

Lesson Module Status

- Slides - draft
- Flash cards – started
- properties – done
- page numbers -
- No-stress quiz – done
- Web Calendar summary – done
- Web book pages - none
- Commands – done
- Welcome mailed -
- Lab – done
- Historical events mailed -
- pairs script tested -



Dennis



Sean



Christopher



Brian



Francisco



Salena



Abd



Sarah



Astitow



Mike D.



Alex



Christine



Steven



Richie



Nathan



Tony



James G.



Sergio



Anthony



Fernando



Miguel



Lars



Jennifer



Rudy



Laura P.



Nick



Juan



Jacob



Andrew



Luke



Saulius



Rich

Instructor: **Rich Simms**

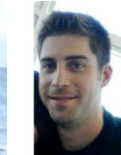
Dial-in: **888-450-4821**

Passcode: **761867**

Online Class Students



Edtson



James B.



Liz



Casady



Jason



Dale



Aaron



Steve



Matt



Sam



Songul



Stephanie



Victor



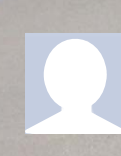
Tanya



Mike P.



Adriana



Laura S.



Olivia



Janelle

Email me (risimms@cabrillo.edu) a relatively current photo of your face for 3 points extra credit

Quiz

Please close your books, notes, lesson materials, forum and answer these questions:

- What is the command to print the manual page for a command?
- How do you show your path?
- Name four directories where one can find commands?

*Online students, email me
your answers at
risimms@cabrillo.edu*

*Classroom students, email me
your answers at
risimms@cabrillo.edu
(or you can write your answers on a
scrap piece of paper and hand it in)*



- [] Has the phone bridge been added?
- [] Is recording on?
- [] Does the phone bridge have the mike?
- [] Share slides, putty (rsimms, simmsben, roddyduk), Chrome
- [] Disable spelling on PowerPoint

Mail Command

Quiz

Please close your books, notes, lesson materials, forum and answer these questions:

- What is the command to print the manual page for a command?
- How do you show your path?
- Name four directories where one can find commands?

*Online students, email me
your answers at
risimms@cabrillo.edu*

*Classroom students, email me
your answers at
risimms@cabrillo.edu
(or you can write your answers on a
scrap piece of paper and hand it in)*

Electronic Mail

Objectives	Agenda
<ul style="list-style-type: none">• Learn how to use the UNIX communication tools write and mail.• Overview on end-to-end email.	<ul style="list-style-type: none">• Quiz• Questions from last week• Mini review• Housekeeping• Write• Basic Mail• More on Mail• End-to-end email• Other MUAs, MTAs, DA and AAs• Wrap up

Previous material and assignment

Questions on Lab Assignments or previous material?

Note: Lab 2 due today

submit as many times as you wish up to midnight

Lab 1 Results

Note: red x's show incorrect answers

1) On Opus, what was the prompt string?

/home/cis90/guest \$ xxxxxxxxxxxx

2) What does the history command do?

shows previous commands xx

3) On Opus, what was your uid (user id) number? xxxxxxxx

503

4) On Opus, what was the name of the shell program being run? xxxxxxxx

bash

5) What terminal device did you use to access Opus? xxxxxxxxxxxxxx

/dev/pts/2 (this varies)

6) On Eko, what is the output from the hostname command?

xxxxxxxxxxxxxxxxxxxx

Eko

7) What command shows the other users that are logged in? x

who

8) What command shows you the name of the computer you are interacting with?

xxxxxxxx

hostname

9) On Eko, what three keys must be pressed locally to use terminal tty2? xxxxxxxx

ctrl+alt+f2

10) On Eko, if you log off one session, do you get logged off all the other sessions? xx

no

11) On Eko, is your command history the same for all login sessions?

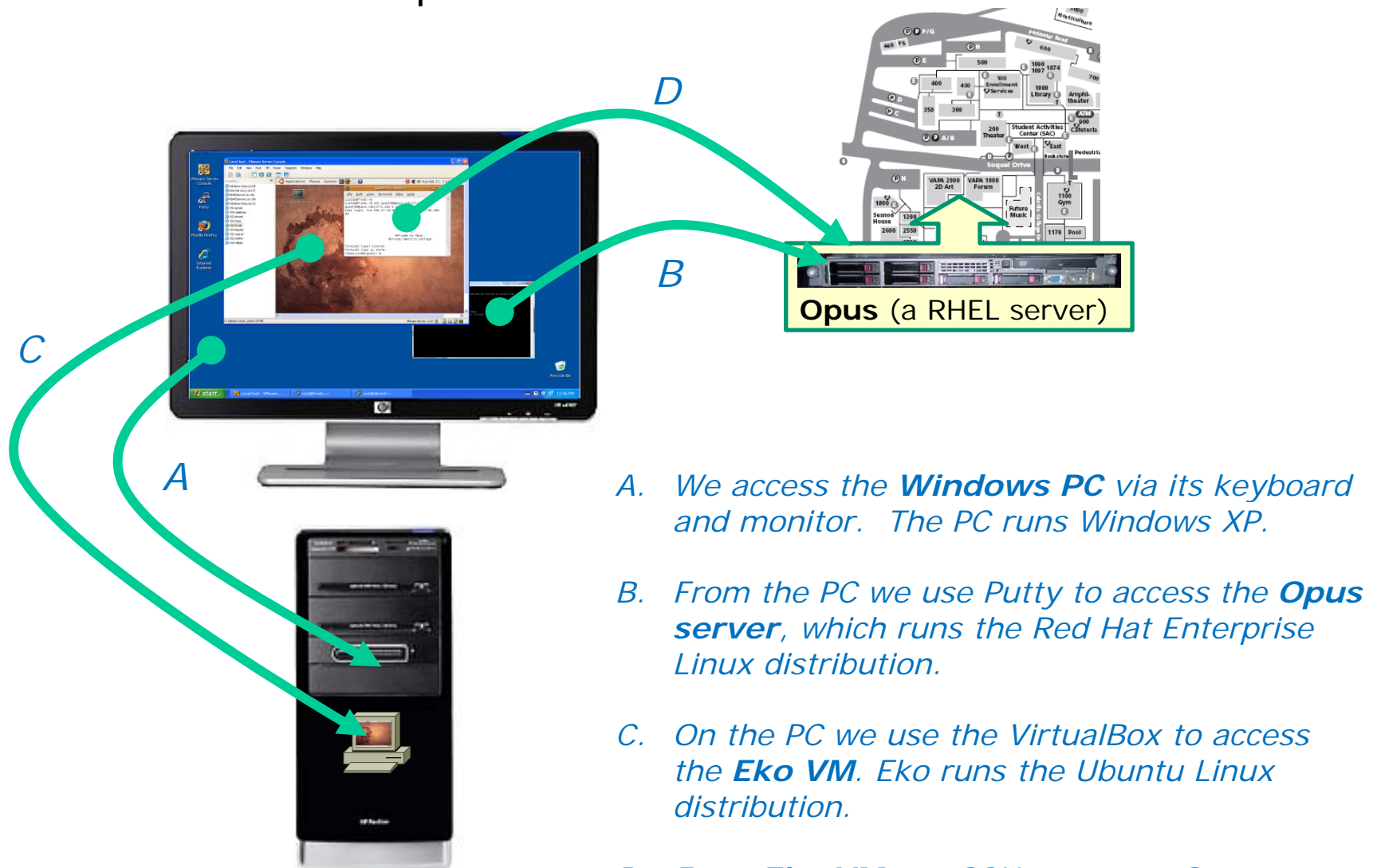
xxxxxxxxxxxxxxxxxxxx

no

12) What command logs you off? xx

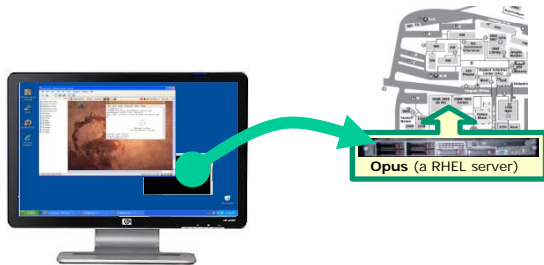
exit

We used three computers for Lab 1 !!



