

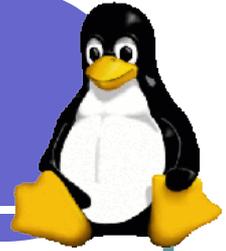
Text Editing



Class Meeting 2

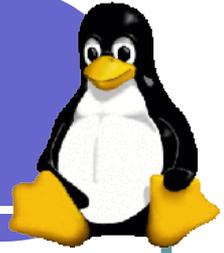
* Notes adapted by Alexey Onufriev from previous work by other members of the CS faculty at Virginia Tech

A few more useful tricks



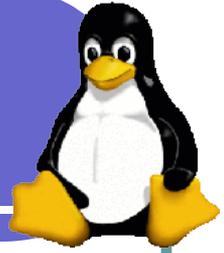
- `man <command>` // tells you what that is + options //
- `pwd` // where am I?? //i
- Unix directory structure: absolute path: `/home/onufriev/`, relative: `./`
- `which <executable>`, `locate <filename>`, `find --name "filename*"` // various finding commands
- `mkdir`, `cp`, `rm`, `cd`, `chmod` this last one changes file's permissions
- `more <filename>` // looks inside the file

Text Editing



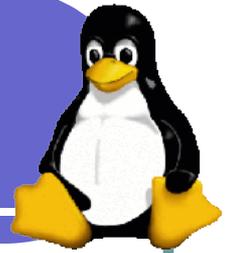
- How do you edit the contents of files?
- Last week, you learned to manipulate files in the file system (`cp`, `rm`, `ln`) and peak into them (`head`)
- Most UNIX editors work with plain ASCII text files
- Common editors include: `vi`, `emacs`, `pico`
- `Vi` = `vim` on almost all modern unixes

Why `vi`?



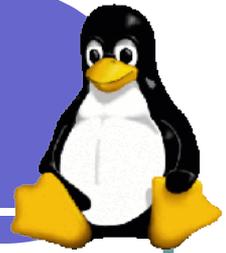
- Availability
 - Any Unix/Linux system
- Commands are keys
 - Accessible via remote login (e.g., `ssh`)
 - Avoids use of mouse
- Simple *and* powerful **text editor**
- Vi Improved (`vim`)

vi Basics



- nvoke with: `vi [filename(s)]`
- Editor controls the window
- Mode based
 - **Command mode**
 - Keys are commands
 - Case and control shifts matter
 - **Insert modes**
 - Keys add text, Escape exits

Command Mode



- `vi` starts in command mode
- Escape key returns to command mode
- Commands for:
 - Cursor movement
 - Editing
 - File operations
 - Searching

Cursor Movement

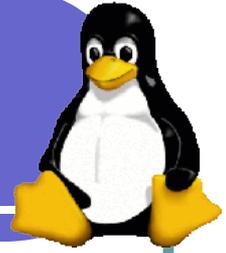


- Single characters: right hand on keyboard:

h j k l
← ↓ ↑ →

- Larger movements — n is a number
 - $n\{j|k|l|h\}$ — repeat n times
 - `Ctrl-F`, `Ctrl-B` — page forward, page back
 - `w`, `b` — next word, word back
 - `:n` — move to line n
 - `0`, `$` — move to beginning or end of line

Editing Commands



- `u` — undo last typing (unlimited undo in vim)
 - `x` — delete current character*
 - `dd` — delete current line*
 - `dw` — delete current word*
 - `rx` — replace current character with `x`*
 - `p` — paste copied/deleted items
 - `J` — join two lines
- * can be preceded by a number to perform command multiple times

File Operations



- ZZ, :wq — **w**rite (save) and **q**uit
- :w — **w**rite
- :w <filename> — **w**rite to <filename>
- :q — **q**uit editing
- :q! — **q**uit without saving
- :e <filename> — **e**dit (load)
<filename>

Search



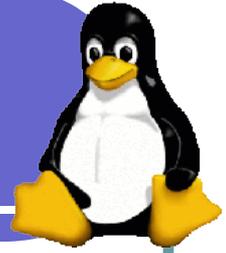
- */ string* — search forward for *string*
- *?string* — search backwards for *string*
- *n* — repeat previous search
- *N* — repeat search in opposite direction
- *%* — find match of current *(, [, or {*

Entering Insert Modes



- `i` — **insert** before cursor
- `I` — **insert** before beginning of line
- `a` — **append** after cursor
- `A` — **append** at end of the line

Additional Information



- Search: `esc`, then `/your_word`, “n” – finds next
- Substitute: `esc`, `:`, then `1,6s/old/new/g` // substitute “old” with “new” globally, beginning at line 1 and ending at 6. `1,$s/old/new/g` – in the entire file.
- Visual mode: `CTRL-V`
 - Remember that you can:
 - **Cut and paste between windows** // use mouse buttons.
// but may not work if you ssh from the outside via a WINDOWS application
 - Undo with `u`
 - Redo with **CTRL r**
 - **Quit without saving** with `:q!`
 - **vmtutor** // execute this command to enter a tutoring session
 - `vim` is available for WINDOWS/MAC

If you hate vi...



- Well, there is EMACS