

Ling 5200  
Day 3: Introduction to Unix,  
continued

© 2008 Kevin Bretonnel Cohen

# Two ways of specifying location

- Relative: walk out the door. Take stairs to first floor. Exit building from east. Take 36 to I-70. Get off at Vasquez exit. Merge onto Colorado. Turn left onto 23<sup>rd</sup>. Turn right onto Krameria. Go to next block. Go to house on southwest corner.
- Absolute: Go to 2089 Krameria St., Denver, CO.

I'm in `/home/kev`, and I want to see  
the contents of `/home`

- Using relative path:

```
ls ..
```

- Using absolute path:

```
ls /home
```

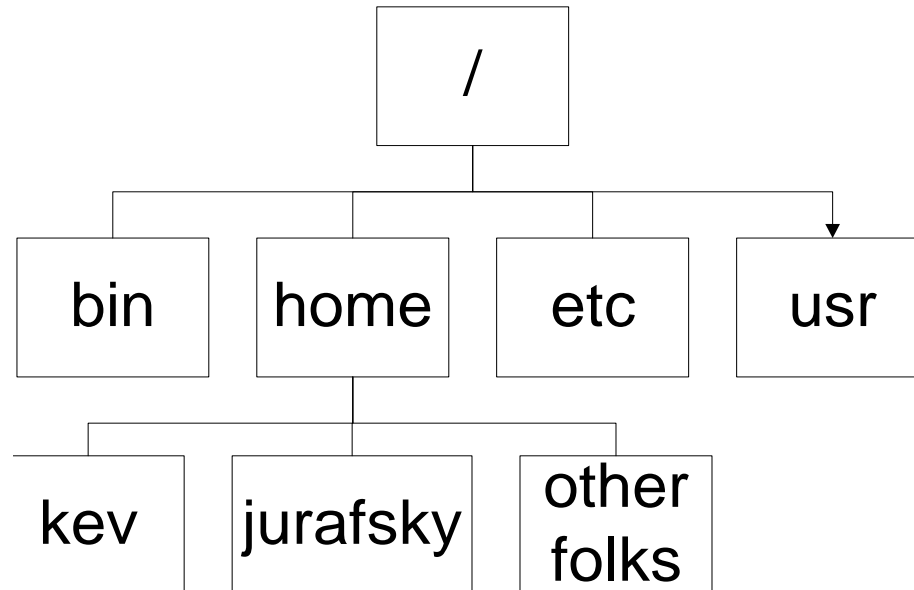
# I'm in `/home/kev`, and I want to see the contents of `/home/jurafsky`

- Using relative path:

```
ls ../jurafsky
```

- Using absolute path:

```
ls /home/jurafsky
```



You've seen this slide before, but  
it didn't sink in at the time

- `ls` to list contents, `cd` to navigate
- `/home/kev` shortcut: `~`
- “the directory above this one”: `..`
- “this directory”: `.`

# More things you can do with files

- View their contents
- Copy
- Rename/move them
- Delete them
- Count contents
- Compare their contents

**Please open a terminal and ssh to babel**

# Viewing file contents

- The whole thing at once
- The whole thing, a bit at a time
- Just part of it

# Viewing file contents

- The whole thing at once
- `cat filename`
- Example:
- `cd`
- `ls -a`
- `cat .cshrc`

# Viewing file contents

- The whole thing, a bit at a time
- `more filename`
- Example:
- `ls /corpora/celex/english`
- `more /corpora/celex/english/README`

# Viewing file contents

- Just some of it (just the beginning)
- `head filename`
- `head -number_of_lines filename`
- **Example:**
- `head /corpora/celex/english/README`
- `head -20 /corpora/celex/english/README`

# Viewing file contents

- Just some of it (just the end)
- `tail filename`
- `tail -number_of_lines filename`
- **Example:**
- `head /corpora/celex/english/README`
- `head -20 /corpora/celex/english/README`

# Copying: cp

- A ditransitive verb
- `cp original_file new_file`
- Example:
- `cd`
- `cp .cshrc .cshrc_bak`

# Caution: no guardrails

- touch junk
- cat junk
- cp .cshrc junk
- cat junk

# Moving/renaming: mv

- A ditransitive verb
- `mv original_file new_file`
- Example 1:
- `cd`
- `ls`
- `mv .cshrc.bak .cshrc_bak01`

# Moving/renaming: mv

- A ditransitive verb
- `mv original_file new_file`
- Example 1:
- `cd`
- `ls`
- `mv .cshrc.bak .cshrc_bak01`

Renames the file

# Moving/renaming: mv

- A ditransitive verb
- `mv original_file new_file`
- Example 2:
- `cd ling5200`
- `ls`
- `mv ../junk .`

# Moving/renaming: mv

- A ditransitive verb
- `mv original_file new_file`
- Example 2:
- `cd ling5200`
- `ls`
- `mv ../junk .`