- A. We access the **Windows PC** via its keyboard and monitor. The PC runs Windows XP.
- B. From the PC we use Putty to access the **Opus server**, which runs the Red Hat Enterprise Linux distribution.
- C. On the PC we use the VirtualBox to access the **Eko VM**. Eko runs the Ubuntu Linux distribution.
- D. From **Eko VM**, we SSH to access **Opus** (different session than B)

Subtle



*Putty to rsimms@opus.cabrillo.edu
or
Putty to opus.cabrillo.edu*

Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address)	Port
rsimms@opus.cabrillo.edu	22

Connection type:

Raw Ielnet Rlogin SSH Serial

```
opus.cabrillo.edu - PuTTY
Using username "rsimms".
rsimms@opus.cabrillo.edu's password: █
```

Basic options for your PuTTY session

Specify the destination you want to connect to

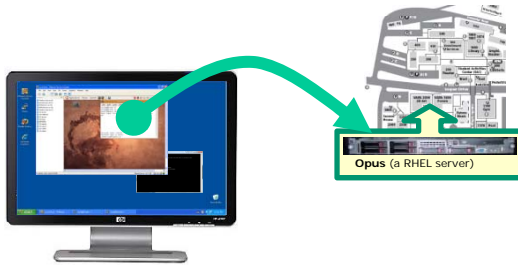
Host Name (or IP address)	Port
opus.cabrillo.edu	22

Connection type:

Raw Ielnet Rlogin SSH Serial

```
opus.cabrillo.edu - PuTTY
login as: █
```

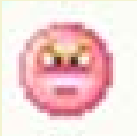
If you specify the user in Putty you won't be prompted for the user name, just the password.




ssh rsimms@opus.cabrillo.edu
or
ssh opus.cabrillo.edu

from the Ubuntu Eko VM

```
cis90@eko: ~  
File Edit View Terminal Help  
Connection to opus.cabrillo.edu closed.  
cis90@eko:~$ ssh opus.cabrillo.edu  
cis90@opus.cabrillo.edu's password:  
Permission denied, please try again.  
cis90@opus.cabrillo.edu's password:
```



```
simmsben@opus:~  
File Edit View Terminal Help  
cis90@eko:~$ ssh simmsben@opus.cabrillo.edu  
simmsben@opus.cabrillo.edu's password:  
Last login: Mon Sep 6 15:42:09 2010 from dsl-63-249-1  
  
      ( 'v' )  
    //  -  - \\  
   ( \  _  / )  
    ~ ~ ~ ~  
      Welcome to Opus  
      Serving Cabrillo College  
  
Terminal type? [xterm]  
Terminal type is xterm.  
/home/cis90/simmsben $
```



*If you don't specify the user on the **ssh** command it will use the user you are currently logged in as. This account may not exist on the remote system!*

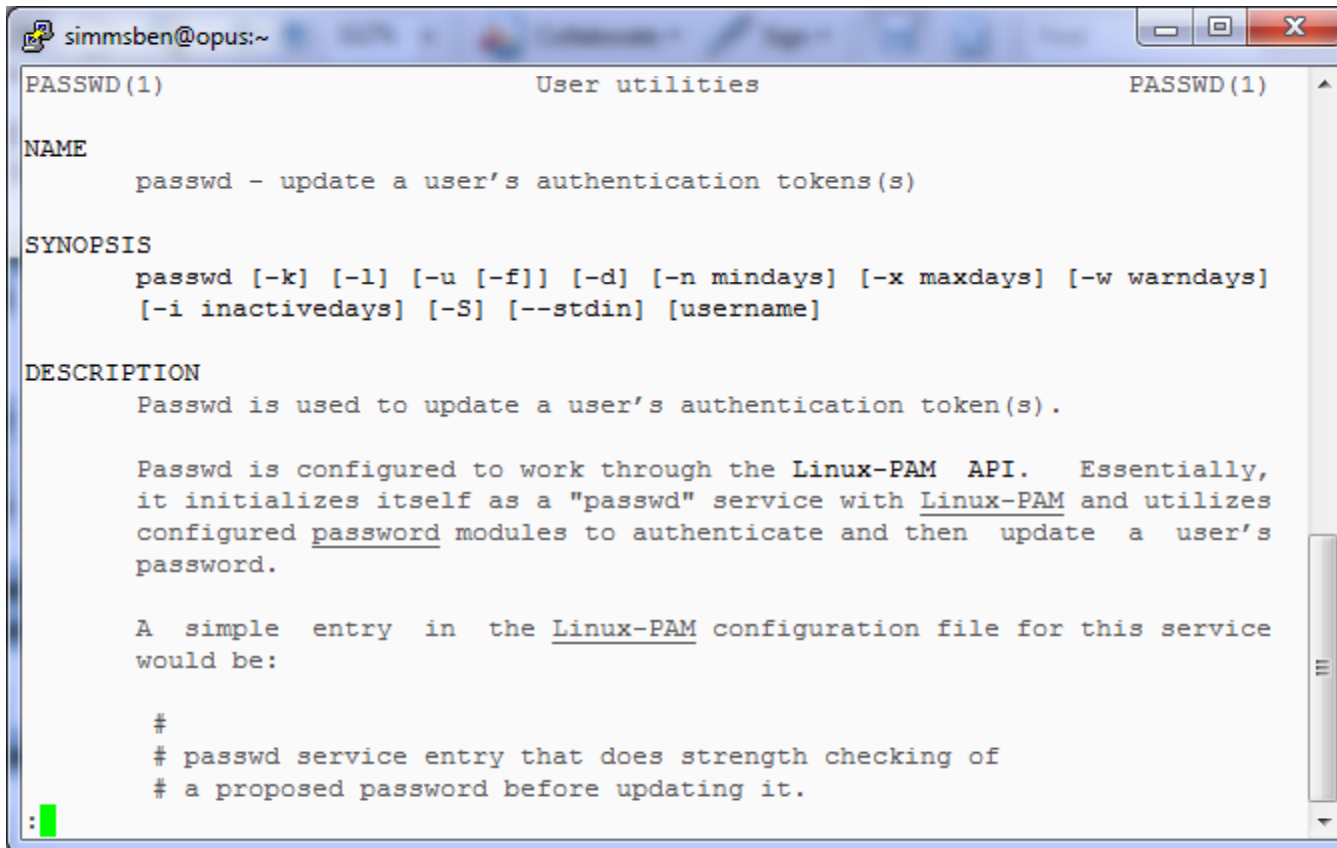
Command Review

```
/home/cis90/simmsben $ type passwd
```

```
passwd is /usr/bin/passwd
```

*passwd resides in
/usr/bin*

```
/home/cis90/simmsben $ man passwd
```



```
simmsben@opus:~
PASSWD(1)                                User utilities                                PASSWD(1)
NAME
    passwd - update a user's authentication tokens(s)
SYNOPSIS
    passwd [-k] [-l] [-u [-f]] [-d] [-n mindays] [-x maxdays] [-w warndays]
    [-i inactivedays] [-S] [--stdin] [username]
DESCRIPTION
    Ppasswd is used to update a user's authentication token(s).

    Ppasswd is configured to work through the Linux-PAM API.  Essentially,
    it initializes itself as a "passwd" service with Linux-PAM and utilizes
    configured password modules to authenticate and then update a user's
    password.

    A simple entry in the Linux-PAM configuration file for this service
    would be:

    #
    # passwd service entry that does strength checking of
    # a proposed password before updating it.
```

*There is a man
page for the
passwd
command*

Command Review

```
/home/cis90/simmsben $ type history
```

history is a **shell builtin**

history is part of the shell and does not have its own program file

```
/home/cis90/simmsben $ man history
```

```
simmsben@opus:~
BASH_BUILTINS (1)                                BASH_BUILTINS (1)
NAME
  bash, :, ., [, alias, bg, bind, break, builtin, cd, command, compgen,
  complete, continue, declare, dirs, disown, echo, enable, eval, exec,
  exit, export, fc, fg, getopts, hash, help, history, jobs, kill, let,
  local, logout, popd, printf, pushd, pwd, read, readonly, return, set,
  shift, shopt, source, suspend, test, times, trap, type, typeset,
  ulimit, umask, unalias, unset, wait - bash built-in commands, see
  bash(1)

BASH BUILTIN COMMANDS
  Unless otherwise noted, each builtin command documented in this section
  as accepting options preceded by - accepts -- to signify the end of the
  options. For example, the :, true, false, and test builtins do not
  accept options. Also, please note that while executing in non-interactive
  mode and while in posix mode, any special builtin (like ., :,
  break, continue, eval, exec, exit, export, readonly, return, set,
  shift, source, times, trap, unset) exiting with a non-zero status
  causes the shell to stop execution.
  : [arguments]
     No effect; the command does nothing beyond expanding arguments
     and performing any specified redirections. A zero exit code is
```

history does not have its own man page either but it is included in the man page for bash builtins

