

Lesson Module Checklist

- Slides
- WB
- Flash cards
- Page numbers
- 1st minute quiz
- Web Calendar summary
- Web book pages
- Commands
- Lab tested
- Put sonnet6, bigfile in depot
- Real test 1 on standby
- Updated /etc/cis90-passwd
- Forbidden web page updated
- 9V backup battery for microphone
- Backup slides, CCC info, handouts on flash drive

Introductions and Credits



Jim Griffin

- Created this Linux course
- Created Opus and the CIS VLab
- Jim's site: <http://cabrillo.edu/~jgriffin/>



Rich Simms

- HP Alumnus
- Started teaching this course in 2008 when Jim went on sabbatical
- Rich's site: <http://simms-teach.com>

And thanks to:

- John Govsky for many teaching best practices: e.g. the First Minute quizzes, the online forum, and the point grading system (<http://teacherjohn.com/>)



Daniel



Riley



Solomon



Instructor: **Rich Simms**
Dial-in: **888-450-4821**
Passcode: **761867**



Curtis



Dillon



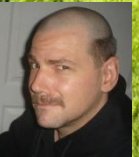
Pam



Aarron



Liz



Gabe



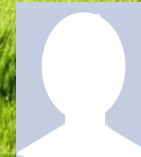
Lucie



Liam



Michael L.



Ryan



Ben L.



Roger



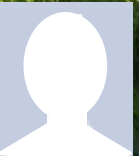
Ariana



Evan



Alex



Natalia



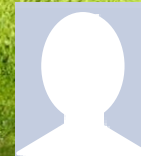
Perky



Samantha



Paul S.



Hilario



Tyrone



Ben C.



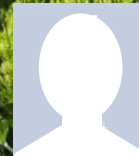
Justin



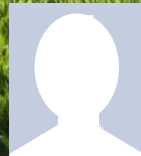
Andrew



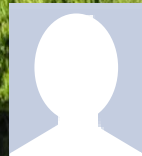
Jordan



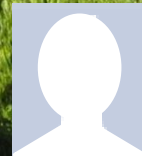
Mark



Ryan



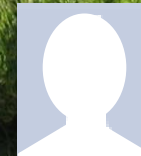
Greg



MJ



Jay



Rich

First Minute Quiz

Please answer these questions **in the order** shown:

No Quiz today ... test instead

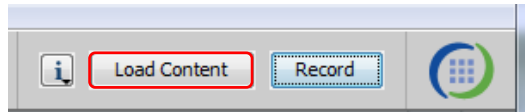
For credit email answers to:

`risimms@cabrillo.edu`

within the **first few minutes of class**

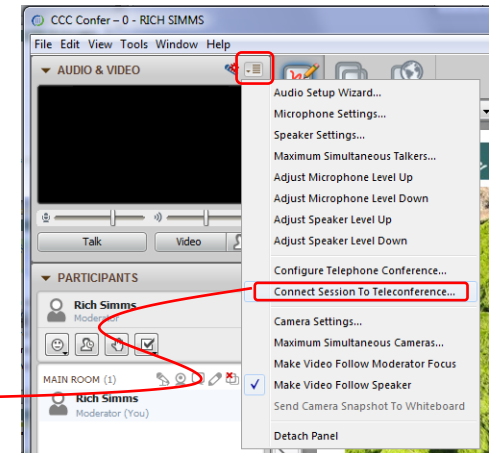
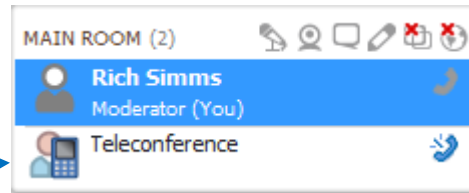


[] Preload White Board with *cis*lesson??*-WB*



[] Connect session to Teleconference

Session now connected to teleconference



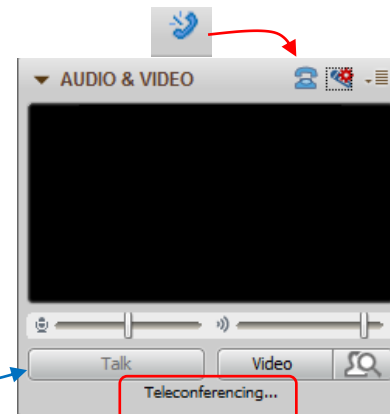
[] Is recording on?



Red dot means recording

[] Use teleconferencing, not mic

Should be greyed out





- [] Video (webcam) optional
- [] layout and share apps

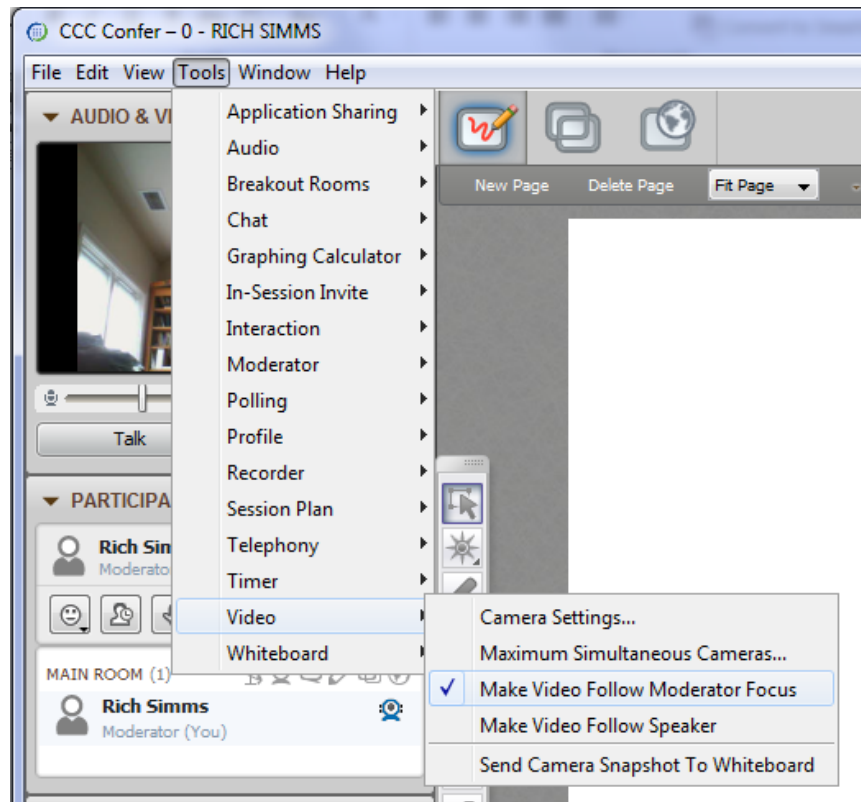
A screenshot of a desktop environment with several applications open. On the left is the "CCC Confer" application window showing a video feed of Rich Simms. In the center is a "Foxit Reader" window displaying a PDF document titled "cis90lesson07.pdf". To the right is a "Chrome" browser window showing a webpage from "simms-teach.com/docs/cis90/cis-90-TEST-1-Fall-12.pdf". Below the browser is a "vSphere Client" window showing a list of virtual machines. In the foreground, a "Putty" terminal window is open, displaying a login prompt for "simben90@oslab:~" and a list of files (boot, bin, etc, sbin, mail, ls). Red arrows point from the text labels "foxit for slides", "chrome", and "vSphere Client" to their respective windows. The desktop taskbar at the bottom shows various icons including the Start button, Internet Explorer, Firefox, and several application icons. The system clock in the bottom right corner indicates 6:52 AM on 10/10/2012.



[] Video (webcam) optional

[] Follow moderator

[] Double-click on postages stamps



Universal Fix for CCC Confer:

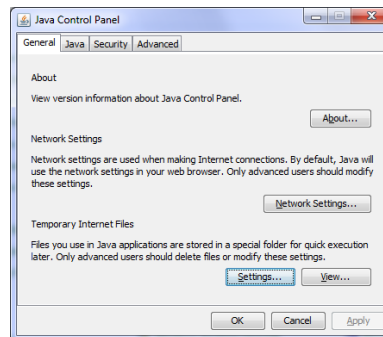
- 1) Shrink (500 MB) and delete Java cache
- 2) Uninstall and reinstall latest Java runtime



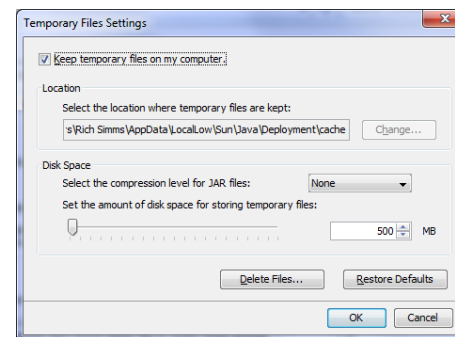
Control Panel (small icons)



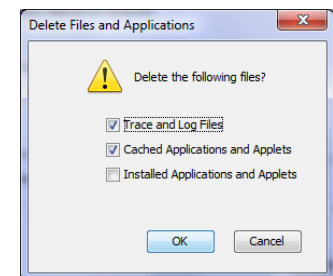
General Tab > Settings...



500MB cache size



Delete these



Google Java download



Managing Files

Objectives	Agenda
<ul style="list-style-type: none">• Be able to create, copy, move, remove and link files	<ul style="list-style-type: none">• Questions• Test Prep• Housekeeping• Managing files• Wrap up• Test

Questions

Questions

Lesson material?

Labs?

How this course works?

Chinese
Proverb

他問一個問題，五分鐘是個傻子，他不問一個問題仍然是一個傻瓜永遠。

He who asks a question is a fool for five minutes; he who does not ask a question remains a fool forever.

