

MATLAB on the GRACE systems on your home Windows computer

DISCLAIMERS:

1. I am not a “guru” on how to set this up. If this does not work for you and you need Matlab at home, then your best bet is to buy the student edition of Matlab from the bookstore. If you are not able to afford that use the labs the university provides.
2. However, this is an alternative. It does require a relatively high speed internet connection between your PC and the university, and a relatively fast PC. If you do not have these it will not work well.
3. Downloading software off the web is risky, and I am not responsible for any problems that may arise.

1. The GRACE system:

Each of you has an account on the Grace system (`grace.umd.edu`)

This is a SUN UNIX system described further at <http://www.grace.umd.edu/>

2. Non-graphical Matlab on the GRACE system

You can log on to the system using `ssh`.

A free ssh client is available from the university. Further information at

<http://www.helpdesk.umd.edu/topics/applications/ssh/920/>

You can access the grace system using the `ssh` client.

Log in with your university ID and password.

You may install Matlab via “`tap matlab`”.

Then typing “`matlab`” at the command prompt gets you into the program

This however does not get you access to the graphical capabilities of Matlab. It should still be possible to do many of the assignments this way.

3. Graphical Matlab on the GRACE system¹

To get the graphical version of Matlab from GRACE you need to be connected to it via a X-Windows emulator. One obvious way to do it is on campus from any of the workstation labs.

To do it from Windows you need to have an X-windows emulator running on your PC. Then you may run a “`xterm`” from your PC, log on to grace, and have access to the graphical version of Matlab.

There are many X-windows systems that can be downloaded and installed. You or a hacker friend may already have something like this running on your PC. If not, here is one way to do this. I do not promise this will work for you.

Download XLiveCD: <http://www.oit.umd.edu/slic/products/IndianaUniversity/xlivecd.html>

This downloads a relatively large file (368 MB) called `xlivecd-20041201.iso`. This is a “CD image file”

¹ Thanks to Rachelle Bye for suggesting this.

a. CD Option

Burn the iso file on to a CD using a program such as Roxio. Then launch XLiveCD from the burned CD. Once the X-Windows window is up you can start a session on the GRACE system and start MATLAB

b. Hard Drive option

Find an iso extractor software from the web. Doing a Google search for “iso extractor” pops up many packages that can do this.

I downloaded Magic ISO which is a shareware package, and installed it.

I then extracted this to a directory using this package. (e.g., c:\XLiveCD)

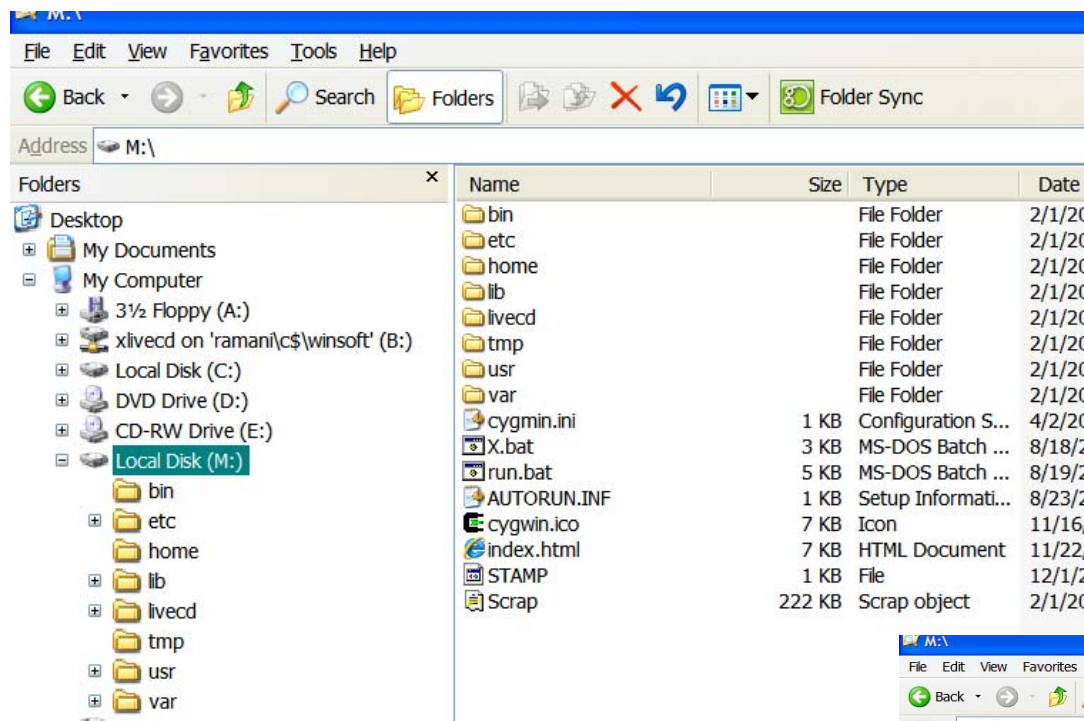
Next you can use windows to associate some drive letter (e.g., B:) with the directory c:\XLiveCD

(Look up the subst command <http://www.computerhope.com/substhelp.htm>)