Command Review

```
/home/cis90/simmsben $ type ls  
ls is aliased to `ls --color=tty`
```

```
/home/cis90/simmsben $ type -a ls  
ls is aliased to `ls --color=tty`  
ls is /bin/ls  
/home/cis90/simmsben $
```

ls resides in /bin

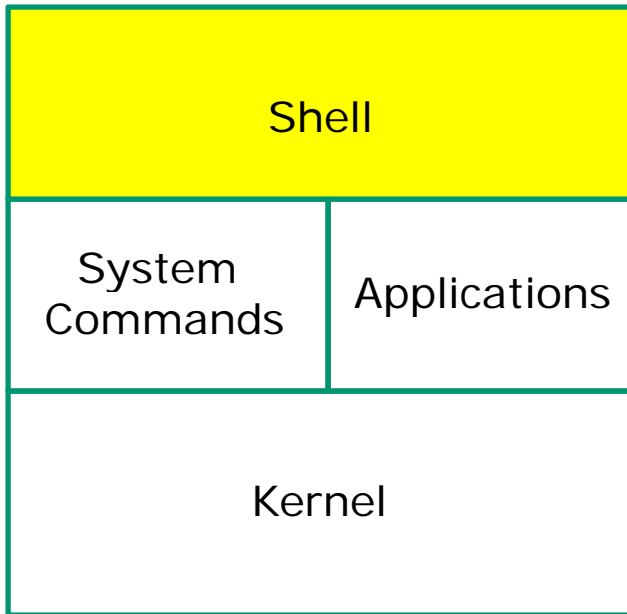
*The **ls** command is aliased, use the **-a** option to find where the command resides*



Review



Life of the Shell



- 1) Prompt
- 2) Parse
- 3) Search
- 4) Execute
- 5) Nap
- 6) Repeat



Command Syntax

Shell prints
this to prompt
user to enter a
command

Shell parses this command line



Examples

```

/home/cis90/simmsben $
/home/cis90/simmsben $ ls
/home/cis90/simmsben $ ls -l
/home/cis90/simmsben $ ls -lt
/home/cis90/simmsben $ ls -lt Poems/
/home/cis90/simmsben $ ls -lt Poems/ bin/
/home/cis90/simmsben $ ls -lt Poems/ bin/ > mylist
    
```

Options modify the
behavior of the command

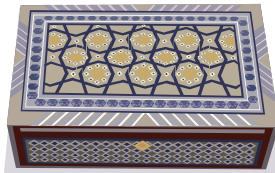
Arguments are what the
command works upon

Redirection is covered
later in the course

Spaces (blanks) are used to separate the command,
options and arguments.

Commands are Programs

Program
(a file on the hard drive)



Loads into RAM

Command line
(parsed by shell):
Options: ...
Args: ... **A**

stdout



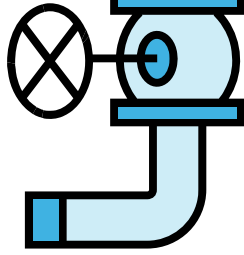
console screen
(default)

Commands get input from:

- A. Command line
- B. Keyboard
- C. Operating System

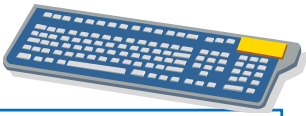


read ↑ ↓ write



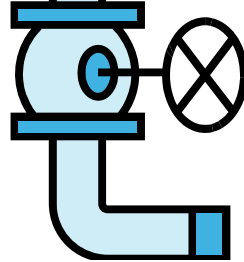
stdin

console keyboard
(default)



Keyboard **B**
Additional data command needs from user. E.g. passwords, math expressions, ...

Operating System **C**
Information available only from the OS. E.g. files, directories, date & time, process info, user info, tty info etc.



stderr

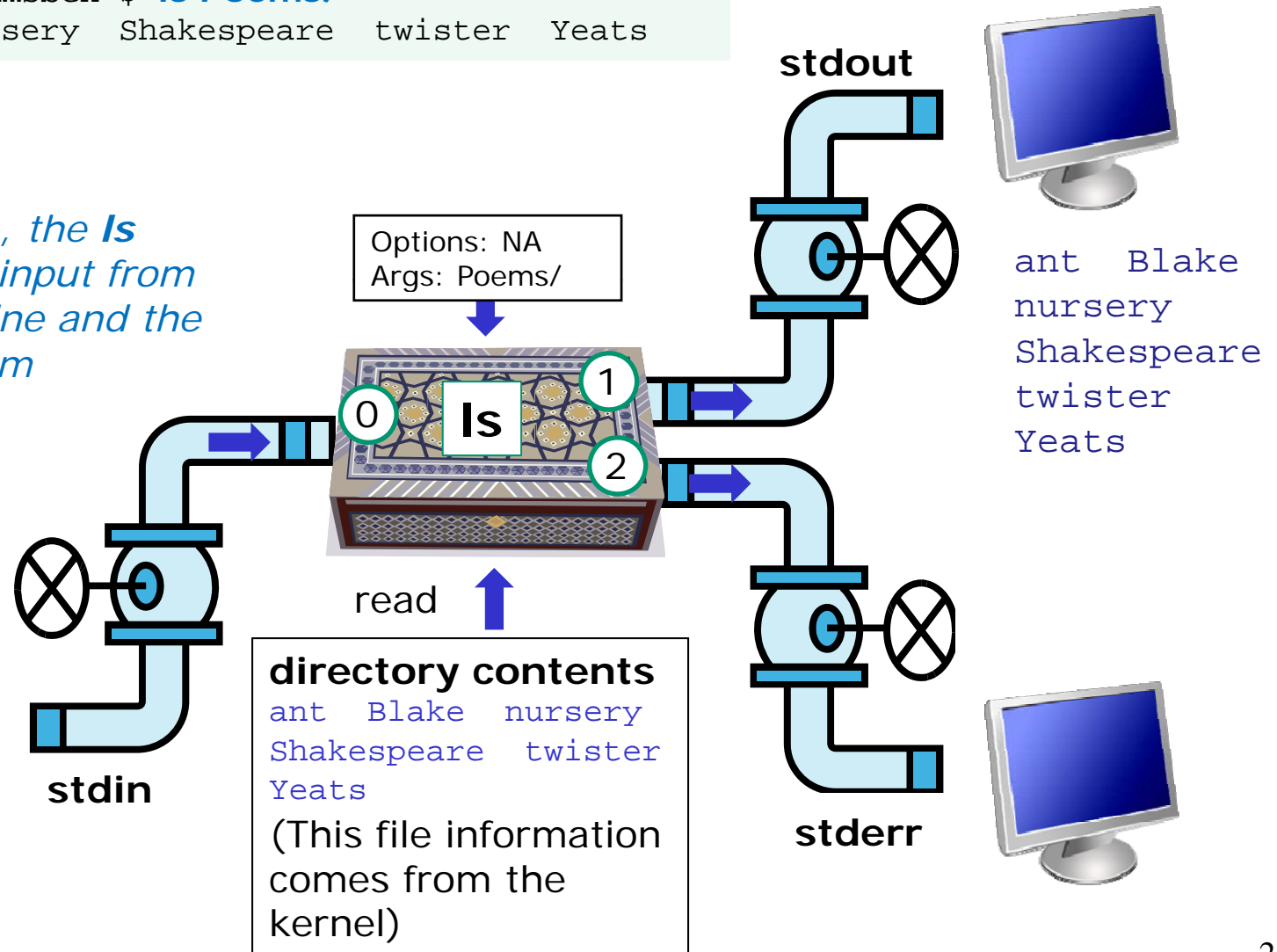


console screen
(default)