Lab 4

Post

Mortem

Lab 4 results

01	XXXX	14	XXX
02	XXXXXXXXXX	15	XXXXXXXXXXXXXX
03	XXXX	16	XX
04	XXXXX	17	XXXXXXXXXXXXXXXXXXXXXX
05	XXXXXXXXXX	18	XXX
06	XXXX	19	XXXXXXX
07	XXXXX	20	XXXXX
08	XXXXXXX	21	XXXXXXXXXXXXXXXXXXXXXX
09	XXXXXXX	22	XXXX
10	XXXXXXX	23	XXXX
11	XXXXXXX	24	XXX
12	XXX	25	XXXXXXXXXX
13	XX		

The most missed questions were 2, 5, 15, 17, 21 and 25

I received one submittal that must have been a PDF attachment sent to my Opus email and is not readable. Please forward original message to me from your sent tray to preserve timestamps.

Lab 4 - Q2

2) Relative to your home directory, what is the pathname of the tiger file in the Blake subdirectory?

Correct answer: **Poems/Blake/tiger**

OK answer: **./Poems/Blake/tiger**

Incorrect answers:

tiger

/Poems/Blake

/Poems/Blake/tiger

home/cis90/xxxxxx/Poems/Blake

/home/cis90/xxxxxx/Poems/Blake/tiger *Not relative pathname*

ls /Poems/Blake/tiger *Pathnames do not include commands*

} *Fails the ls test*

Using **ls** test on Opus:

```
/home/cis90/simben $ ls Poems/Blake/tiger
```

```
Poems/Blake/tiger
```

Lab 4 - Q5

5) Are any of your hidden files directories? If so, which ones?

Correct answers: `., .., .ssh`

Incorrect answers:

`.bash_history` *this is not a directory*
`.plan` *this is not a directory*
`none` *hidden directories start with a .*

Checking answer on Opus:

/home/cis90/simben \$ ls -lad .*

hidden files start with a .

<code>drwxr-xr-x.</code>	10	simben90	cis90	4096	Sep 27 12:37	<code>.</code>
<code>drwxr-x---</code>	34	rsimms	cis90	4096	Sep 11 12:02	<code>..</code>
<code>-rw-----.</code>	1	simben90	cis90	14518	Sep 30 09:01	<code>.bash_history</code>
<code>-rw-----.</code>	1	simben90	cis90	24	Jul 20 2001	<code>.bash_logout</code>
<code>-rw-----.</code>	1	simben90	cis90	354	Sep 17 2003	<code>.bash_profile</code>
<code>-rw-----.</code>	1	simben90	cis90	146	Jan 18 2004	<code>.bashrc</code>
<code>-rw-----.</code>	1	simben90	cis90	41	Sep 19 18:41	<code>.lessht</code>
<code>-rw-r--r--.</code>	1	simben90	cis90	40	Jul 20 2001	<code>.plan</code>
<code>drwx-----.</code>	2	simben90	cis90	4096	Aug 2 14:23	<code>.ssh</code>

Lab 4 - Q15

15) What file or files in your home directory should you not view with the cat or more commands?

Correct answer: **what_am_i**

Checking answer on Opus:

```
/home/cis90/simben $ file *
bigfile:          ISO-8859 English text, with overstriking
bin:              directory
dead.letter:      ASCII mail text
empty:            empty
Hidden:           directory
lab01.graded:     ASCII text
lab01-submitted:  ASCII text
lab02.graded:     ASCII English text
lab03.graded:     ASCII English text
Lab2.0:           directory
Lab2.1:           directory
letter:           ASCII English text
log:              ASCII text
```

Use the **file** command to classify files. Use * which bash will expand to all non-hidden files in the directory as arguments to the file command.

All these are text files or directories

Lab 4 - Q15

```
mbox:          ASCII mail text, with very long lines
Miscellaneous: directory
mission:       ASCII English text
Poems:         directory
proposal1:     ASCII English text
proposal2:     ASCII English text
proposal3:     ASCII English text
small_town:    ASCII English text
spellk:        ASCII English text
text.err:      ASCII text
text.fxd:      ASCII text
timecal:       shell archive or script for antique kernel text
uhistory:      ASCII mail text
what_am_i:     data
/home/cis90/simben $
```

*These are all directories or text files ...
EXCEPT **what_am_i** which contains
binary data*

Even timecal is a text file (a script)

```
/home/cis90/roddyduk $ cat what_am_i
H/./>/..#.#.mailrc!.profile+HiddenLab3.1.1%Lab3.1.2f*PoemsReference8bigfile
$bi!mailfoldersa_very_long_filenameerrors/fruita/greeting,lettermys
tery^proposal1,proposal29timecal/home/cis90/roddyduk $
```

*Binary/data files contain unprintable characters that spew garbage on the screen. Text commands like **cat**, **head**, **more**, ..., etc. do not handle the unprintable characters gracefully. If your terminal gets messed up try the **reset** command.*

Lab 4 - Q17

17) What ls command-line allows you to see the permissions of your home directory while you are in your home directory?

Correct answer: **ls -ld** *(and many other solutions shown below)*

Checking answer on Opus:

Use the d option in conjunction with the l option to show information on the directory itself rather than its contents.

```
/home/cis90/simben $ ls -ld
drwxr-xr-x. 10 simben90 cis90 4096 Sep 27 12:37 .
```

or /home/cis90/simben \$ **ls -ld /home/cis90/simben/**
drwxr-xr-x. 10 simben90 cis90 4096 Sep 27 12:37 /home/cis90/simben/

or /home/cis90/simben \$ **ls -ld \$HOME**
drwxr-xr-x. 10 simben90 cis90 4096 Sep 27 12:37 /home/cis90/simben

or /home/cis90/simben \$ **ls -ld ~**
drwxr-xr-x. 10 simben90 cis90 4096 Sep 27 12:37 /home/cis90/simben

permissions

Lab 4 - Q17

Or do a long listing of the parent directory and locate your home directory in the output

```
/home/cis90/simben $ ls -l ..
```

```
total 168
```

```
< snipped >
```

```
drwxr-xr-x.  9 mennat90 cis90 4096 Mar 17 19:03 mennat
drwxr-xr-x.  9 milhom90 cis90 4096 Mar  6 13:53 milhom
drwxr-xr-x.  9 paljay90 cis90 4096 Mar 19 00:10 paljay
drwxr-xr-x.  9 perste90 cis90 4096 Mar 14 16:55 perste
drwxr-xr-x.  9 rodduk90 cis90 4096 Mar  1 12:25 rodduk
drwxr-xr-x.  9 rutsam90 cis90 4096 Mar 15 12:56 rutsam
drwxr-xr-x.  9 schrya90 cis90 4096 Mar 15 12:56 schrya
drwxr-xr-x.  9 shepau90 cis90 4096 Mar 15 12:56 shepau
drwxr-xr-x.  9 simben90 cis90 4096 Mar 14 15:56 simben
drwxr-xr-x.  9 valjus90 cis90 4096 Mar 15 12:56 valjus
drwxr-xr-x.  9 vashil90 cis90 4096 Mar 15 12:56 vashil
drwxr-xr-x.  9 wiltyr90 cis90 4096 Mar 15 12:56 wiltyr
drwxr-xr-x.  9 wismar90 cis90 4096 Mar 16 15:16 wismar
```

Lab 4 - Q21

21) What command will set your prompt to show your current working directory path and a \$?

Correct answer: `PS1=' $PWD $ '`

Incorrect answers:

`' $PWD $ '` *(bash will produce error message)*

`PS1=$PWD $` *(bash will produce error message)*

`PS1="$PWD $ "` *(bash will expand \$PWD too soon and produce static prompt)*

`pwd` *(doesn't change the prompt variable PS1)*

Checking answer on Opus:

`/home/cis90/simben $ PS1="Fix me: $"`

`Fix me: $PS1=' $PWD $ '`

`/home/cis90/simben $ cd /`

`/ $ cd`

`/home/cis90/simben $ cd ~/Poems/`

`/home/cis90/simben/Poems $`

static prompt to test new prompt

*dynamic prompt which
changes as you move about
file tree*

Lab 4 - Q25

- 24) What file in the Miscellaneous directory is a symbolic link to another file?
25) What is the inode number of the file being linked to?