**Moves the file from parent  
to current directory**

# Moving/renaming: mv

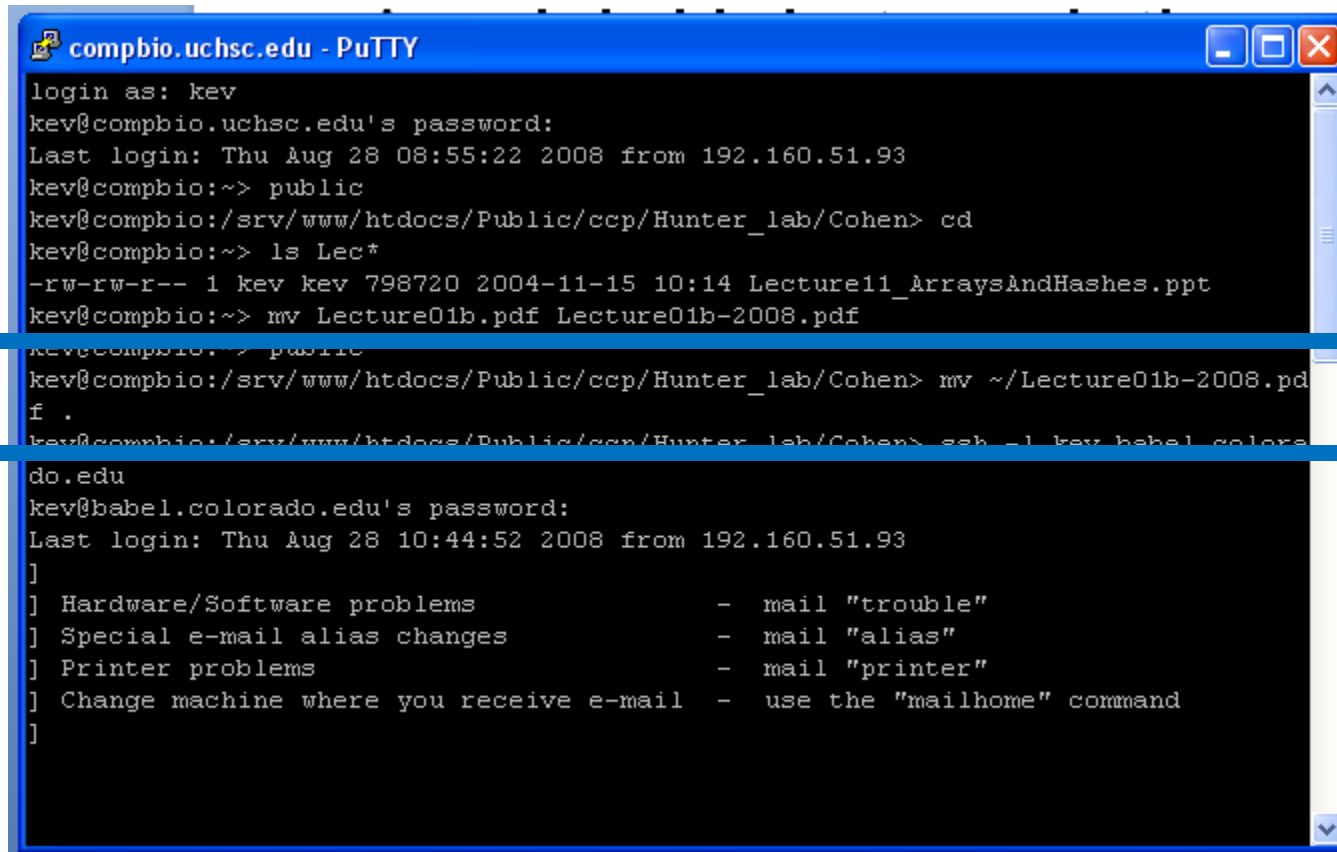
- A ditransitive verb
- `mv original_file new_file`
- Example 3:
- `cd ling5200`
- `ls`
- `mv ../junk mango`

# Moving/renaming: mv

- A ditransitive verb
- `mv original_file new_file`
- Example 3:
- `cd ling5200`
- `ls`
- `mv ../junk mango`

**Moves from parent to current directory  
and changes name**

# A quick Unix translation exercise



```
compbio.uchsc.edu - PuTTY
login as: kev
kev@compbio.uchsc.edu's password:
Last login: Thu Aug 28 08:55:22 2008 from 192.160.51.93
kev@compbio:~> public
kev@compbio:~/srv/www/htdocs/Public/ccp/Hunter_lab/Cohen> cd
kev@compbio:~> ls Lec*
-rw-rw-r-- 1 kev kev 798720 2004-11-15 10:14 Lecture11_ArraysAndHashes.ppt
kev@compbio:~> mv Lecture01b.pdf Lecture01b-2008.pdf
kev@compbio:~> public
kev@compbio:~/srv/www/htdocs/Public/ccp/Hunter_lab/Cohen> mv ~/Lecture01b-2008.pdf f .
kev@compbio:~/srv/www/htdocs/Public/ccp/Hunter_lab/Cohen> ssh -l kev babel colorado.edu
do.edu
kev@babel.colorado.edu's password:
Last login: Thu Aug 28 10:44:52 2008 from 192.160.51.93
]
] Hardware/Software problems           - mail "trouble"
] Special e-mail alias changes         - mail "alias"
] Printer problems                     - mail "printer"
] Change machine where you receive e-mail - use the "mailhome" command
]
```