Example program to process: ls command

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

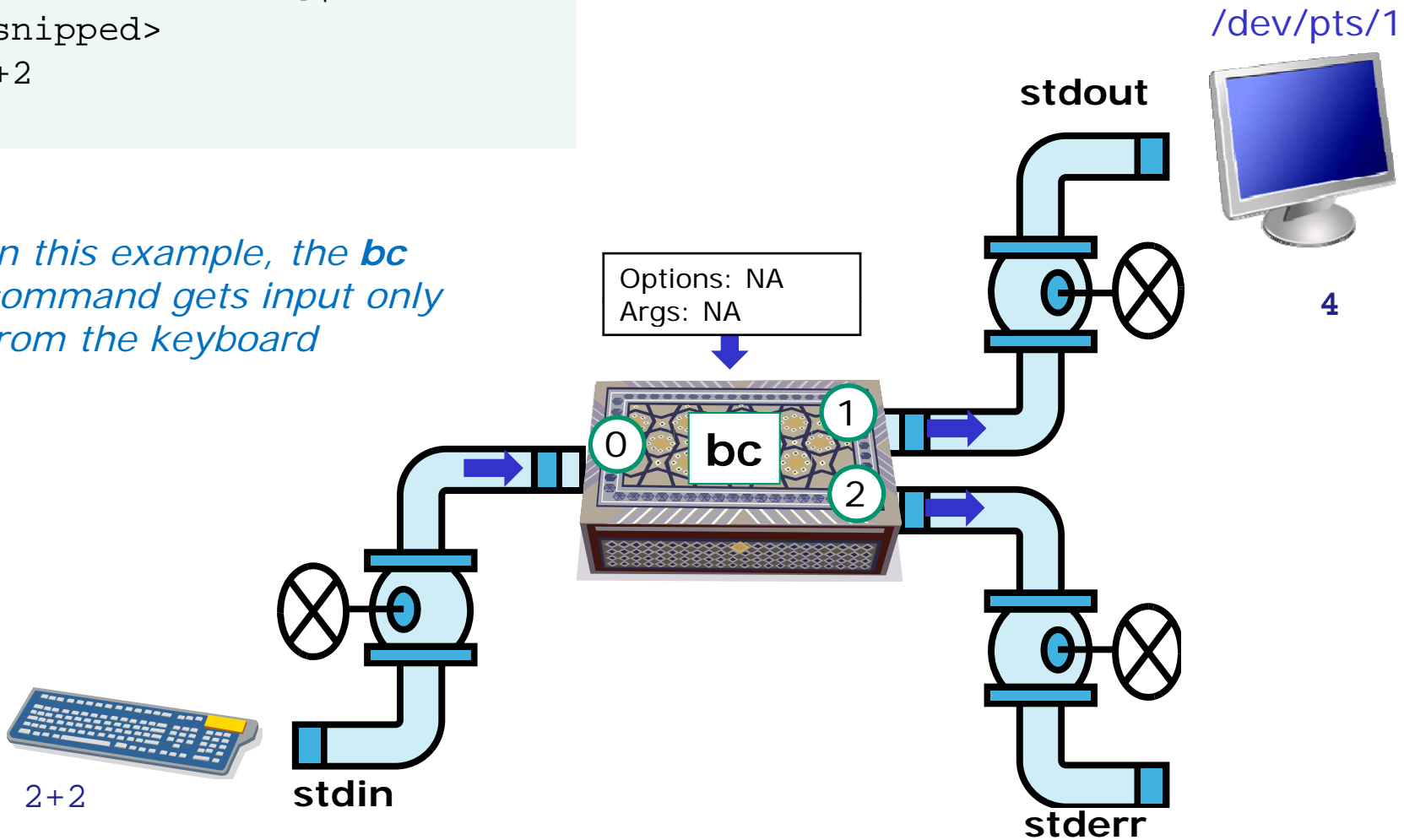
*In this example, the **ls** command gets input from the command line and the operating system*



Example program to process: bc command

```
[rsimms@nosmo ~]$ bc
<snipped>
2+2
4
```

In this example, the bc command gets input only from the keyboard



Environment Variables Names and Values

Use \$ for the "value" of a variable

Analogy: Each variable is a named location. The contents of any location is the "value" of that variable.

```
$ echo $LOGNAME
simmsben
```

```
$ echo HOME
HOME
```

```
$ echo $HOME
/home/cis90/simmsben
```

```
$ echo $SHELL
/bin/bash
```

```
$ echo $HOSTNAME
opus.cabrillo.edu
```



Command Review

bash	banner	cat
	bc	cd
clear	cal	ls
exit	date	pwd
	finger	
file	passwd	
type		
	echo	
history	apropos	
	man	
ps	whatis	
id		
tty		
who		
whoami		
uname		



Practice Test Questions

What is your uid (user ID)?



Practice Test Questions

What day of the week was Sept 11, 2001?

Practice Test Questions

Where does the program file for the ps command reside?

Practice Test Questions

Parse the following command. How many options and how many arguments does it have?

```
ls -l /boot/grub/
```

Practice Test Questions

Which program gave you this error message?

```
/home/cis90/simmsben $ typo history  
-bash: typo: command not found  
/home/cis90/simmsben $
```

Practice Test Questions

Which program gave you this error message?

```
/home/cis90/simmsben $ uname -everything  
uname: invalid option -- e  
Try `uname --help' for more information.  
/home/cis90/simmsben $
```



Housekeeping

The last day to add this class was 9/10

Final Roster

31 students in the classroom section (67727)
19 students in the online section (68884)

Not all students wanting to add could be added

*If in doubt, verify with WebAdviser at
<http://wave.cabrillo.edu>*

Students who are enrolled or added are shown on the next slide



Dennis



Sean



Christopher



Brian



Francisco



Salena



Abd



Sarah



Astitow



Mike D.



Alex



Christine



Steven



Richie



Nathan



Tony



James G.



Sergio



Anthony



Fernando



Miguel



Lars



Jennifer



Rudy



Laura P.



Nick



Juan



Jacob



Andrew



Luke



Saulius



Rich

Instructor: **Rich Simms**

Dial-in: **888-450-4821**

Passcode: **761867**

Online Class Students



Edtson



James B.



Liz



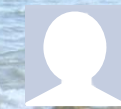
Casady



Jason



Dale



Aaron



Steve



Matt



Sam



Songul



Stephanie



Victor



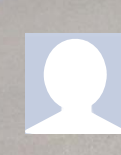
Tanya



Mike P.



Adriana



Laura S.



Olivia



Janelle

Email me (risimms@cabrillo.edu) a relatively current photo of your face for 3 points extra credit

Student Surveys

Rich's Cabrillo College CIS Classes
CIS 90 Calendar

Home Resources Forums CIS Lab CTC

CIS 90 (Fall 2010) Course Calendar

[Course Home](#) [Grades](#)
(content subject to change)

Lesson	Date	Topics	Chapter	Due
1	9/1	<p>Class and Linux Overview</p> <ul style="list-style-type: none"> Understand how this course will work High-level overview of computers, operating systems and virtual machines Overview of UNIX/Linux market and architecture Learn first commands and how to navigate between terminals Use a remote Linux server Use Linux running on a local virtual machine <p>Materials</p> <ul style="list-style-type: none"> How this class works (download) Presentation slides (download) Logins Sheet (download) Howto #103: Installing PuTTY (download) Howto #301: Bringing the Eko VM home (download) <p>Assignment</p> <ul style="list-style-type: none"> Student Survey <p>CCC Confer</p> <ul style="list-style-type: none"> Enter virtual classroom Class archives 	1.1-1.15 (Gillay)	

Introduction to UNIX/Linux (CIS 90)
Fall 2010 - Student Survey

Student Information

- Preferred first name: _____ Last name: _____
- Date: _____ Email address: _____
- Web site, if any: _____
- Grading choice: pass/no-pass grade (choose one, you may change your mind later)

Computer Background

- Previous computer classes or training taken: _____
- Work or other experience using computers: _____

Home equipment

- Do you have a computer with at least 2 GB of RAM? yes no
- Do you have Internet access? no modem dsl/cable

Course Objectives

- What are you hoping to learn in this class?

- Other comments or special learning needs?

I'm missing surveys from several students

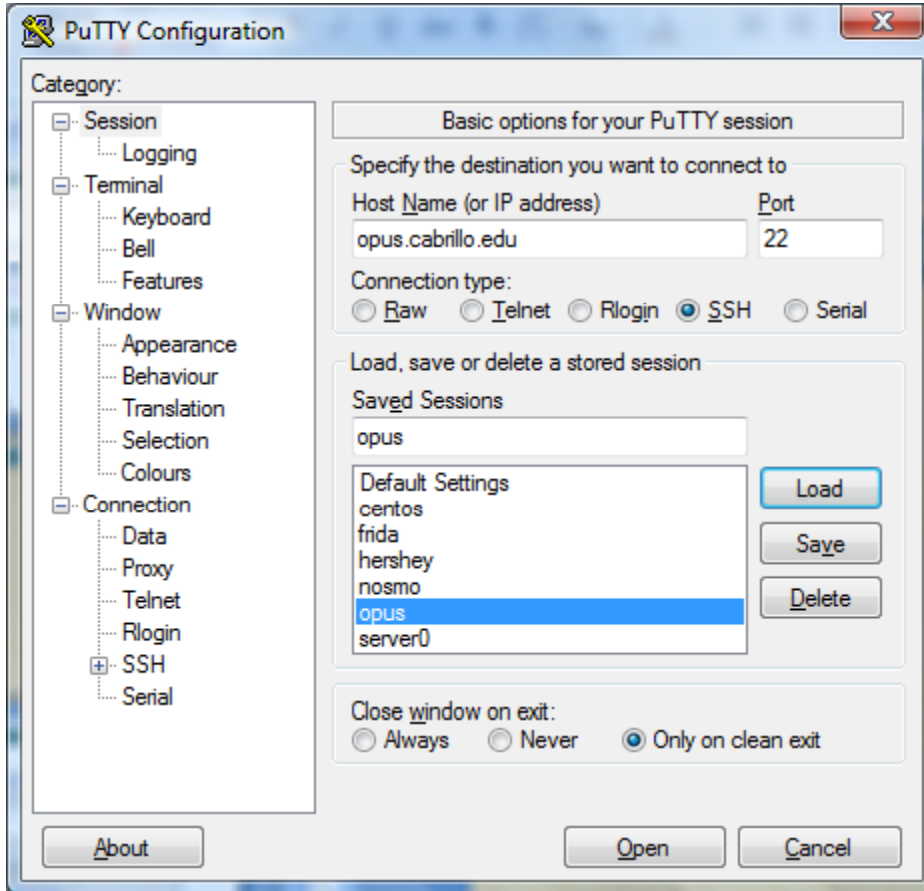
Please send them as an attachment to risimms@cabrillo.edu