Correct answer: **varies by student**

The 1 code indicates this is a symbolic link

```
/home/cis90/simben $ ls -l Miscellaneous/
total 28
-rw-r--r--. 1 simben90 cis90 1382 Feb 1 2002 better_town
-rw-r--r--. 1 simben90 cis90 148 Jul 20 2001 file.dos
-rw-r--r--. 1 simben90 cis90 78 Oct 26 2004 fruit
-rw-r--r--. 2 simben90 cis90 10576 Jul 20 2001 manpage
lrwxrwxrwx. 1 simben90 cis90 20 Aug 1 16:55 mystery -> ../bin/enlightenment
-rw-r--r--. 1 simben90 cis90 78 Apr 17 2004 salad
/home/cis90/simben $ ls -li bin/enlightenment
9636 bin/enlightenment
```

The mystery file is a symbolic link to the enlightenment file in the user's bin directory

Lab 4 - Q25

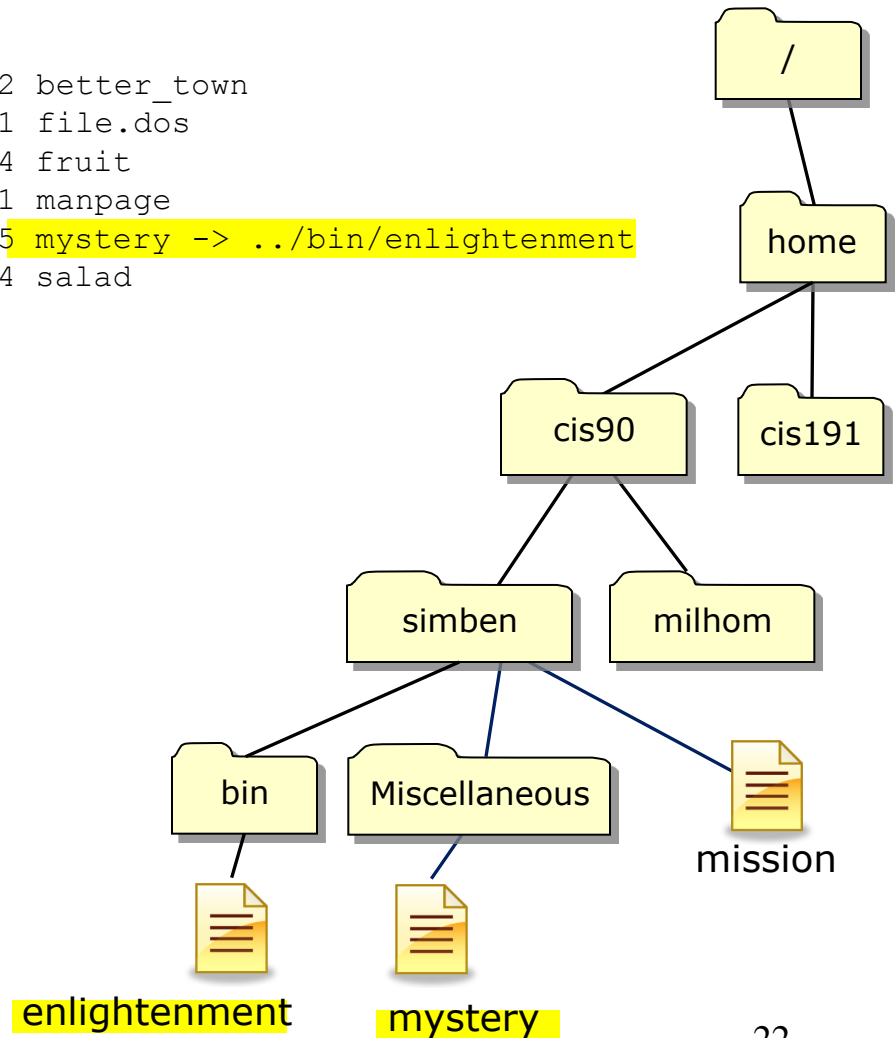
```
/home/cis90/simben $ ls -l Miscellaneous/
total 28
```

```
-rw-r--r--. 1 simben90 cis90 1382 Feb 1 2002 better_town
-rw-r--r--. 1 simben90 cis90 148 Jul 20 2001 file.dos
-rw-r--r--. 1 simben90 cis90 78 Oct 26 2004 fruit
-rw-r--r--. 2 simben90 cis90 10576 Jul 20 2001 manpage
lrwxrwxrwx. 1 simben90 cis90 20 Aug 1 16:55 mystery -> ../bin/enlightenment
-rw-r--r--. 1 simben90 cis90 78 Apr 17 2004 salad
```

```
/home/cis90/simben $ ls -li bin/enlightenment
```

```
9636 bin/enlightenment
```

The mystery file is a symbolic link to the enlightenment file in the user's bin directory



Lab 4 - Extra Credit

Bonus) With what command can you list only the hidden files of your home directory?

```
/home/cis90/simben $ echo .*  
. .. .bash_history .bash_logout .bash_profile .bashrc .lessht .plan .ssh .vim  
.viminfo
```

or

```
/home/cis90/simben $ ls -d .*  
. .bash_history .bash_profile .lessht .ssh .viminfo  
.. .bash_logout .bashrc .plan .vim
```

or

```
/home/cis90/simben $ ls -a | grep '^\.'  
.br/>.br/>..br/>.bash_historybr/>.bash_logoutbr/>.bash_profilebr/>.bashrcbr/>.lesshtbr/>.planbr/>.sshbr/>.vimbr/>.viminfo
```

This last command has several elements that we have not yet studied: piping, grep command and regular expressions.



Housekeeping

Jay's Mac testing of PDF Forms **Chrome Browser**

cis-90-TEST-1-Spring-13-practiceTESTINChrome.pdf - Adobe Acrobat Pro

File Edit View Document Comments Forms Tools Advanced Window Help

Find

Please fill out the following form. If you are a form author, choose Distribute Form in the Forms menu to send it to your recipients. Highlight Fields

CIS 90 - Spring 2013 - PRACTICE TEST 1 - 30 points

Honor Code:
This is a practice test and you may work with others and use the forum. However on the real test you must work alone.

Name:

Instructions:
Download and save this test to your computer. Fill out the form, save it and email it as an attachment to risimms@cabrillo.edu using your regular (non-Opus) email.

PLEASE VERIFY YOU ACTUALLY SENT A NON-BLANK, COMPLETED TEST TO BE GRADED!

Part 1 - Flashcards questions (1 point each)

[Q1] What command shows the other users logged in to the computer?
[A1]

[Q2] What environment variable is used by the shell to determine which directories to search when locating a command?
[A2]

[Q3] What command can you use to "chat" with another user?
[A3]

All fields blank!

Don't use the Chrome Browser to fill out your PDF test!

Jay's testing of PDF Forms Mac Preview

cis-90-TEST-1-Spring-13-practiceTESTINPREVIEW.pdf - Adobe Acrobat Pro

File Edit View Document Comments Forms Tools Advanced Window Help

Find

Please fill out the following form. If you are a form author, choose Distribute Form in the Forms menu to send it to your recipients. Highlight Fields

CIS 90 - Spring 2013 - PRACTICE TEST 1 - 30 points

Honor Code:
This is a practice test and you may work with others and use the forum. However on the real test you must work alone.

Name: _____

Instructions:
Download and save this test to your computer. Fill out the form, **save it** and email it as an attachment to risimms@cabrillo.edu using your regular (non-Opus) email.

Part 1 - Flashcards questions (1 point each)

[Q1] What command shows the other users logged in to the computer?
[A1] _____

[Q2] What environment variable is used by the shell to determine which directories to search when locating a command?
[A2] _____

[Q3] What command can you use to "chat" with another user?
[A3] _____

Looks blank initially!

cis-90-TEST-1-Spring-13-practiceTESTINPREVIEW.pdf - Adobe Acrobat Pro

File Edit View Document Comments Forms Tools Advanced Window Help

Find

Please fill out the following form. If you are a form author, choose Distribute Form in the Forms menu to send it to your recipients. Highlight Fields

CIS 90 - Spring 2013 - PRACTICE TEST 1 - 30 points

Honor Code:
This is a practice test and you may work with others and use the forum. However on the real test you must work alone.

Name: Test completed in preview (Mac App)

Instructions:
Download and save this test to your computer. Fill out the form, **save it** and email it as an attachment to risimms@cabrillo.edu using your regular (non-Opus) email.

Part 1 - Flashcards questions (1 point each)

[Q1] What command shows the other users logged in to the computer?
[A1] etc/passwd with no leading spaces

[Q2] What environment variable is used by the shell to determine which directories to search when locating a command?
[A2] /etc/passwd with leading space

[Q3] What command can you use to "chat" with another user?
[A3] who

To see entries, blanks must be added manually to the end of each line. Leading /'s are stripped!

Don't use Mac Preview to fill out your PDF test!

Jay's Mac testing of PDF Forms **Adobe Reader**

cis-90-TEST-1-Spring-13-practiceTESTINADOBE.pdf - Adobe Acrobat Pro

File Edit View Document Comments Forms Tools Advanced Window Help

Find

Please fill out the following form. If you are a form author, choose Distribute Form in the Forms menu to send it to your recipients. Highlight Fields

CIS 90 - Spring 2013 - PRACTICE TEST 1 - 30 points

Honor Code:
This is a practice test and you may work with others and use the forum. However on the real test you must work alone.

Name: TEST in Adobe Reader

Instructions:
Download and save this test to your computer. Fill out the form, save it and email it as an attachment to visimms@cabrillo.edu using your regular (non-Opus) email.

PLEASE VERIFY YOU ACTUALLY SENT A .PDF FILE

Make Sure HW is MODIFIED

Part 1 - Flashcards questions (1 point each)

[Q1] What command shows the other users logged in to the computer?
[A1] /etc/passwd with no space in front

[Q2] What environment variable is used by the shell to determine which directories to search when locating a command?
[A2] /etc/passwd with space in front

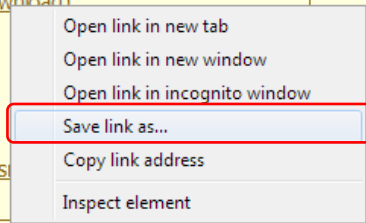
[Q3] What command can you use to "chat" with another user?
[A3] who

Works perfectly!

