

Linux

Tom Kelliher, CS 220

Sept. 12, 2007

1 Administrivia

Announcements

Solutions to exercises from last time available online.

Assignment

Appendix A discusses assemblers and SPIM. Look through it.

From Last Time

Conditional branches.

Outline

1. Linux.
2. Hands-on Linux lab.

Coming Up

SPIM intro lab.

2 Linux

- GUI (Cygwin/X) and text-based (SSH) environments.
- The most important command: `logout`/`exit`.
- The second most important command: `man`. As in:
 - `man man`
 - `man spim`
 - `man -k files`
- The most important command after logging in for the first time: `passwd`

2.1 Common Trip-Ups and Tips

1. The `Delete` key doesn't work.
2. There are suspended jobs.
3. The path component separator: `/`, not `\`.
4. The arrow keys and other cursor positioning keys.
5. Those “funny” keystroke sequences in `emacs`.
6. Toggling between `emacs` and the shell.
7. Forgetting your Linux text when you're working.
8. `Ctrl-c`, `Ctrl-z`, `Ctrl-d`, `Ctrl-q`/`Ctrl-s`.

2.2 Anatomy of a Command

```
ls -aCF

ls -a -C -F ~kelliher/pub

ls -l ~

cat /usr/var/Enron/offShoreAccounts
less /usr/var/Enron/offShoreAccounts

w | grep ckonradi

gcc -o homework1 homework1.cc library.cc

./homework1 > homework1.results

rm *

rm -i *

alias rm 'rm -i'

less .cshrc .login

script
```

2.3 Linux Concepts

1. Your userid and group.
2. Your home directory.
3. The filesystem; navigation: `.`, `..`
4. Relative, absolute pathnames.
5. Directory commands: `cd`, `mkdir`, `rmdir`, `pwd`, `ls`.
6. Filenames; wildcards, abbreviations. File completion.

7. File commands: `rm`, `less`, `cp`, `mv`.
8. File permissions.
9. The superuser.
10. Processes.
11. The shell.
12. Getting help: `man`, online resources, books.

3 Hands-On Linux Lab

See lab handout.