Student Accounts

To see all the CIS 90 student accounts, including your own, type the following command on Opus:

ls /home/cis90

Opus Accounts



*First 5 letters
of last name*

*First 3 letters
of first name*

username: 11111fff
password: 11111fff1

The digit 1 (one)

*Email the instructor if you
need your password reset*

*Note: If you didn't submit Lab 1, then it was done for you
so you would have an account for today's class*

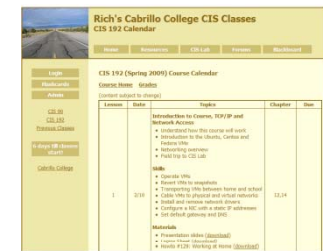
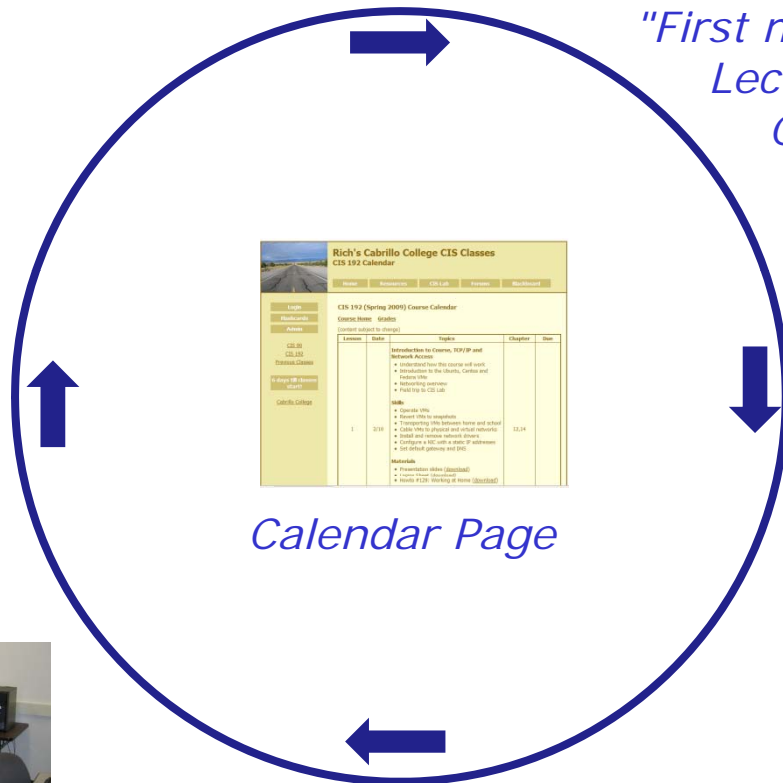
The typical week
http://simms-teach.com

Wednesday

"First minute" quiz
Lecture on new lesson material
Class activities
Lab assignments due midnight



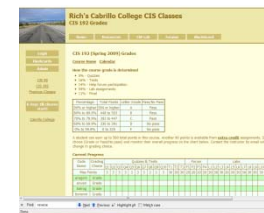
Use Forum to ask and answer questions



Calendar Page



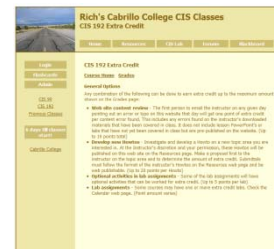
Thursday is grading day



Check progress on the Grades Page



Work Lab Assignments for TBA portion of class (3 hours 5 min) in CIS Lab



Check Extra Credit Page if you need some more points

Lord of the Rings Character Code Names

Current Progress					
Code Name	Grading Choice	Q1	Q2	Q3	Q4
Max Points		3	3	3	3
aragorn	Grade				
arwen	Grade				
balrog	Grade				
boromir	Grade				
denethor	Grade				
dwalin	Grade				
elrond	Grade				
eomer	Grade				
eowyn	Grade				
faramir	Grade				
frodo	Grade				
galadriel	Grade				
gimli	Grade				
glorfindel	Grade				
ioeth	Grade				
legolas	Grade				
lobelia	Grade				
nazgul	Grade				
pippin	Grade				
saruman	Grade				
sauron	Grade				
theoden	Grade				
treebeard	Grade				

Your grade code names are now available

Email me when if you haven't already

Extra Credit Howtos



Rich's Cabrillo College CIS Classes Resources

Home Resources Forums CIS Lab CTC

Login
Flashcards
Admin

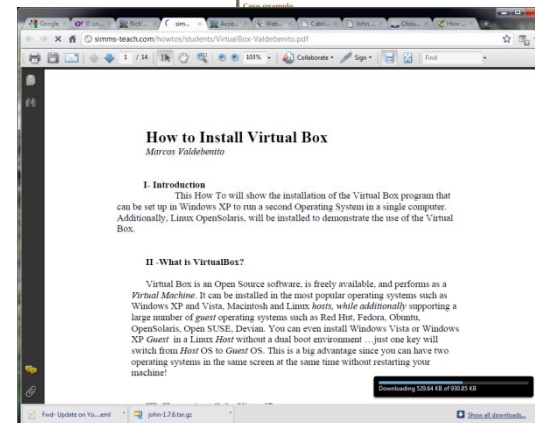
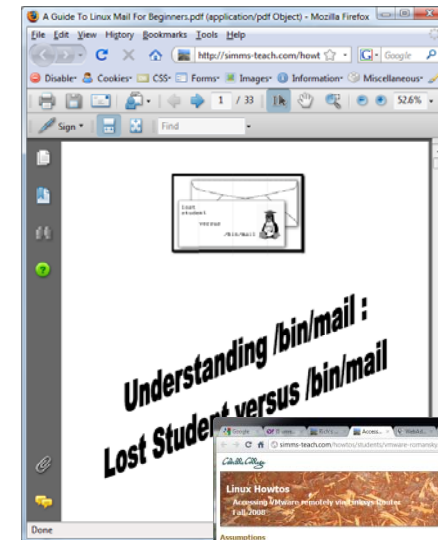
CIS 90
CIS 192
Previous Classes

101 days till term ends!

Cabrillo College
Static IPs

Links

<p>Instructors</p> <ul style="list-style-type: none"> Programming Master Ed Linux Master Jim Web Master John Network Master Gerlinde Network Master Rick <p>Clubs</p> <ul style="list-style-type: none"> GNU Linux Users Group <p>Departments</p> <ul style="list-style-type: none"> CNSA CIS CS <p>Crib Sheets</p> <ul style="list-style-type: none"> Ollie Wright (CIS 90) 	<p>Getting Linux</p> <ul style="list-style-type: none"> Linux ISOs Kernels RPMs <p>Tools and Software</p> <ul style="list-style-type: none"> Apache Bastille cygwin DIAG diagnostics DOS boot disks John the Ripper MSDN Academic Alliance Netfilter Putty SSH Tools Tripwire VMware Server Wireshark <p>Standards</p> <ul style="list-style-type: none"> IETF (RFCs) IEEE 	<p>Documentation</p> <ul style="list-style-type: none"> TLDP LINFO Commands Summary vi summary <p>Howtos</p> <ul style="list-style-type: none"> email DNS Ethernet (NIC drivers) NIS PPP NFS <p>Student Howtos</p> <ul style="list-style-type: none"> Marc Romansky (Accessing VMware remotely via Linksys Router) Marc Romansky (Accessing VMware with PuTTY) Marcos Valdebenito (VirtualBox) Michael Wicherski (Permissions) Michael Wicherski (/bin/mail)
--	---	---



Graded work is copied to your home directories

```
/home/cis90/simmsben $ ls
bigfile  Hidden      Lab2.1      mission     proposal2   spellk      timecal
bin      lab01.graded letter      Poems       proposal3   text.err    what_am_i
empty    Lab2.0      Miscellaneous proposal1    small_town  text.fxd
```

```
/home/cis90/simmsben $ cat lab01.graded
Grading Rubric
```

30 points total. Six points for a successful submittal using Opus and two points for each correct answer.

6 of 6 - successful submittal
24 of 24 - correct answers to questions

Total: 30 points - Great job!