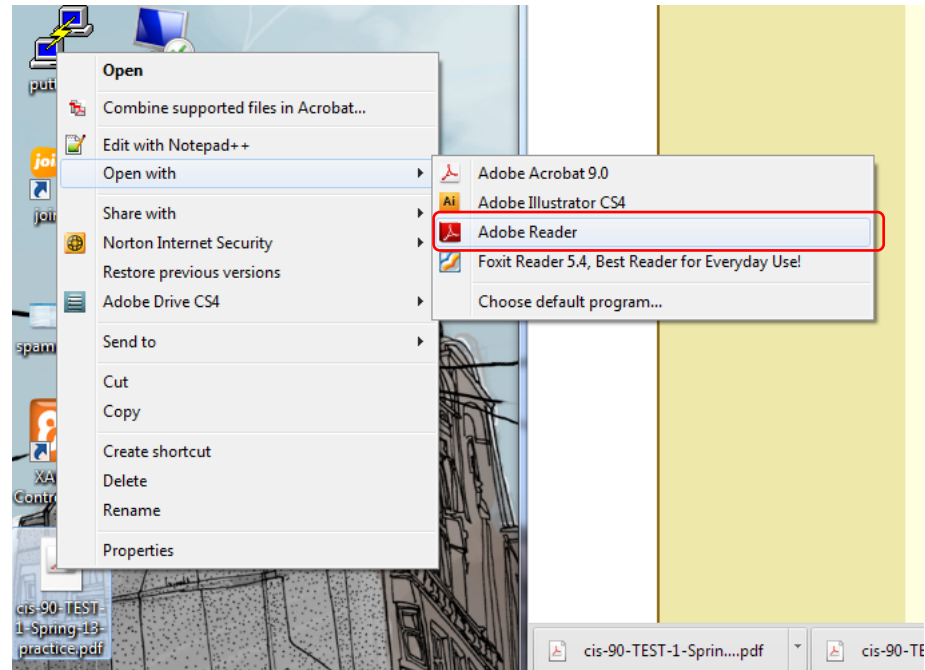
Always use Adobe Reader to fill out your tests

1

<ul style="list-style-type: none"> • Presentation slides (download) • Instructor Evaluation Form (link) • Practice test (download)
Assignment <ul style="list-style-type: none"> • NA
CCC Confer <ul style="list-style-type: none"> • Enter virtual class • Class archives
Test #1



2



This Works!

Instructions:

Download and save this test to your computer. Fill out the form using **Adobe Reader**, save it and email it as an attachment to **risimms@cabrillo.edu** using your regular (non-Opus) email.

**PLEASE VERIFY YOU ACTUALLY SENT A NON-BLANK TEST
WITH COMPLETE ANSWERS TO BE GRADED!**

Grades Web Page

<http://simms-teach.com/cis90grades.php>

Code Name	Grading Choice	Quizzes & Tests												Forum				Labs										Project	Extra Credit	Total	Grade	
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	T1	T2	T3	F1	F2	F3	F4	L1	L2	L3	L4	L5	L6	L7	L8	L9					L10
Max Points		3	3	3	3	3	3	3	3	3	3	30	30	30	20	20	20	20	30	30	30	30	30	30	30	30	30	30	60	90	560	
adaldrida	grade			3	3										20				17	24	24	10								6		
anborn	grade	3	3	3	3										20				30	29	30	27								13		
arador	grade	3		1											0				30											1		
aragorn	grade	3		3	3										16				30	29	30	25								8		
balrog	grade														0																	
bilbo	grade	3		2	3										20				27	28	30	30								13		
bombadil	grade	0	0												4				10	14												
celebrian	grade														20					24		16										
cirdan	grade	1	3		3										20				7	26	2											
durin	grade	1	2	1	3										4				27	24	30	21										
dwalin	grade	3		3	3										20				29	28	28	25										
elrond	grade	3	3	3	3										20				30	29	30	30										
eomer	grade	3	3	3	3										20				29	30	30	26										
faramir	grade	2	3	3	3										20				28	29	30	30										
frodo	grade	3	3	3	3										16				30	30	30	30										
gimli	grade	2	3		3										20				23	27	28	13										
goldberry	grade			1											0				27	26	28	27										
gwaihir	grade			2											12				30		28	10										
haldir	grade	3	2	1	2										0				25	28	22	26										
ingold	grade	0	2	3	3										20				25	28	30	21								8		
ioeth	grade	3	3	3	1										20				26	29	30	23								15		
legolas	grade		3		3										20				29	29	30	28								16		
marhari	grade														20				30	29	30	25								5		
pallando	grade		3	3	3																											
quickbeam	grade		0	0																												
samwise	grade	3	3		3																											
saoron	grade		1	3																												
shadowfax	grade	3		2	3																											
strider	grade	3	3	3	2										20				30	29	30	29								16		
theoden	grade	3	3	3	3										20				29	29	30	28								13		
treebeard	grade	3		3	3										12				30	28	30	28								8		
tulkas	grade														8				30	29	30	24								12		

Please check

- Grading Ch
- Quiz points
- Forum poin
- Lab points
- Extra Credi

Don't know your secret LOR code name?
... then email me your student survey to

Please check your:

- Grading Choice
- Quiz points
- Forum points
- Lab points
- Extra Credit points

Don't know your secret LOR code name?

... then email me your student survey to get it!

Perkins/VTEA Survey

Carl D. Perkins Career and Technical Education Act

POSTREPLY ↩

Search this topic...

Search

Carl D. Perkins Career and Technical Education Act

by Rich Simms » Fri Mar 01, 2013 8:08 pm

The Carl D. Perkins Vocational and Technical Education Act was originally authorized by Congress in 1984. It was reauthorized in 1998 and again in 2006. This act provides federal funding for improving career technical education (CTE) within the United States in order to help the economy.

For Cabrillo College to receive a portion of this funding students in technical classes must fill out a survey. The more surveys completed the more funds the college will receive. The survey only needs to be completed once per term by each student.

This survey can be completed online using web advisor:

Log on to WEBADVISOR at <https://wave.cabrillo.edu>

Select "STUDENTS: Click Here" (navy blue bar)

- Under "Academic Profile" Click on "Student Update Form"
- Use drop down list under "Select the mark" for which you are registered" and click on the current term.
- Select "SUBMIT"

Scroll down to the "Career Technical Information"

- Answer questions by clicking in the circle to the left of your "Yes" or "No" answers
- You can get definitions for a question by clicking on blue underlined phrase
- After answering all questions Select "SUBMIT"

Then "LOG OUT"

Thank you for taking a few minutes to help Cabrillo College CS/CIS programs!

- Rich

This is an important source of funding for Cabrillo College.

*Send me an email that you completed this survey for **3 points extra credit!***

<http://oslab.cabrillo.edu/forum/viewtopic.php?f=63&t=1883>



Help with labs



Like some help with labs?

I'm in the CIS Lab Monday afternoons

- See schedule at <http://webhawks.org/~cislabs/>

or see me during office hours

or contact me to arrange another time online

Managing Files



New commands for your toolbox:

touch	<i>to make a file (or update the timestamp)</i>
mkdir	<i>to make a directory</i>
cp	<i>to copy a file</i>
mv	<i>to mv or rename a file</i>
rmdir	<i>to remove a directory</i>
rm	<i>to remove a file</i>
ln	<i>to create a link</i>

Redirecting stdout:

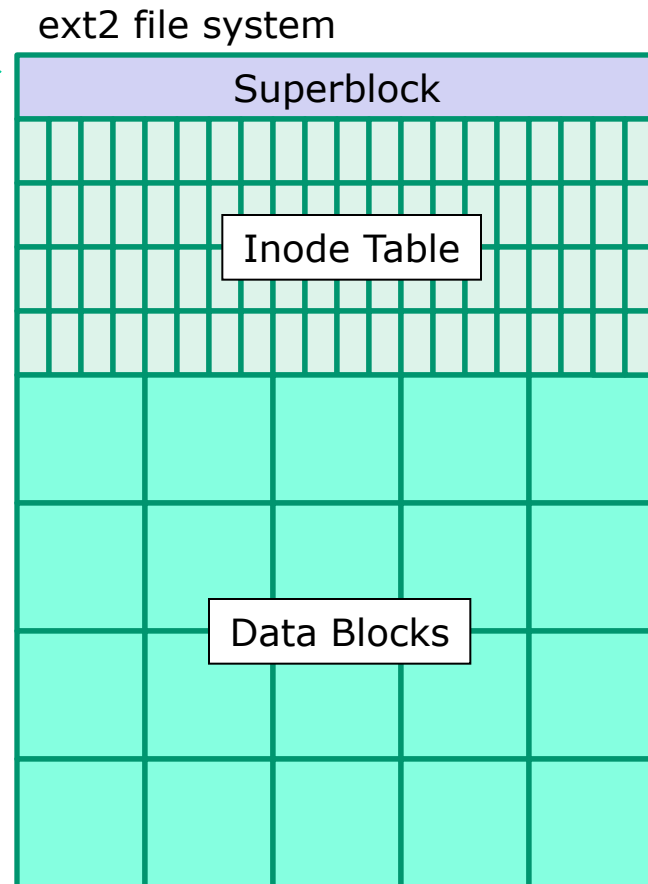
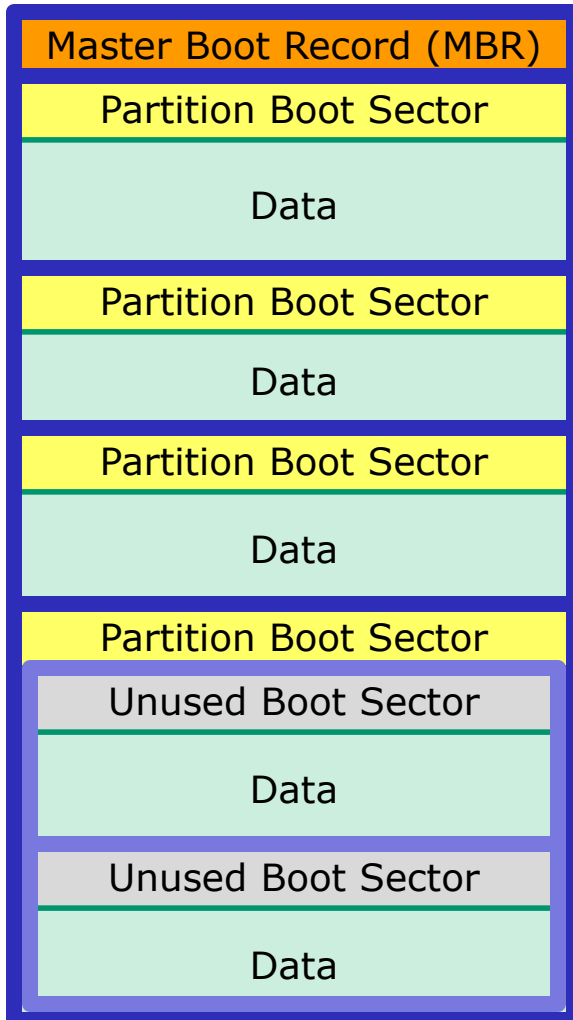
> *filename* *redirecting stdout to create/empty a file*



File Systems

Linux

The hard drive is partitioned and the data areas can be formatted as a file system. Linux typically uses ext2, ext3 and ext4 file systems. Windows uses FAT32 and NTFS file systems.



