

CSE 11 Discussion

with your host, Chris Taylor

SSH Basics

- SSH (secure shell) is how we log in remotely and complete assignments
- (How you log in varies by system)
- Your username can be found using the ACMS account lookup tool:
<https://sdacs.ucsd.edu/~icc/index.php>
- Password is what you're used to on your UCSD account

Setting up your stuff (Mac)

- Download and install Xquartz
<http://www.xquartz.org>

- Leave it running → 

- To login to the remote server, do:
`ssh -X cs11wb??@ieng6.ucsd.edu`

- To transfer files, use “scp”

- `scp [source] [destination]`

- Same syntax as “cp” command, except with remote files

- e.g.:

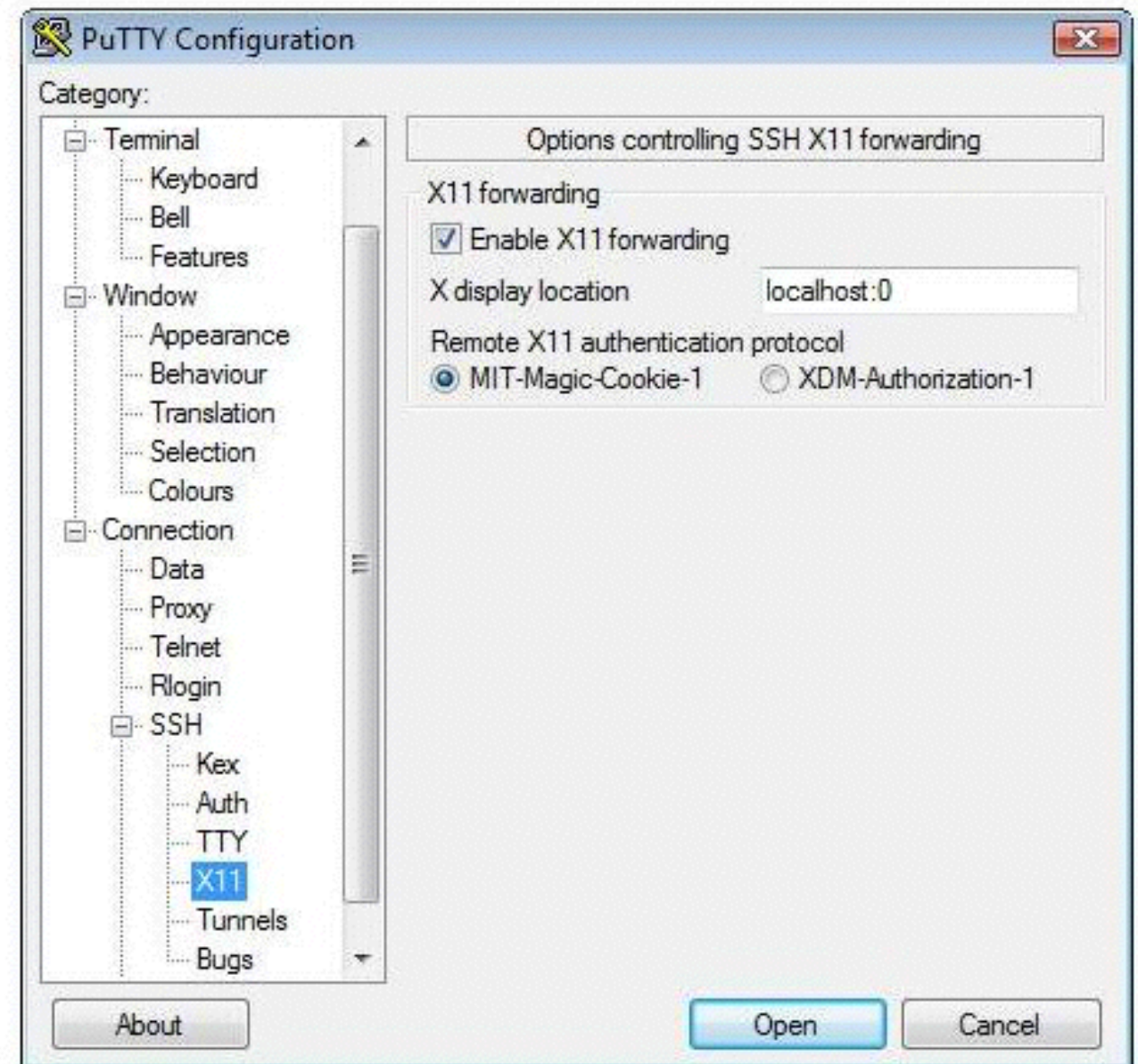
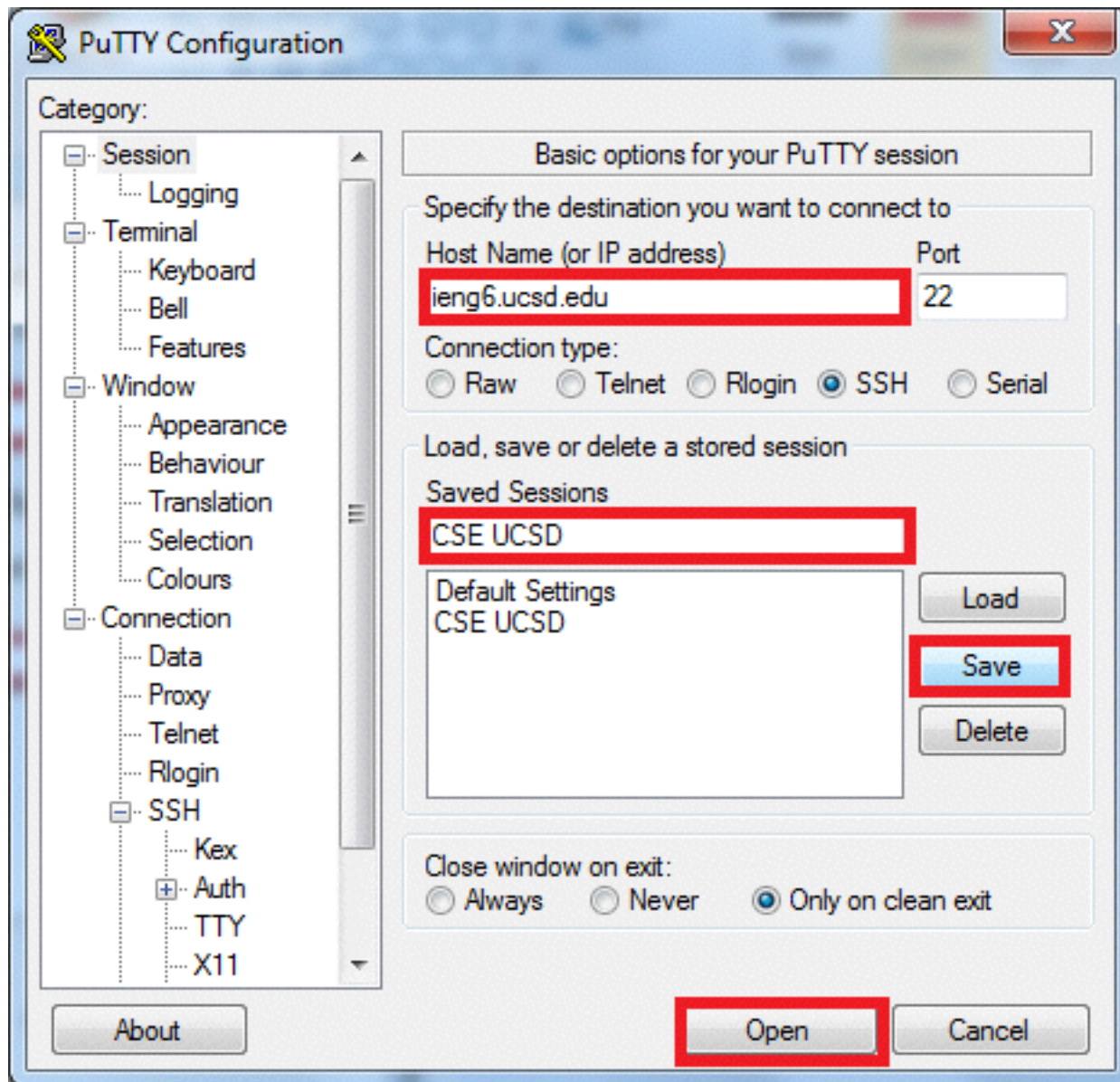
`scp fluttershy.jpg cs11wb1@ieng6.ucsd.edu:~/` (here to there)