- 1) /home/cis90/guest \$
- 2) shows past commands
- 3) 503
- 4) bash
- 5) /dev/pts/2
- 6) eko
- 7) who
- 8) hostname
- 9) ctrl-alt-f2
- 10) no
- 11) no
- 12) exit

*Log in to Opus using your new Opus account and use the **ls** and **cat** commands to see your graded work*

Graded work is copied to your home directories

```
/home/cis90/simmsben $ ls /home/cis90/answers/
```

```
lab01
```

```
/home/cis90/simmsben $ cat /home/cis90/answers/lab01
```

```
1) /home/cis90/guest $
```

```
2) shows past commands
```

```
3) 503
```

```
4) bash
```

```
5) /dev/pts/2 (or any other /dev/pts/xx device)
```

```
6) eko
```

```
7) who
```

```
8) hostname
```

```
9) ctrl-alt-f2
```

```
10) no
```

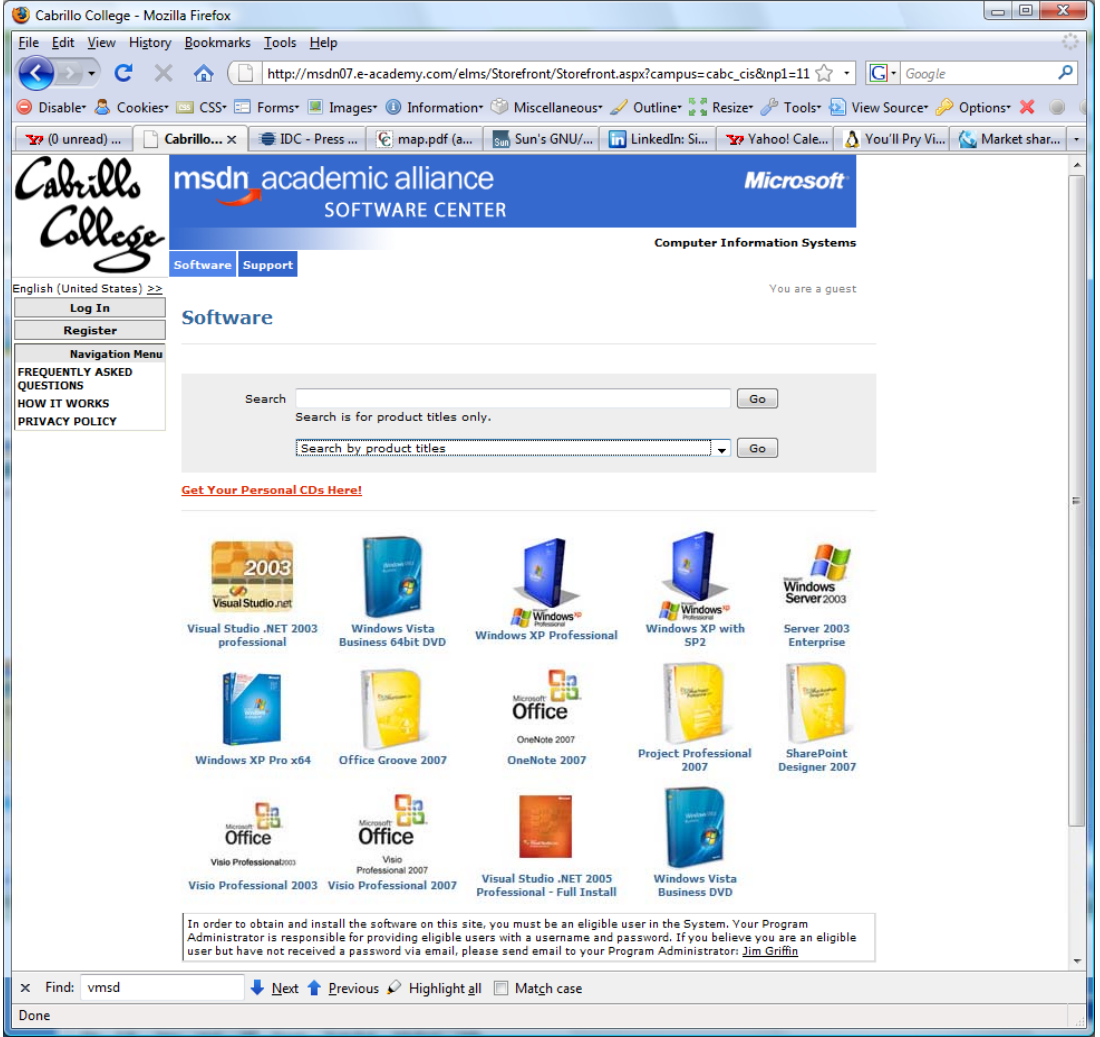
```
11) no
```

```
12) exit
```

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

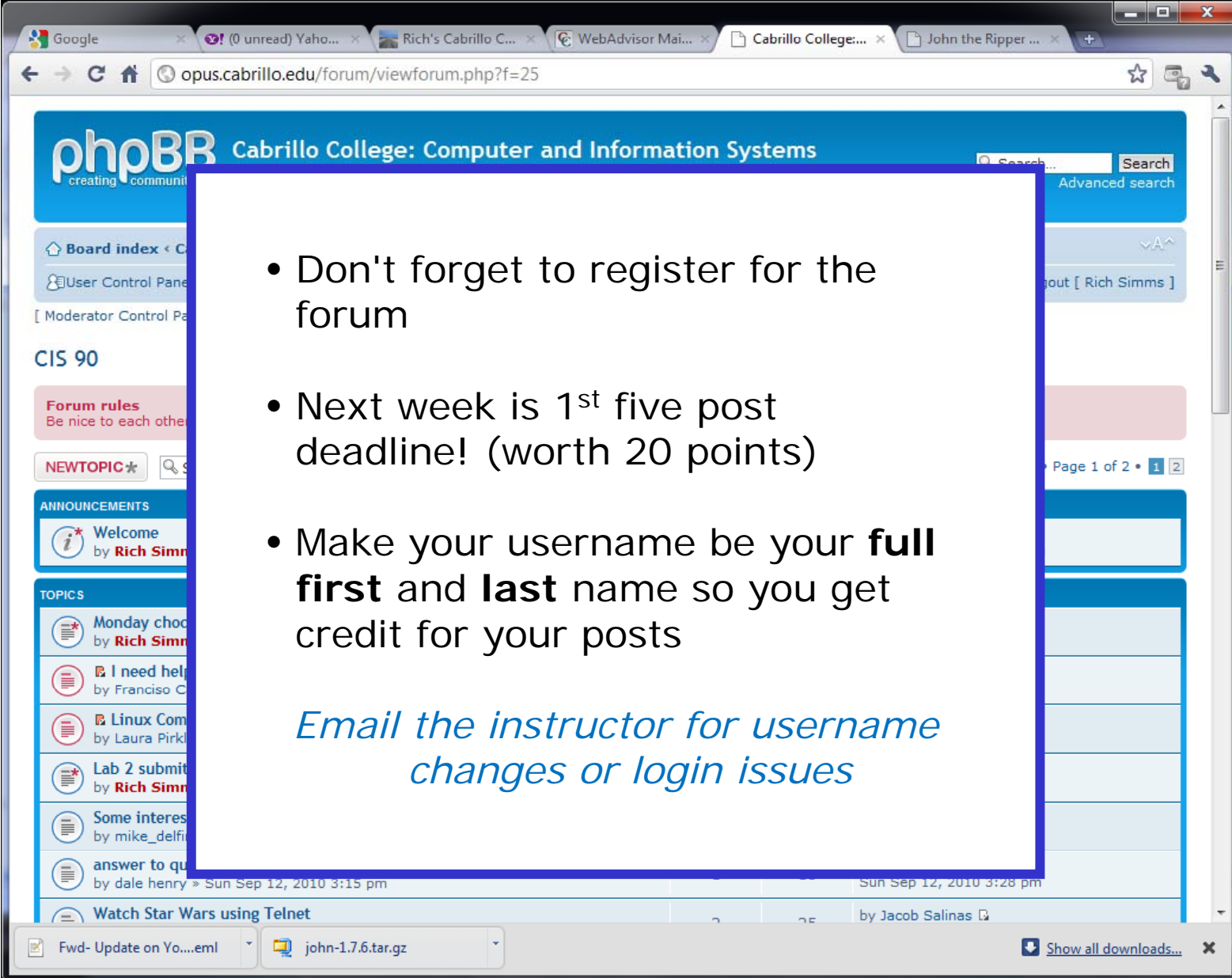
The answers to labs will be posted to the answers directory once the due date has passed.

MSDN Academic Alliance



Your accounts have been created from your email addresses and activated.

Happy downloading!



phpBB Cabrillo College: Computer and Information Systems

Board index < C
User Control Pane
[Moderator Control Pa

CIS 90

Forum rules
Be nice to each other

NEWTOPIC* 🔍

ANNOUNCEMENTS

Welcome
by Rich Simm

TOPICS

- Monday cho
by Rich Simm
- I need help
by Franciso C
- Linux Com
by Laura Pirk
- Lab 2 submit
by Rich Simm
- Some interes
by mike_delfi
- answer to qu
by dale henry » Sun Sep 12, 2010 3:15 pm
- Watch Star Wars using Telnet
by Jacob Salinas

- Don't forget to register for the forum
- Next week is 1st five post deadline! (worth 20 points)
- Make your username be your **full first and last** name so you get credit for your posts

Email the instructor for username changes or login issues

Fwd- Update on Yo...eml john-1.7.6.tar.gz Show all downloads...