UNIX Files

The three elements of a file

```
/home/cis90/simben/Poems $ ls
ant Blake nursery Shakespeare twister Yeats
```

filename

+

```
/home/cis90/simben/Poems $ ls -li twister
102625 -rw-r--r-- 1 simben90 cis90 151 Jul 20 2001 twister
```

inode number *inode information*

inode

+

data

```
/home/cis90/simben/Poems $ cat twister
A tutor who tooted the flute,
tried to tutor two tooters to toot.
Said the two to the tutor,
"is it harder to toot? Or to
tutor two tooters to toot?"
```

filenames are stored in directories, **not** in inodes

bigfile 19470
bin 9628
letter 9662

Hello Mother! Hello Father!

Here I am at Camp Granada. Things are very entertaining, and they say we'll have some fun when it stops raining.

All the counselors hate the waiters, and the lake has alligators. You remember Leonard Skinner? He got ptomaine poisoning last night after dinner.

Now I don't want this to scare you, but my bunk mate has malaria. You remember Jeffrey Hardy? Their about to organize a searching party.

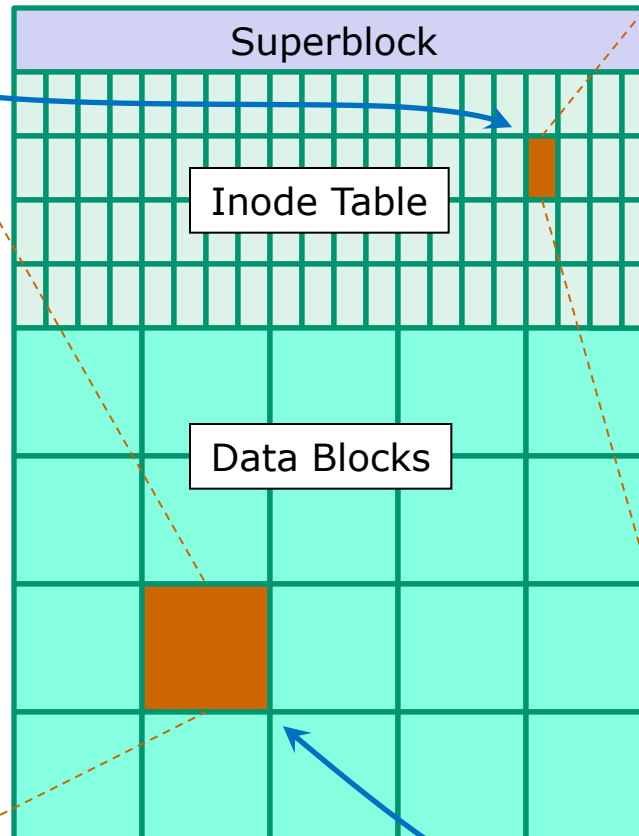
Take me home, oh Mother, Father, take me home! I hate Granada.
Don't leave me out in the forest where I might get eaten by a bear! Take me home, I promise that I won't make noise, or mess the house with other boys, oh please don't make me stay -- I've been here one whole day.

Dearest Father, darling Mother, how's my precious little brother? I will come home if you miss me. I will even let Aunt Bertha hug and kiss me!

Wait a minute! It's stopped hailing! Guys are swimming!
Guys are sailing! Playing baseball, gee that's better!
Mother, Father, kindly disregard this letter.

Alan Sherman

ext2 file system



9662	inode number
-	Type
rw-r--r--	Permissions
1	Number of links
simben90	User
cis90	Group
1044	Size
2001-07-20	Modification time
2012-09-17	Access Time
2012-08-01	Change time
Pointer(s) to data blocks	Pointer(s) to data blocks

```
/home/cis90/simmsben $ ls -il letter
```

```
9662 -rw-r--r--. 1 simben90 cis90 1044 Jul 20 2001 letter
```

Creating Files

Managing the UNIX/Linux File System

Creating Files

Commands:

touch

- creates an empty ordinary file(s), or if the file already exists, it updates the time stamp.

mkdir

- creates an empty directory(s)
- options: -p (to create nested directories)

echo "string" > filename

- Creates or overwrites a text file

Managing the UNIX/Linux File System

Creating Files

touch creates one or more empty regular files, or if the file already exists, it updates the time stamp.

A new file, named sawyer is created in the current working directory

```
/home/cis90/simmsben $ ls -l sawyer  
ls: sawyer: No such file or directory
```

```
/home/cis90/simmsben $ touch sawyer  
/home/cis90/simmsben $ ls -l sawyer  
-rw-rw-r-- 1 simmsben cis90 0 Mar 18 06:34 sawyer
```

An empty file 

Managing the UNIX/Linux File System

Creating Files

Multiple files can be created with one command

```
/home/cis90ol/simmsben $ ls -l a b c  
ls: a: No such file or directory  
ls: b: No such file or directory  
ls: c: No such file or directory
```

```
/home/cis90ol/simmsben $ touch a b c  
/home/cis90ol/simmsben $ ls -l a b c  
-rw-rw-r-- 1 simmsben cis90ol 0 Mar 17 09:27 a  
-rw-rw-r-- 1 simmsben cis90ol 0 Mar 17 09:27 b  
-rw-rw-r-- 1 simmsben cis90ol 0 Mar 17 09:27 c
```

Managing the UNIX/Linux File System

Creating Files

The last modified timestamp for sawyer is updated if the file already exists

```
/home/cis90/simmsben $ ls -l sawyer
```

```
-rw-rw-r-- 1 simmsben cis90 0 Mar 18 06:34 sawyer
```

```
/home/cis90/simmsben $ touch sawyer
```

```
/home/cis90/simmsben $ ls -l sawyer
```

```
-rw-rw-r-- 1 simmsben cis90 0 Mar 18 06:40 sawyer
```

Last modified



Managing the UNIX/Linux File System

Creating Files

mkdir creates one or more new directories

Create a new directory named island

```
/home/cis90/simmsben $ ls -l island  
ls: island: No such file or directory
```

```
/home/cis90/simmsben $ mkdir island  
/home/cis90/simmsben $ ls -ld island  
drwxrwxr-x 2 simmsben cis90 4096 Mar 18 06:43 island
```

Note: Use the d option on the ls command to list information about the directory itself rather than directory contents

file type is directory

Managing the UNIX/Linux File System

Creating Files

Create multiple directories at once

```
/home/cis90ol/simmsben $ mkdir redhat debian slackware  
/home/cis90ol/simmsben $ ls -ld redhat/ debian/ slackware/  
drwxrwxr-x 2 simmsben cis90ol 4096 Mar 17 09:36 debian/  
drwxrwxr-x 2 simmsben cis90ol 4096 Mar 17 09:36 redhat/  
drwxrwxr-x 2 simmsben cis90ol 4096 Mar 17 09:36 slackware/
```

Note: Use the d option on the ls command to list information about the directory itself rather than directory contents

Managing the UNIX/Linux File System

Creating Files

Create nested directories (one directory inside another)

```
/home/cis90/simmsben $ mkdir africa/ghana  
mkdir: cannot create directory `africa/ghana': No  
such file or directory
```

```
/home/cis90/simmsben $ mkdir -p africa/ghana  
/home/cis90/simmsben $ ls africa  
ghana
```

Need to use the p option to create new parent directories as needed

Managing the UNIX/Linux File System

Creating Files

echo "string" > newfile Creates or overwrites a text file

Creating a file named accra and adding some text to it

```
/home/cis90/simmsben $ cd africa
/home/cis90/simmsben/africa $ ls
ghana
/home/cis90/simmsben/africa $ cd ghana
/home/cis90/simmsben/africa/ghana $ echo Population 1,658,937 > accra
/home/cis90/simmsben/africa/ghana $ cat accra
Population 1,658,937
```

Output of the echo command is redirected from the screen to a file named accra



Managing the UNIX/Linux File System

Creating Files

Be careful!



```
/home/cis90/simmsben/africa/ghana $ cat accra
Population 1,658,937
/home/cis90/simmsben/africa/ghana $ > accra
/home/cis90/simmsben/africa/ghana $ cat accra
/home/cis90/simmsben/africa/ghana $
```

*The redirection character > will create the file named if that file does not exist. **If the file does exist though it will be emptied!***