Start-> Run -> subst M: c:\XLiveCD

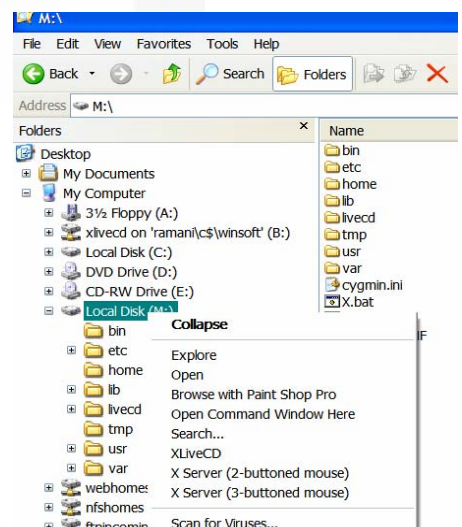
c. Launching XLiveCD

Open up file manager which should show your “new” disk (or alternately, if you choose the CD option, your CD drive)



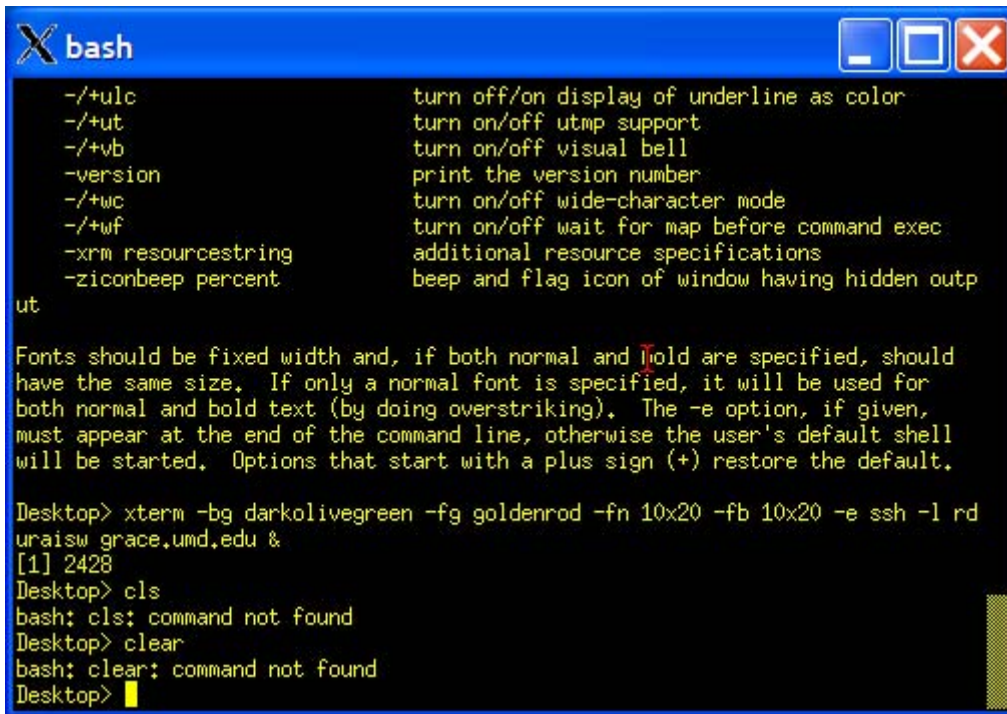
Right click on the new virtual disk you created (M: in the above example), or the CD letter if you choose the CD option. This pops up a window which includes the following menu options:

- 1) XLiveCD
- 2) X Server (2-buttoned mouse)
- 3) X Server (3-buttoned mouse)



Choose the X-server corresponding to your mouse configuration.

This pops up several windows including one which has “X bash” on it.



```
X bash
-/+ulc      turn off/on display of underline as color
-/+ut      turn on/off utmp support
-/+vb      turn on/off visual bell
-version    print the version number
-/+wc      turn on/off wide-character mode
-/+wf      turn on/off wait for map before command exec
-xrm resourcestring  additional resource specifications
-ziconbeep percent  beep and flag icon of window having hidden out
ut

Fonts should be fixed width and, if both normal and bold are specified, should
have the same size.  If only a normal font is specified, it will be used for
both normal and bold text (by doing overstriking).  The -e option, if given,
must appear at the end of the command line, otherwise the user's default shell
will be started.  Options that start with a plus sign (+) restore the default.

Desktop> xterm -bg darkolivegreen -fg goldenrod -fn 10x20 -fb 10x20 -e ssh -l rd
uraisw grace.umd.edu &
[1] 2428
Desktop> cls
bash: cls: command not found
Desktop> clear
bash: clear: command not found
Desktop> █
```

Issue a command such as the one above

```
xterm -bg darkolivegreen -fg goldenrod -fn 10x20 -fb 10x20 -e ssh -l
rduraisw grace.umd.edu &
```

xterm: name of command

bg: background color

fg: foreground color

fn: font size

fb: some other font size

e: login command to the grace system

which is: ssh -l YourUMID grace.umd.edu &

This pops up another window with a question you answer yes to.

Enter your password and you are in to the GRACE system.

(to get help on the options available to the xterm command say xterm -help

d. MATLAB on GRACE

Type “tap matlab” to set up Matlab

Run “matlab”

This opens up windows that let you have a graphical Matlab.