Write Command

write command

send a message to another user

write username [ttyname]

- Use **ttyname** if there are multiple logins by same username

- The receiver gets:

```
Message from yourname@yourhost on yourtty at hh:mm ...
```

- Each line you type gets sent to the other user.
- To end sending messages type Ctrl-D (Hold down Ctrl and tap D key)
- The receiver will see an EOF (end of file) at the end.
- If the receiver wants to reply then they need to use write command as well.

write command

send a message to another user

```
simmsben@opus:~  
/home/cis90/simmsben $ who  
simmsben pts/0      2008-07-24 09:42 (dsl-63-249-86-11.cruzio.com)  
simmsmar pts/1      2008-07-24 09:38 (dsl-63-249-86-11.cruzio.com)  
rsimms    pts/2      2008-07-24 09:49 (dsl-63-249-86-11.cruzio.com)  
rsimms    pts/3      2008-07-24 13:09 (dsl-63-249-86-11.cruzio.com)  
rsimms    pts/4      2008-07-24 13:10 (dsl-63-249-86-11.cruzio.com)  
/home/cis90/simmsben $ write rsimms pts/4  
Hola  
Bye  
Ctrl-D  
/home/cis90/simmsben $ █
```

Note, the pts/4 is only needed if there is only one login by the target user

```
rsimms@opus:~  
[rsimms@opus ~]$ tty  
/dev/pts/4  
[rsimms@opus ~]$  
Message from simmsben@opus.cabrillo.edu on pts/0 at 13:24 ...  
Hola  
Bye  
EOF  
[rsimms@opus ~]$ █
```

write command

Beji chats with Mary using write commands

```
simmsben@opus:~  
/home/cis90/simmsben $ write simmsmar 1  
will you play gopher with me? 3  
o 5 (a convention, "o" used for over)  
  
Message from simmsmar@opus.cabrillo.edu on pts/1 at 17:19 ... 8  
how about in five minutes? 10  
o 12  
ok, don't take too long or i'll start barking 13  
o 15  
see you soon bye 17  
EOF 18  
bye 19 (Ctrl-D) 21  
/home/cis90/simmsk
```



simmsben

Use Ctrl-D to stop writing. Ctrl-D is EOF (End of File) and is slightly more friendly than Ctrl-C



simmsmar

```
simmsmar@opus:~  
[simmsmar@opus ~]$  
Message from simmsben@opus.cabrillo.edu on pts/2 at 17:18 ... 2  
will you play gopher with me? 4  
o 6  
write simmsben 7  
how about in five minutes? 9  
o 11  
ok, don't take too long or i'll start barking 14  
o  
see you soon bye 16 (Ctrl-D) 17  
[simmsmar@opus ~]$ bye 20  
EOF 22  
[simmsmar@opus ~]$
```


mesg command

enable or disable writes to your terminal

```
simmsmar@opus:~  
[simmsmar@opus ~]$ mesg n  
[simmsmar@opus ~]$ █
```

Use n to
disable or y to
enable



simmsmar

```
simmsben@opus:~  
/home/cis90/simmsben $ write simmsmar  
write: simmsmar has messages disabled  
/home/cis90/simmsben $ █
```



simmsben

Class Exercise
write and mesg

- Students, please login to Opus using your own accounts
- Rich, run the pairs script to pair up all the CIS 90 students.
- Students, use the write command to "chat" with your pair mate. e.g. **write *username***
- Students, ask your pair mate for their name and whether they are in the online or classroom section of the class.
- End the chat session with Ctrl-D

Note to Rich:

Run the pairs script in your cis90/misc/uhist directory

Mail Command

Notes to Rich



[] - Send out Welcome letter

use mail-welcome script in /cis90/misc/uhist directory

UNIX mail

Sending messages

Benji sends an email to Rich and Mary



simmsben

Use . or
Ctrl-D to
end the
message

```
simmsben@opus:~  
/home/cis90/simmsben $ mail simmsmar richsimms@yahoo.com  
Subject: Salsa on Friday  
See you at the Palomar dance floor. Bring  
your dancing shoes!  
  
- Benji  
.  
Cc:  
/home/cis90/simmsben $
```

Intended recipients

The first prompt is "Subject: ", you enter the subject, then enter the message. The last prompt is "Cc: ". After hitting Enter the message is sent



richsimms@yahoo.com



simmsmar

Tip: cc yourself to save a copy of messages sent

UNIX Mail

Reading messages

Mary reads email from Benji



simmsmar

One message is in the header list (in tray), "N" means New, "1" is the message number

The & is the mail prompt.
Enter a 1 to read message 1

```
simmsmar@opus:~  
You have mail in /var/spool/mail/simmsmar  
[simmsmar@opus ~]$ mail  
Mail version 8.1 6/6/93.  Type ? for help.  
"/var/spool/mail/simmsmar": 1 message 1 new  
>N 1 simmsben@opus.cabrill  Wed Jul 23 15:16  19/682  "Salsa on Friday"  
& 1  
Message 1:  
From simmsben@opus.cabrillo.edu  Wed Jul 23 15:16:39 2008  
Date: Wed, 23 Jul 2008 15:16:39 -0700  
From: Benji Simms <simmsben@opus.cabrillo.edu>  
To: richsimms@yahoo.com, simmsmar@opus.cabrillo.edu  
Subject: Salsa on Friday  
  
See you at the Palomar dance floor.  Bring  
your dancing shoes!  
  
- Benji  
&
```

UNIX mail

Reading messages sent from UNIX mail

Rich reads email from Benji

The screenshot shows a Windows Internet Explorer browser window displaying the Yahoo! Mail interface. The address bar shows the URL `http://us.mg2.mail.yahoo.com/dc/launch?.rand=etbmjdnr2soqv`. The page title is "(0 unread) Yahoo! Mail, richsimms - Windows Internet Explorer". The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar contains various icons for navigation and search. The main content area shows the Yahoo! Mail inbox for user "richsimms". The inbox list includes several messages, with the selected message being from Benji Simms with the subject "Salsa on Friday". The message content is visible in the preview pane below the list.

<input type="checkbox"/>	From	Subject	Date	Size
<input checked="" type="checkbox"/>	Benji Simms	Salsa on Friday	Wed, 7/23/08 3:16 PM	1KB
<input type="checkbox"/>	siliconvalleyclub@umich.edu	[siliconvalley-alumni] Ann Arbor Opportunity Night	Wed, 7/23/08 1:21 PM	10KB
<input type="checkbox"/>	Pamela Price	Re: [HPAA onHP] UHS - Ingenix Subrogation Servi	Wed, 7/23/08 9:38 AM	17KB
<input type="checkbox"/>	hp_alumni_jobs@yahoogroups.com	[HPAA Jobs] Digest Number 1951	Wed, 7/23/08 5:30 AM	72KB
<input type="checkbox"/>	Lands' End	Exclusive Outerwear Premiere! Free Shipping, new	Tue, 7/22/08 7:45 PM	26KB
<input type="checkbox"/>	Kathy Dow	[HPAA onHP] UHS - Ingenix Subrogation Services	Tue, 7/22/08 11:14 AM	20KB
<input type="checkbox"/>	Newegg.com	Go Back to School in High Tech Style with Newegg	Tue, 7/22/08 3:35 AM	27KB
<input type="checkbox"/>	helpdesk@cruzio.com	Cruzio Newsletter #118	Mon, 7/21/08 7:14 PM	17KB
<input type="checkbox"/>	HP Home & Home Office Store	HP EPP Members: Save on the HP Products You W	Mon, 7/21/08 5:18 PM	19KB
<input type="checkbox"/>	Gerlinde Brady	!Fwd: CREATE CATC Retoolina at Cabrillo College!	Mon, 7/21/08 9:18 AM	940KB

Salsa on Friday

Benji Simms <simmsben@opus.cabrillo.edu> Add To: richsimms@yahoo.com; simmsmar@opus.cabrillo.edu

See you at the Palomar dance floor. Bring your dancing shoes!

