Linux Life in a Windows World
Question

I just bought a shiny new Dell laptop running Microsoft Windows XP. This class seems to be entirely based on Unix/Linux topics; will I be able to use my new computer to work on the software from this class?
Recommended solution

Get Microsoft Windows versions of the following software:

- emacs or xemacs
- WinEdit (shareware)
- R
- a secure shell client
- MinGW
- Active State Perl
- the R utilities off of Brian Ripley’s web page
- MikTeX (comes with a dvi viewer called Yap)
- Ghostscript and GSview (shareware, \(\approx\) $50 to eliminate the registration message)
- an X server (the dept uses Xceed \(\approx\) $50)

The links on the class web page will help you get this software.
VMware

Virtual machine software

- Complete versions of two (or more) operating systems on a Windows (or Linux) host
- Fast: guest operating system nearly operates at native processor/video speed
- Expensive (> $100)
- Tricky guest operating system install
- You have to administrate (at least) two operating systems
- Not a good solution if you don’t like to tinker
- Requires a lot of RAM
Cygwin

- “There’s a C library which provides a Unix-style API. The applications are linked with it and voila - they run on Windows.”
- Comes with: bash, gcc, perl, \LaTeX, an X server, ssh, scp, emacs, make, ...
- Seamlessly integrates windows with Unix-esque commands
- A little tricky to install
- File sharing is a lot easier than ordinary VMware installations
- Many unix programs cannot be built from source as is with Cygwin (though many can)
- You can’t really use Cygwin to build R packages (you’re better off just using a dos prompt)
Installing Cygwin

- To install Cygwin
  1. Run *setup.exe* from their website
  2. Choose to download packages to local repository (get everything, 1 gig)
  3. Re-run *setup.exe*
  4. Choose to install packages from a local repository
- Cygwin now automatically starts you in their X-windows environment
Services for Unix

- Free (as in cost) Cygwin style software produced by Microsoft
- A user base has modified a lot of standard Unix utilities to compile under SFU; such as emacs, bash,...
- Does not come with an X server. Web site says you can use commercial clients like Xceed
- Is rumored to be “an integral part of Longhorn”
- Installation is easy
- I haven’t really used this enough to compare critically with Cygwin
Many groups have created versions of Linux that you can run by booting directly off of a CD

Eg: Knoppix, Mandrake Move, Damn Small Linux ...

It’s as easy as: download the live CD image, burn it to a CD, update your BIOS so that it boots from the CD first (most computers do this already)

Every time you boot your machine with the CD in, it will boot to Linux rather than windows

Reboot the machine without the CD in and everything is back to normal

Most likely Linux will only have read access to your Windows files¹

Use a usb drive to store files permanently

¹Unless you installed Windows yourself and partitioned your drive with different file systems. In which case you know better than me what you are doing.
This Class

- If you prefer to work in a Windows environment, use the Windows versions of emacs, \LaTeX, R, ...
- ssh to the departmental servers to do the assignments that require Unix/Linux
- A Linux Live CD is the most harmless way to try Linux on your own machine
- Try installing SFU or Cygwin if you want to tinker; there is no departmental support for these solutions
- Install VMware only if you really like to tinker; there is absolutely no departmental support for this solution