Linux, vi, and Scala

1-18-2012

Opening Discussion

- What did we talk about last class?
- Minute Essays
  - Minimum size for shrinking, single atoms.
  - Making whoami more philosophical.
  - When you have questions, ask them.

Permissions

- Do ls with -l option to see permissions.
- Sets of rwx for user, group, and others.
- Use whoami and groups to find identity.
- Use chmod and chown to change permissions or ownership.

Remote

- Use ssh to login into one machine from another.
- Use scp to copy files from one machine to another.
- The website has a link to Putty which will give you these abilities from Windows.

Other

- du – Lists disk usage
- grep – Searches for something inside of files.
- find – Find files.
- head – List the first several lines of a file.
- tail – List the last several lines of a file.
- top – Look at what is running on a machine.
- w – Look at who is logged into a machine.

I/O Redirection

- You can send a programs output to a file using > or >>.
- You can make a program use a file as input using <.
- You can do more interesting things by sending the output of one program to another with |.

Text Files/Editors

- Programs are typically written as plain text files and should be edited with a text editor.
- Notepad is a basic text editor on Windows.
- Word is NOT a text editor.
- Some text editors are better than others for programming.
- In this class we will use vi.

vi

- The vi editor is standard on Linux which is one reason we like to use it.
- It is also good for programming.
- Has modes. Start in command mode. You type in an edit mode.
  - i – insert
  - I – insert at beginning of line
  - a – append
  - A – append at end of line
  - R – replace characters

Other Commands

- x – delete characters
- dd – delete/cut lines
- yy – yank/copy lines
- p or P – paste before or after
- r – replace a single character
- J – join lines
- / and n – search for something and next
- cw – change a word
- . - repeat last command
- u and Crtl-r – Undo and redo

Scala Script/First Program

- Let's make a directory and use vi to write our first Scala program then run it.
- The standard first program is “Hello World” and I don't want to break with tradition.

Minute Essay

- Next class we really move into Scala. Any questions about command-line and vi?
- The book contains a LOT more information than we can get through in class. Read and practice.