Class Exercise

- In your home directory create a directory named *characters* inside a directory name *island*.

```
mkdir -p island/characters
```

- In the directory named *characters* create three files:

```
cd island/characters  
echo "Katherine Anne Austin" > kate  
echo "James Ford" > sawyer  
echo "Hugo Reyes" > hurley
```

- Print all files with **cat ***
- Empty the file *hurley*

```
> hurley
```

Listing Files

Managing the UNIX/Linux File System

Short listing

```
/home/cis90/simmsben $ ls island  
characters
```

Short recursive listing

```
/home/cis90/simmsben $ ls -R island  
island:  
characters  
  
island/characters:  
hurley kate sawyer
```

Managing the UNIX/Linux File System

Long listing

```
/home/cis90/simmsben $ ls -l island  
total 8  
drwxrwxr-x 2 simmsben cis90 4096 Mar 18 07:25 characters
```

Long recursive listing

```
/home/cis90/simmsben $ ls -lR island  
island:  
total 8  
drwxrwxr-x 2 simmsben cis90 4096 Mar 18 07:25 characters
```

```
island/characters:  
total 24  
-rw-rw-r-- 1 simmsben cis90 11 Mar 18 07:25 hurley  
-rw-rw-r-- 1 simmsben cis90 22 Mar 18 07:25 kate  
-rw-rw-r-- 1 simmsben cis90 11 Mar 18 07:25 sawyer
```

Managing the UNIX/Linux File System

Making a directory tree diagram

```
/home/cis90/simmsben $ tree island
```

```
island
```

```
`-- characters  
    |-- hurley  
    |-- kate  
    `-- sawyer
```

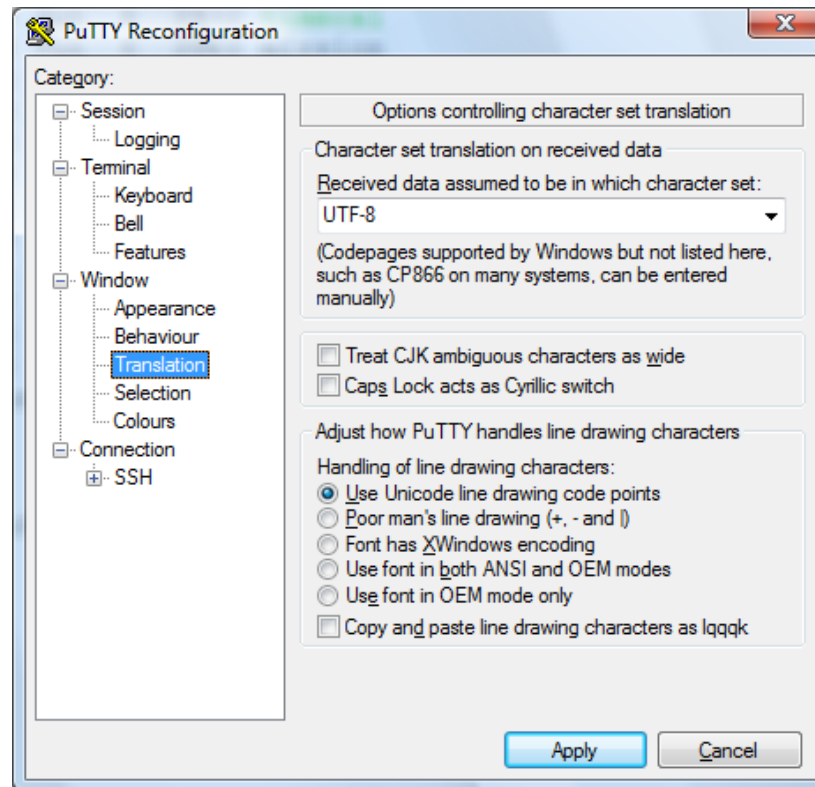
```
1 directory, 3 files
```

```
/home/cis90/simmsben $
```

Putty must be configured to use UTF-8 to show line drawing characters

Managing the UNIX/Linux File System

Putty may need to be configured UTF-8 for tree command



Class Exercise

- Return to your home directory with:

```
cd
```

- Do a long listing of the *island* directory with:

```
ls island
```

- Do a long recursive listing of the *island* directory with:

```
ls -lR island
```

- Make tree diagram of the *island* directory with:

```
tree island
```

Copy Files

Managing the UNIX/Linux File System

Copying

Copying files:

cp *<source file> <target file>*

cp *<source file> <target directory>*

cp *<source file> <source file> <target directory>*

Where:

<source file>

<target file>

<target directory>

*are **absolute** or **relative** pathnames*

Managing the UNIX/Linux File System

Copying

Copying files:

cp *<source file> <target file>*

cp *<source file> <target directory>*

cp *<source file> <source file> <target directory>*

options: -i -r

i = warn before overwriting target files

r = recursive (copies all source sub-directories)

Managing the UNIX/Linux File System

Copying a file

Commands:

Note: using a relative pathname

cp *<source file>* *<target file>*

```
/home/cis90/simmsben $ cd
/home/cis90/simmsben $ cd island/characters/
/home/cis90/simmsben/island/characters $ ls
hurley kate sawyer
/home/cis90/simmsben/island/characters $ echo "Hugo Reyes" > hurley
```

Make a copy of the hurley file

```
/home/cis90/simmsben/island/characters $ cp hurley hurley.bak
/home/cis90/simmsben/island/characters $ ls
hurley hurley.bak kate sawyer
/home/cis90/simmsben/island/characters $ cat hur*
Hugo Reyes
Hugo Reyes
```

Managing the UNIX/Linux File System

Copying multiple files to a directory

cp *<source file> <source file> <target directory>*

```
/home/cis90/simmsben/island/characters $ ls  
hurley  hurley.bak  kate  sawyer
```

Make a new directory called backup

```
/home/cis90/simmsben/island/characters $ mkdir backup
```

Copy three files to the new directory

```
/home/cis90/simmsben/island/characters $ cp hurley kate sawyer backup/
```

List the three files in the new directory

```
/home/cis90/simmsben/island/characters $ ls backup  
hurley  kate  sawyer
```

Managing the UNIX/Linux File System

Copying multiple files to a directory

cp *<source file> <source file> <target directory>*

Copy all files to the new directory

```
/home/cis90/simmsben/island/characters $ cp * backup/
```

```
cp: omitting directory `backup'
```

*Although * matches
backup, it is not
included in the copy*

List the four files in the new directory

```
/home/cis90/simmsben/island/characters $ ls backup/
```

```
hurley hurley.bak kate sawyer
```

```
/home/cis90/simmsben/island/characters $
```

Note: copying a file to an existing file will overwrite that file

Managing the UNIX/Linux File System

Copying

options: `-i -r`

`i` = warns before overwriting

`r` = recursive (copies all sub folders)

```
/home/cis90/simmsben/island/characters $ ls h*
hurley  hurley.bak
/home/cis90/simmsben/island/characters $ cp -i hurley hurley.bak
cp: overwrite `hurley.bak'? yes
/home/cis90/simmsben/island/characters $
```

The `i` option provides some interaction with the user before overwriting a file

Managing the UNIX/Linux File System

Copying

options: `-i -r`

`i` = warns before overwriting

`r` = recursive (copies all sub directories)

```
/home/cis90/simmsben/island/characters $ cd ..  
/home/cis90/simmsben/island $ ls  
characters
```

Do recursive copy of the characters directory to a new players directory

```
/home/cis90/simmsben/island $ cp -r characters players  
/home/cis90/simmsben/island $ ls -R players  
players:  
backup  hurley  hurley.bak  kate  sawyer  
  
players/backup:  
hurley  hurley.bak  kate  sawyer  
/home/cis90/simmsben/island $
```

Class Exercise

- Change to your *island* directory using an absolute path

```
cd /home/cis90/simben/island/characters/
```

Use your own username

- Make a backup copy of *kate*

```
cp kate kate2
```

- Copy *hurley* and overwrite *kate* using interactive mode

```
cp -i hurley kate    (Respond with yes to overwrite)  
cat kate
```

- Restore *kate* from the backup copy

```
cp kate2 kate  
cat kate
```

moving files

Managing the UNIX/Linux File System

Moving

Moving files:

mv *<source file> <target file>*

mv *<source file> <target directory>*

mv *<source file> <source file> <target directory>*

Where:

<source file>

<target file>

<target directory>

*are **absolute** or **relative** pathnames*

Managing the UNIX/Linux File System

Moving

Moving files:

mv *<source file> <target file>*

mv *<source file> <target directory>*

mv *<source file> <source file> <target directory>*

options: -i

i = warn before overwriting

Managing the UNIX/Linux File System

Renaming

Commands:

mv *<original name> <new name>*

This is how you rename files in UNIX/Linux!

