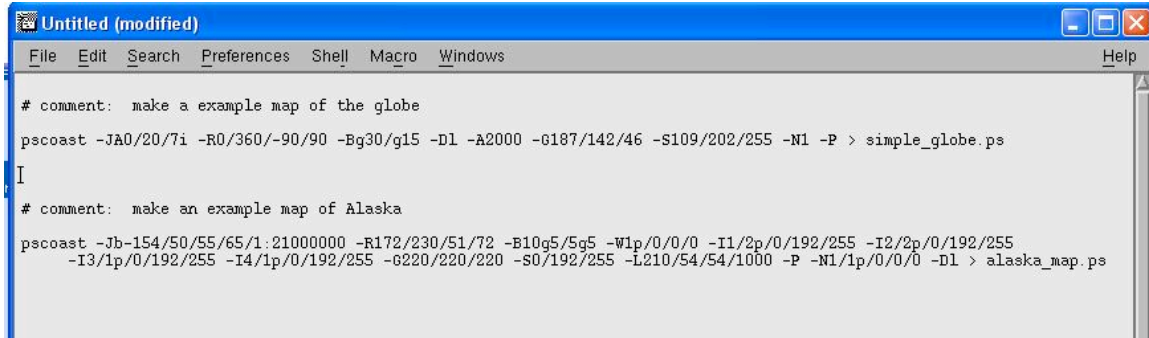
An empty window named “Untitled” should appear. This is a text window where you can type and store your commands:



You will enter your GMT commands in this window. These can get a bit long, so you may need to stretch the Nedit “Untitled” window out as far as you can (to the right or left) so that all of your commands fit on one line.

You will eventually type in a long string of commands like the following example. For now, just try typing in a comment (text to yourself) that is preceded with a # sign. Type the following:

```
# comment: make an example map of the globe
```



```

Untitled (modified)
File Edit Search Preferences Shell Macro Windows Help
# comment: make a example map of the globe
pscoast -JA0/20/7i -R0/360/-90/90 -Bg30/g15 -D1 -A2000 -G187/142/46 -S109/202/255 -N1 -P > simple_globe.ps
I
# comment: make an example map of Alaska
pscoast -Jb-154/50/55/65/1:21000000 -R172/230/51/72 -B10g5/5g5 -W1p/0/0/0 -I1/2p/0/192/255 -I2/2p/0/192/255
-I3/1p/0/192/255 -I4/1p/0/192/255 -G220/220/220 -S0/192/255 -L210/54/54/1000 -P -N1/1p/0/0/0 -D1 > alaska_map.ps

```

7. Now save your text window. Use File → Save As. Name the file “GMT_example_commands.com”. This should be saved in your Lab7 folder.

8. Next you will refer to the supplemental documents for entering GMT commands in your text file, copying them to the X window, and viewing your map. Below are a few tips for these steps:

Copy/Paste in Text & X-windows

To copy commands that you’ve typed in your Text window, highlight the entire command with your cursor, then in your white X window, point your mouse and click with the **scroll wheel**. This should paste your copied command in the window. You will probably need to hit the Return key to execute the command.

RGB Colors

GMT uses RGB numeric codes to specify colors of features. A good website for identifying number sequences for various RGB colors is:

<http://gucky.uni-muenster.de/cgi-bin/rgbtan-en>

Viewing Postscript Files (.ps) in X-windows

In GMT, you will be generating a .ps file, or a postscript file, that contains your map image. To view this file in X windows, type the following:

```
$ gs filename.ps &
```

This command uses the program GhostScript (gs) to view your file.

Repeating Commands in X windows

To repeat a command in X-windows, just hit your up (or down) arrow on your keyboard. You may find this to be a quick shortcut when you are repeatedly entering the above command after generating a new postscript file.

Converting a Postscript file to a JPEG

When you are done making edits to your GMT map postscript file, you may want to save it as JPEG file. To do this, type the following command the X-window:

```
$ ps2raster filename.ps -A -Tj
```

A JPEG file, with the same “filename” prefix will be saved in your current directory.

Quitting X-windows

When you're done with X-windows, at bottom of your screen, right-click the X icon and select Exit. Then type “exit” in any remaining Cygwin windows.