# man pages

- Unix's help facility
- Syntax: `man command_name`
- E.g.: `man cp`

```
NAME
  cp - copy files

SYNOPSIS
  /usr/bin/cp [ -fip ] source file target file

  /usr/bin/cp [ -fip ] source file ... target

  /usr/bin/cp -r | -R [ -fip ] source dir ... target

  /usr/xpg4/bin/cp [ -fip ] source file target file

  /usr/xpg4/bin/cp [ -fip ] source file ... target

  /usr/xpg4/bin/cp -r | -R [ -fip ] source dir ... target

DESCRIPTION
  In the first synopsis form, neither source file nor
  target file are directory files, nor can they have the same
  --More-- (8%)
```



To see more, hit the spacebar

# Comparing files: `diff`

- A ditransitive verb
- `diff one_file another_file`
- Example 3:
- `cd ling5200`
- `diff ../junk mango`
- `touch junk`
- `diff junk mango`

# man pages

- Name
- Synopsis of syntax
- Description
- Options



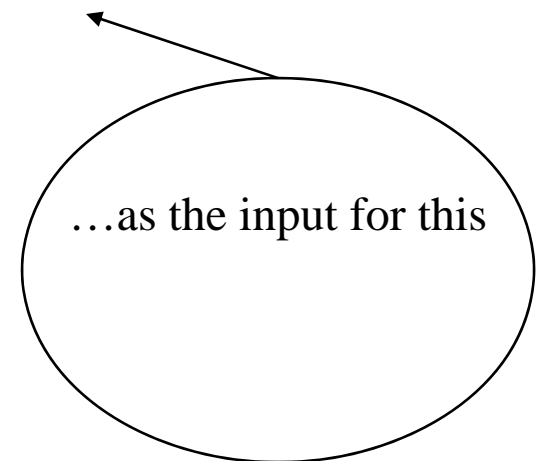
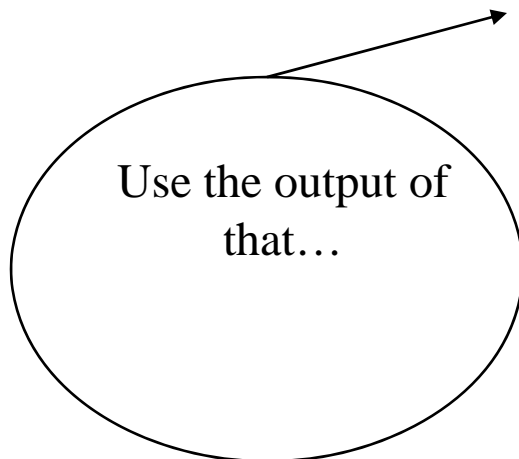
# Some important Unix concepts

- Redirection
- Security/permissions
- Environment

# Piping and redirection

- Piping: sending the output of one command to another command as its input

```
cat .cshrc | wc
```



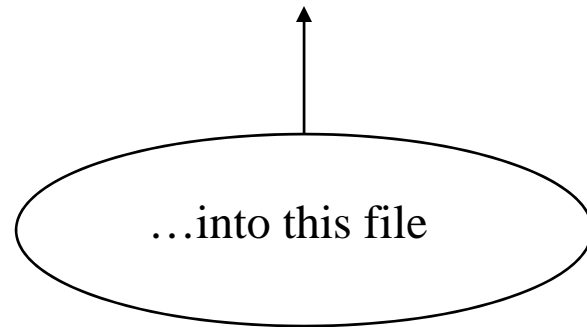
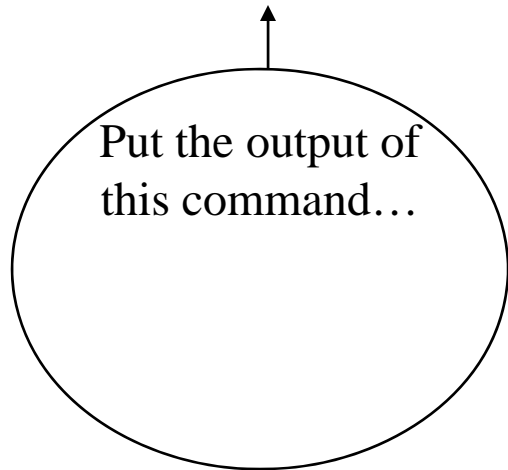
# Piping and redirection

- `ls -l /corpora2`
- `ls -l /corpora2 | head`
- `ls -l /corpora2 | head -5`

# Piping and redirection

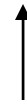
- Redirection: sending output someplace other than to your screen

```
ls -l /corpora2 > corpora2_contents
```



# Piping and redirection

- If the file doesn't already exist...
- If the file does already exist...
- `>>`
- `cat .cshrc > junk`
- `ls -lt /corpora2 >> junk`



No space!