Managing the UNIX/Linux File System

Moving Examples

```
/home/cis90/simben $ touch iPhone iPad ProLiant Pavilion Powerege
```

```
/home/cis90/simben $ mv Powerege PowerEdge Renaming a file
```

```
/home/cis90/simben $ mkdir Apple HP Dell Make some sample directories
```

```
/home/cis90/simben $ mv iPhone Apple/ Moving files one  
at a time into a  
/home/cis90/simben $ mv iPad Apple/ directory
```

```
/home/cis90/simben $ mv ProLiant Pavilion HP/ Moving multiple files at  
once into a directory
```

```
/home/cis90/simben $ mv PowerEdge Dell/ Moving one file into a  
directory
```


Managing the UNIX/Linux File System

Verifying file moves

Listing the contents of multiple directories to verify file moves

```
/home/cis90/simben $ ls Apple HP Dell
```

Apple:

iPad iPhone

Dell:

PowerEdge

HP:

Pavilion ProLiant

```
/home/cis90/simben $ tree Apple HP Dell
```

Apple

|-- iPad

`-- iPhone

HP

|-- Pavilion

`-- ProLiant

Dell

`-- PowerEdge

0 directories, 5 files

Class Exercise

- Change to your *island* directory using an absolute path

```
cd /home/cis90/simben/island/characters/
```

Use your own username

- Rename *kate* to *katherine*

```
mv kate katherine  
cat katherine
```

- Create a new file named *jin* and rename it to be hidden

```
touch jin  
mv jin .jin
```

(verify with `ls` and `ls -a`)

Removing Files

Managing the UNIX/Linux File System

Removing

Removing files:

rm <file-pathname> ...

The ... (ellipses) mean you can specify more than one filename per command

options: -i -r -f

i = prompt before remove

r = recursive (delete subdirectories)

f = force (never prompt)

rmdir <directory-pathname> ...

Directories must be empty for this to work

Managing the UNIX/Linux File System

Remove a file

Remove a file:

```
/home/cis90/simben $ touch junk1 junk2 junk3 junk4  
/home/cis90/simben $ ls junk*  
junk1  junk2  junk3  junk4
```

*Create four
test files*

```
/home/cis90/simben $ rm junk1  
/home/cis90/simben $ ls junk*  
junk2  junk3  junk4
```

Remove one of them

Managing the UNIX/Linux File System

Remove one or more files interactively

Remove one or more files interactively:

```
/home/cis90/simben $ rm -i junk*
```

```
rm: remove regular empty file `junk2'? y Remove just the junk2 file
```

```
rm: remove regular empty file `junk3'? n
```

```
rm: remove regular empty file `junk4'? n
```

```
/home/cis90/simben $ ls junk* Verify it was removed
```

```
junk3  junk4
```

Managing the UNIX/Linux File System

Removing Directories

Remove a directory

```
/home/cis90/simben $ mkdir junkdir1 Make a test directory
/home/cis90/simben $ touch junkdir1/junk6 Put a test file in new directory

/home/cis90/simben $ rmdir junkdir1 Try to remove non-empty directory
rmdir: junkdir1: Directory not empty

/home/cis90/simben $ rm junkdir1/junk6 Remove file in directory
/home/cis90/simben $ rmdir junkdir1 Remove empty directory
/home/cis90/simben $
```

*Directories must be empty to be removed by **rmdir***

Class Exercise

- Change to your home directory

```
cd
```

- Create some test files

```
touch junk1 junk 2 junk3 junk4  
ls junk*
```

- Remove one

```
rm junk 1  
ls junk*
```

- Remove the others

```
rm junk[234]  
ls junk*
```


linking files

Managing the UNIX/Linux File System

Linking

Linking files:

ln *<existing-name> <new-name>*

options: -s

s = symbolic link (like Windows shortcut)

With UNIX there are hard and soft (symbolic) links

Managing the UNIX/Linux File System

Hard Links

Creating a "hard" link

ln *<existing-name> <new-name>*

```
/home/cis90/simben $ echo "Chocolate Licorice Taffy Jelly Beans" > sweets
/home/cis90/simben $ cat sweets
Chocolate Licorice Taffy Jelly Beans
```

```
/home/cis90/simben $ ln sweets dulces
```

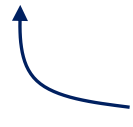
Hard link dulces to sweets

```
/home/cis90/simben $ ls -il sweets dulces
```

```
100176 -rw-rw-r-- 2 simben90 cis90 37 Mar 14 09:29 dulces
100176 -rw-rw-r-- 2 simben90 cis90 37 Mar 14 09:29 sweets
```



same inode



number of hard linked files

*Hard links allows **multiple** filenames for the **same** file.*

Managing the UNIX/Linux File System

Hard Links

Creating a "hard" link

In *<existing-name> <new-name>*

```
/home/cis90/simben $ ln sweets candy
```

Hard link candy to dulces

```
/home/cis90/simben $ ls -il sweets dulces candy
100176 -rw-rw-r-- 3 simben90 cis90 37 Mar 14 09:29 candy
100176 -rw-rw-r-- 3 simben90 cis90 37 Mar 14 09:29 dulces
100176 -rw-rw-r-- 3 simben90 cis90 37 Mar 14 09:29 sweets
```

same inode

number of hard linked files

```
/home/cis90/simben $ ln sweets bonbons
```

Hard link bonbons to sweets

```
/home/cis90/simben $ ls -il sweets dulces candy bonbons
100176 -rw-rw-r-- 4 simben90 cis90 37 Mar 14 09:29 bonbons
100176 -rw-rw-r-- 4 simben90 cis90 37 Mar 14 09:29 candy
100176 -rw-rw-r-- 4 simben90 cis90 37 Mar 14 09:29 dulces
100176 -rw-rw-r-- 4 simben90 cis90 37 Mar 14 09:29 sweets
```

same inode

number of hard linked files

Managing the UNIX/Linux File System

Hard Links

The . and .. directories are hard links!

```
/home/cis90/simben $ ls -ldi . /home/cis90/simben
```

```
98306 drwxr-xr-x 10 simben90 cis90 4096 Mar 14 09:41 .
98306 drwxr-xr-x 10 simben90 cis90 4096 Mar 14 09:41 /home/cis90/simben
```

same inode

*number of hard linked files
(9 directories in /home/cis90/simben with a .. file)*

```
/home/cis90/simben $ ls -ldi .. /home/cis90/
```

```
2395394 drwxr-x--- 42 rsimms cis90 4096 Mar 6 08:17 ..
2395394 drwxr-x--- 42 rsimms cis90 4096 Mar 6 08:17 /home/cis90/
```

same inode

*number of hard linked files
(41 directories in /home/cis90 with a .. file)*

Hard links allows **multiple** filenames for the **same** file.

Note the hidden . and .. files are hard linked to their respective directories

Managing the UNIX/Linux File System

Hard Links

Creating a "hard" link

In *<existing-name> <new-name>*

```
/home/cis90/simben $ rm sweets
/home/cis90/simben $ ls -il sweets dulces candy bonbons
ls: sweets: No such file or directory
100176 -rw-rw-r-- 3 simben90 cis90 37 Mar 14 09:29 bonbons
100176 -rw-rw-r-- 3 simben90 cis90 37 Mar 14 09:29 candy
100176 -rw-rw-r-- 3 simben90 cis90 37 Mar 14 09:29 dulces
```

↑ *same inode*

↑ *number of hard linked files*

Removing one of the hard linked files will not delete any of the other hard links, it will just decrement the number of hard links shown in a long listing

Managing the UNIX/Linux File System

Symbolic "Soft" Links

Creating a "soft" (symbolic) link

ln -s <existing-name> <new-name>

The s option for a symbolic link

```
/home/cis90/simben $ ln -s /etc/httpd/conf/httpd.conf apache
```

Creating a symbolic link to the Apache configuration file

```
/home/cis90/simben $ ls -li apache /etc/httpd/conf/httpd.conf
```

```
100172 lrwxrwxrwx 1 simben90 cis90 26 Mar 14 09:13 apache -> /etc/httpd/conf/httpd.conf
1280166 -rw-r--r-- 1 root root 33776 Feb 29 18:45 /etc/httpd/conf/httpd.conf
```

l for symbolic link, - for regular file

Different inodes

Symbolic links are like Windows shortcuts. They are two separate files and it is possible to break the links when the target files get renamed.

Managing the UNIX/Linux File System

Symbolic "Soft" Links

```
/home/cis90/simben $ ls -li apache /etc/httpd/conf/httpd.conf
100172 lrwxrwxrwx 1 simben90 cis90    26 Mar 14 09:13 apache -> /etc/httpd/conf/httpd.conf
1280166 -rw-r--r-- 1 root      root    33776 Feb 29 18:45 /etc/httpd/conf/httpd.conf
```

```
/home/cis90/simben $ head -n 5 apache
#
# This is the main Apache server configuration file.  It contains the
# configuration directives that give the server its instructions.
# See <URL:http://httpd.apache.org/docs/2.2/> for detailed information.
# In particular, see
```

```
/home/cis90/simben $ head -n 5 /etc/httpd/conf/httpd.conf
#
# This is the main Apache server configuration file.  It contains the
# configuration directives that give the server its instructions.
# See <URL:http://httpd.apache.org/docs/2.2/> for detailed information.
# In particular, see
```

From Benji's home directory, he can now refer to the Apache configuration file using either `apache` or `/etc/httpd/conf/httpd.conf`

Class Exercise

- Create a file named candy using:
`> candy`
- Create a hard link to candy named sweets using:
`ln candy sweets`
- Create a soft link to candy named dulces using:
`ln -s candy dulces`
- List them using:
`ls -li candy sweets dulces`

Wrap up (lesson)

New commands:

cp

ln

mkdir

mv

rm

rmdir

touch

copy files

link files

make directory

move or rename files

remove files

remove directory

make/modify a file

Redirection:

>

redirects stdout



CIS 90 Linux Lab Exercise

Lab 5: Managing Files Spring 2012

Lab 5: Managing Files

The goal of this lab is to become proficient with system commands for copying, moving, renaming, creating and removing files within your home directory.

Forum

Browse to: <http://opus.cabrillo.edu/forum/viewforum.php?f=46>

Check the forum for any late breaking news about this lab. The forum is also the place to go if you get stuck, have a question or want to share something you have learned about this lab.