`scp cs11wb1@ieng6.ucsd.edu:~/fluttershy.jpg ./` (there to here)

Setting up your stuff (Windows)

- Install Putty for SSH
- Install WinSCP for file transfers
- <https://sites.google.com/a/eng.ucsd.edu/cse-11-winter-2015-mwf/remote-lab-access>
- Install Xming and xming-fonts so you can see graphics

Putty setup



Linux basics

- `pwd` print working directory
- `ls` list contents of current directory
- `cd` change directory
- `mv` move (rename) a file
- `cp` copy
- `rm` remove
- `rmdir` remove directory
- `mkdir` make directory
- `chmod` change permissions of file or directory

Linux shell shortcuts

- (these could save you a ton of time)
- TAB is your best friend; completes names of files and commands
- Up/down arrow: cycle through last commands entered
- ctrl+a: jump to beginning
- ctrl+e: jump to end
- ctrl+left arrow/right arrow: jump left/right between words
- ctrl+u: cut everything
- ctrl+w: cut one word
- ctrl+y: paste
- ctrl+r: search for previously entered command

Vim or Emacs

- Your choice, neither is better.
- Setup:
`cp /home/linux/ieng6/cs11wb/public/HW1/.vimrc ~/`
`cp /home/linux/ieng6/cs11wb/public/HW1/.emacs ~/`
- Run using `gvim` or `emacs`

Basic Java

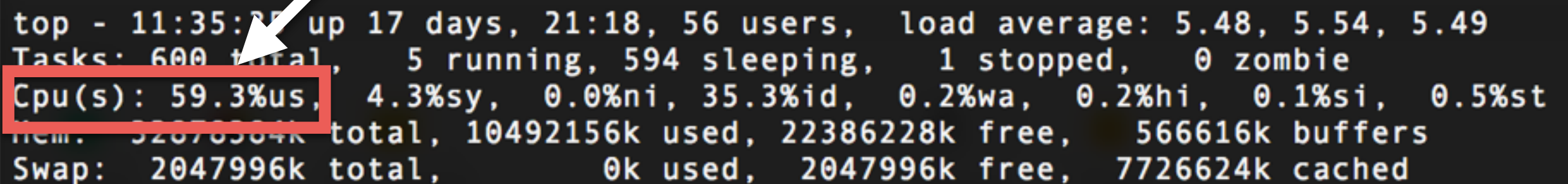
- `javac`: compile first
`java`: run
- Example from homework 1:
`javac Debug.java`
`java Debug`
- Prepare for tons of error messages
- Google/Stack Overflow/Piazza are your friends

Questions

Some advanced stuff

- For OS X/Linux users: sshfs lets you mount remote filesystems like folders
- autojump: spend less time doing **cd**
- **top** command: see how slow ieng6 is

CPU usage



```
top - 11:35:25 up 17 days, 21:18, 56 users,  load average: 5.48, 5.54, 5.49
Tasks: 600 total,   5 running, 594 sleeping,   1 stopped,   0 zombie
Cpu(s): 59.3%us,   4.3%sy,   0.0%ni, 35.3%id,   0.2%wa,   0.2%hi,   0.1%si,   0.5%st
Mem:  32878384k total, 10492156k used, 22386228k free,   566616k buffers
Swap:  2047996k total,    0k used,  2047996k free,  7726624k cached
```