Procedure

Log on to the Opus server so that you have a command line shell at your service. Be sure you are in your home directory to start this lab. We are going to reorganize the files in our home directory. This will involve making new subdirectories and moving files around. The questions asked during this procedure are for your clarification only. You will be graded on correctly performing the procedure. At the end of the lab you will submit your new layout by entering the command:

submit

Part I - Making Directories

1. Display a listing of the files in your home directory using the **ls -F** command.
2. Now let's make some new directories using the **mkdir** command:
 - Make a new directory named **edits** for keeping our file edits using the following command:
mkdir edits
 - View the new directory's contents using the **-a** option of the **ls** command. Do you see the two hidden files that were created with the directory?
 - You can make more than one new directory at a time by supplying two arguments to the **mkdir** command. Make two new directories, one called **docs** the other called **etc**
 - Verify that they were made in your home directory.

*In this lab you will
reorganize your home
directory*

*Be careful. For this lab,
the slower you go the
sooner you will be done!*

Next Class

Assignment: Check Calendar Page on web site to see what is due next week:

<http://simms-teach.com/cis90calendar.php>

Lab 5 due

Quiz questions for next class:

- What command is used to rename a file?
- If two files are hard linked do they have the same or different inode numbers?
- What option for the rm command provides confirmation when deleting files?

Test 1

Test

- Open book, open notes, open computer ... **HOWEVER, you must work alone. You may not share answers. You may not receive or give assistance to others.**
- Download and save the test to your computer. Fill out the form using Adobe Reader, save it and email it as an attachment to **risimms@cabrillo.edu** using your regular (non-Opus) email. Please cc: yourself and verify you actually sent a non-blank, completed test to be graded.
- Everyone should submit their test (completed or not) by the end of class.
- If you need extra time, you can submit again by no later than 11:59PM. Only the last submittal will be graded.



Notes to instructor

[] Send email on Opus to students

```
~/cis90/test01/q15/mail-q15-T1
```

[] Logoff Sun-Hwa users

```
skill -KILL -v pts/n
```

[] Create T1 trouble on Sun-Hwa-II

```
#./trouble-T1
```

[] Change file permissions on Test 1

```
simms-teach.com 644
```




Test 1

Backup

Lab 4 - Q1

2) Write down the absolute path of your home directory.

Correct answer: `/home/cis90/simben`

OK answer: `~`

Incorrect answers:

`$HOME` *That is the correct variable, but question asks for an absolute path*

`/home/cis90/xxxxxx $` *Close, that is the prompt and it fails ls test*

`home/cis90/xxxxxx` *Close, fails the ls test, absolute pathnames must start with /*

`/home/cis90/xxxxxx90/` *Close, fails the ls test, drop the "90"*

Using **ls** check on Opus:

```
/home/cis90/simben $ ls -d /home/cis90/simben/  
/home/cis90/simben/  
/home/cis90/simben $
```

Lab 4 - Q5

5) Are any of your hidden files directories? If so, which ones?

Correct answers: `., .., .mozilla, .ssh`

Incorrect answers:

Poems/

Lab2.0/

Lab2.1

Hidden/

bin

Miscellaneous

.bash_history

.bash_profile

.emacs

.plan

Not hidden

(hidden files have names that start with .)

Not directoroes

Lab 4 - Q5

Files that are **directories** (1st column=d) AND **hidden** (filenames start with .)

```

/home/cis90/simben $ ls -ald .*
➡ drwxr-xr-x 10 simben90 cis90 4096 Mar  7 14:19 .
➡ drwxr-x--- 42 rsimms    cis90 4096 Mar  6 08:17 ..
-rw-----  1 simben90 cis90 16776 Mar  9 09:49 .bash_history
-rw-----  1 simben90 cis90    24 Jul 20  2001 .bash_logout
-rw-----  1 simben90 cis90   354 Sep 17  2003 .bash_profile
-rw-----  1 simben90 cis90   146 Jan 18  2004 .bashrc
-rw-r--r--  1 simben90 cis90   515 Feb  4 16:33 .emacs
-rw-----  1 simben90 cis90    65 Mar  9 07:45 .lessht
➡ drwxr-xr-x  4 simben90 cis90 4096 Feb  4 16:33 .mozilla ←
-rw-r--r--  1 simben90 cis90   40 Jul 20  2001 .plan
➡ drwx----- 2 simben90 cis90 4096 Feb  8 15:58 .ssh ←
-rw-----  1 simben90 cis90 1222 Feb 26 19:20 .viminfo
/home/cis90/simben $
  
```

Lab 4 - Q5

Files that are **directories** (1st column=d) AND **hidden** (filenames start with .)

```
/home/cis90/simben $ ls -aF
```

./	bin/	Lab2.0/	.plan	text.fxd
../	dead.letter	Lab2.1/	Poems/	timecal*
accounts@	.emacs	.lessht	proposal1	uhistory
allfiles17137	empty	letter	proposal2	.viminfo
.bash_history	Hidden/	log	proposal3	what_am_i
.bash_logout	lab01.graded	mbox	small_town	
.bash_profile	lab01-submitted	Miscellaneous/	spellk	
.bashrc	lab02.graded	mission	.ssh/	
bigfile	lab03.graded	.mozilla/	text.err	
/home/cis90/simben \$				

Lab 4 - Q8

8) What is the inode number of the /home/cis90 directory?

Correct answers: 8966

Incorrect answers:

9011

9131

9063

*Wrong directory
chosen*

Checking answer on Opus:

```
/home/cis90/simben $ ls -ld /home/cis90
```

```
8966 /home/cis90
```

the /home/cis90 directory

The inode number

Lab 4 - Q10

10) What's the name of the largest text file in your home directory?

Correct answer: **varies by student**

```
/home/cis90/simben $ ls -ls
total 396
```

*Use the l (for long) and S (for size)
options to sort by size*

```
-rw----- 1 simben90 cis90 124804 Mar  4 20:09 mbox
-r----- 1 simben90 staff  27073 Mar  1 10:15 lab03.graded
-rw-rw-r-- 1 simben90 cis90  25390 Feb 29 22:18 uhistory
-rw-r--r-- 2 simben90 cis90  10576 Jul 20  2001 bigfile
```

< *snipped* >

```
/home/cis90/simben $ file mbox lab03.graded uhistory bigfile
```

```
mbox:          ASCII mail text, with very long lines
```

```
lab03.graded:  ASCII English text
```

Use the file command to identify text files

```
uhistory:      ASCII mail text
```

```
bigfile:       ISO-8859 English text, with overstriking
```

```
/home/cis90/simben $
```

The biggest text file for simben90 is mbox at 124,804 bytes

Lab 4 - Q9

9) Who is the owner of your home directory?

Correct answers: **your username, e.g. simben90, milhom90, etc.**

Incorrect answers:

/home/cis90/simben *That's not a username (it's a home directory)*

simben *That is an incomplete user name*

rsimms *Not the owner*

cis90 *Not the owner*

Checking answer on Opus:

/home/cis90/simben \$ cd

*cd with no arguments takes you to
your home directory*

/home/cis90/simben \$ ls -ld

drwxr-xr-x 10 **simben90** cis90 4096 Mar 7 14:19 .

owner →

← *group*

/home/cis90/simben \$ ls -ld /home/cis90/simben/

drwxr-xr-x 10 **simben90** cis90 4096 Mar 7 14:19 /home/cis90/simben/

owner →

← *group*

Lab 4 - Q9

```
/home/cis90/simben $ ls -l /home/cis90
total 320
drwxr-xr-x 10 ahrmat90 cis90 4096 Mar 12 13:44 ahrmat
drwxr-xr-x  2 rsimms   cis90 4096 Mar  8 21:59 answers
drwxr-x---  3 rsimms   cis90 4096 Mar  7 06:34 bin
drwxr-xr-x  9 blerav90 cis90 4096 Mar  8 22:02 blerav
drwxr-xr-x  9 bodian90 cis90 4096 Mar  8 22:02 bodian
drwxr-xr-x 10 bunsol90 cis90 4096 Mar  7 15:39 bunsol
drwxr-xr-x  9 cheken90 cis90 4096 Feb 16 13:17 cheken
drwxr-xr-x  9 cofcol90 cis90 4096 Mar  8 22:02 cofcol
drwxr-xr-x 10 colabd90 cis90 4096 Mar  8 22:02 colabd
drwxr-xr-x 10 deltas90 cis90 4096 Mar  8 22:02 deltas
drwxr-xr-x  4 rsimms   cis90 4096 Feb 28 13:03 depot
drwxr-xr-x  9 doucor90 cis90 4096 Mar  8 22:02 doucor
drwxr-xr-x  9 flamat90 cis90 4096 Mar  8 22:02 flamat
drwxr-xr-x  9 gueous90 cis90 4096 Mar  8 22:02 gueous
drwxr-xr-x  9 guest90  cis90 4096 Feb 19 23:35 guest
< snipped >
```

owners

groups

directories

Lab 4 - Q19

19) From your home directory what is the relative path to sonnet1?

Correct answer: **Poems/Shakespeare/sonnet1**

Incorrect answers:

/Poems/Shakespeare /sonnet1 *(multiple arguments, fails ls test)*

Poems/Shakespeare/ *(incomplete path, must include filename)*

/home/cis90/simben/Poems/Shakespeare/sonnet1 *(not a relative path)*

*cd with no arguments takes you to
your home directory*

```
/home/cis90/simben $ cd  
/home/cis90/simben $ ls Poems/Shakespeare/sonnet1  
Poems/Shakespeare/sonnet1
```

*Always check your pathname by using it as an
argument to the ls command*