- Benji



richsimms@yahoo.com

UNIX Mail

Replying to messages

Mary replies to email from Benji



simmsmar

```
simmsmar@opus:~  
& 1  
Message 1:  
From simmsben@opus.cabrillo.edu Wed Jul 23 15:16:39 2008  
Date: Wed, 23 Jul 2008 15:16:39 -0700  
From: Benji Simms <simmsben@opus.cabrillo.edu>  
To: richsimms@yahoo.com, simmsmar@opus.cabrillo.edu  
Subject: Salsa on Friday  
  
See you at the Palomar dance floor. Bring  
your dancing shoes!  
  
- Benji  
  
& r  
To: richsimms@yahoo.com simmsmar@opus.cabrillo.edu  
    simmsben@opus.cabrillo.edu  
Subject: Re: Salsa on Friday  
  
I'll see you there!  
  
- Mary  
.  
Cc: richsimms@yahoo.com  
&
```

Enter an r to
"reply to all"
for the last
message read

UNIX Mail

Benji gets the reply from Mary



simmsben

Benji reads reply from Mary

```
simmsben@opus:~  
You have mail in /var/spool/mail/simmsben  
/home/cis90/simmsben $ mail  
Mail version 8.1 6/6/93.  Type ? for help.  
"/var/spool/mail/simmsben": 1 message 1 new  
>N 1 simmsmar@opus.cabrill Wed Jul 23 16:25 19/677 "Re: Salsa on Friday"  
& p 1  
Message 1:  
From simmsmar@opus.cabrillo.edu Wed Jul 23 16:25:51 2008  
Date: Wed, 23 Jul 2008 16:25:51 -0700  
From: Mary Simms <simmsmar@opus.cabrillo.edu>  
To: richsimms@yahoo.com, simmsben@opus.cabrillo.edu,  
simmsmar@opus.cabrillo.edu  
Subject: Re: Salsa on Friday  
  
I'll see you there!  
  
- Mary  
  
&
```

Entering just the message number or a "p" followed by the message number are equivalent. The p is the mail print command.

UNIX Mail

Rich reads reply from Mary



The screenshot shows a Yahoo! Mail inbox in a Windows Internet Explorer browser window. The browser address bar shows the URL `http://us.mg2.mail.yahoo.com/dc/launch?.rand=etbmjdnr2soqv`. The page title is "(0 unread) Yahoo! Mail, richsimms". The browser's address bar contains "Yahoo! Search". The page header includes "YAHOO! MAIL", "richsimms Offline", and "Sign Out, My Account, Mail Classic". The left sidebar shows folders: "Inbox", "Drafts", "Sent", "Spam", "Trash", "Contacts", "Calendar", "Notepad", "All Feeds", and "My Folders". The main content area shows an "Inbox" with 2772 messages. A table lists messages with columns for "From", "Subject", "Date", and "Size". The selected message is "Re: Salsa on Friday" from "Mary Simms" with a subject of "Re: Salsa on Friday" and a date of "Wed, 7/23/08 4:25 PM". The message content is displayed below the table, showing the text "I'll see you there!" and "- Mary".

<input type="checkbox"/>	From	Subject	Date	Size
<input checked="" type="checkbox"/>	Mary Simms	Re: Salsa on Friday	Wed, 7/23/08 4:25 PM	2kB
<input type="checkbox"/>	Benji Simms	Salsa on Friday	Wed, 7/23/08 3:16 PM	1kB
<input type="checkbox"/>	siliconvalleyclub@umich.edu	[siliconvalley-alumni] Ann Arbor Opportunity Night	Wed, 7/23/08 1:21 PM	10kB
<input type="checkbox"/>	Pamela Price	Re: [HPAA onHP] UHS - Ingenix Subrogation Servi	Wed, 7/23/08 9:38 AM	17kB
<input type="checkbox"/>	hp_alumni_jobs@yahoogroups.com	[HPAA Jobs] Digest Number 1951	Wed, 7/23/08 5:30 AM	72kB
<input type="checkbox"/>	Lands' End	Exclusive Outerwear Premiere! Free Shipping, new	Tue, 7/22/08 7:45 PM	26kB
<input type="checkbox"/>	Kathy Dow	[HPAA onHP] UHS - Ingenix Subrogation Services	Tue, 7/22/08 11:14 AM	20kB
<input type="checkbox"/>	Newegg.com	Go Back to School in High Tech Style with Newegg	Tue, 7/22/08 3:35 AM	27kB
<input type="checkbox"/>	helpdesk@cruzio.com	Cruzio Newsletter #118	Mon, 7/21/08 7:14 PM	17kB
<input type="checkbox"/>	HP Home & Home Office Store	HP EPP Members: Save on the HP Products You W	Mon, 7/21/08 5:18 PM	19kB

richsimms@yahoo.com

Class Exercise
UNIX mail

- Logon to Opus
- Send an email to your pair mate and ask them if they are going to the Palomar Salsa lessons on Fridays. Hint: use **mail *username***
- Reply to the messages you receive Hint: run **mail**, type **n** command to read new messages, use **r** command to reply
- Enter **ls /home/cis90** to see all CIS 90 accounts and send an email to another student (your choice)
- Reply to any emails you get

More on Mail Command

mail command

read and write modes

Read mode:

- `mail` (to read new messages)
- `mail -f` (to read saved messages in mbox)
- `mail -f myfile` (to read saved messages in myfile)

Write mode:

- `mail simmsben`
- `mail simmsben simmsmar richsimms@yahoo.com`

mail command

read mode sub commands

You are in **read mode** when you invoke mail with no arguments

- ? print these commands
- p <message list> print messages
- n goto and print next message
- e <message list> edit messages
- d <message list> delete messages
- s <message list> file save (append) messages to file
- u <message list> undelete messages
- R <message list> reply to sender(s)
- r <message list> reply to all
- m <user list> mail to specific users
- q quit, saving read messages to local mbox file
- x quit, mark all mail as unread and undeleted.
- h print out active message headers

A <message list> consists of integers, ranges of same, or user names separated by spaces. If omitted, Mail uses the current message

A <user list> consists of user names separated by spaces.

mail command

(h)header sub-command

h (print headers – e.g. list my in tray)

```

simmsben@opus:~
& h
1 simmsmar@opus.cabril Wed Jul 23 16:25 19/677 "Re: Salsa on Friday"
2 simmsben@opus.cabril Thu Jul 24 13:54 28/962 "test of attached message"
> 3 simmsben@opus.cabril Thu Jul 24 14:03 25/932 "Another test"
N 4 roddyduk@opus.cabril Thu Jul 24 14:17 18/729 "Lets play ball"
N 5 millehom@opus.cabril Thu Jul 24 14:20 21/746 "Linux scripts"
&
  
```

message numbers

N = New, message is unread

> points to the current message (last one printed)

mail command

(p)rint sub-command

```
simmsben@opus:~  
& h  
  1 simmsmar@opus.cabrill Wed Jul 23 16:25 19/677 "Re: Salsa on Friday"  
  2 simmsben@opus.cabrill Thu Jul 24 13:54 28/962 "test of attached message"  
  3 simmsben@opus.cabrill Thu Jul 24 14:03 25/932 "Another test"  
  4 roddyduk@opus.cabrill Thu Jul 24 14:17 18/729 "Lets play ball"  
>  5 millehom@opus.cabrill Thu Jul 24 14:20 21/746 "Linux scripts"  
& print simmsmar  
Message 1:  
From simmsmar@opus.cabrillo.edu Wed Jul 23 16:25:51 2008  
Date: Wed, 23 Jul 2008 16:25:51 -0700  
From: Mary Simms <simmsmar@opus.cabrillo.edu>  
To: richsimms@yahoo.com, simmsben@opus.cabrillo.edu,  
    simmsmar@opus.cabrillo.edu  
Subject: Re: Salsa on Friday  
  
I'll see you there!  
  
- Mary  
&
```

print all messages
from simmsmar

mail command

(p)rint sub-command

```
simmsben@opus:~/home/cis90/simmsben $ mail
Mail version 8.1 6/6/93.  Type ? for help.
"/var/spool/mail/simmsben": 5 messages 5 new
>N 1 simmsmar@opus.cabrill  Wed Jul 23 16:25  19/677  "Re: Salsa on Friday"
  N 2 simmsben@opus.cabrill  Thu Jul 24 13:54  28/962  "test of attached message"
  N 3 simmsben@opus.cabrill  Thu Jul 24 14:03  25/932  "Another test"
  N 4 roddyduk@opus.cabrill  Thu Jul 24 14:17  18/729  "Lets p
  N 5 millehom@opus.cabrill  Thu Jul 24 14:20  21/746  "Linux
& p 5
Message 5:
From millehom@opus.cabrillo.edu  Thu Jul 24 14:20:51 2008
Date: Thu, 24 Jul 2008 14:20:51 -0700
From: Homer Miller <millehom@opus.cabrillo.edu>
To: simmsben@opus.cabrillo.edu
Subject: Linux scripts

Hi Benji,
Do you have a script that checks if the Nimbus installation has finished?
Let me know,

Thanks,
Homer
```

print message 5,
note that
commands can be
abbreviated to a
single letter

mail command

(p)rint sub-command

```
simmsben@opus:~  
& h  
  1 simmsmar@opus.cabrill Wed Jul 23 16:25 19/677 "Re: Salsa on Friday"  
  2 simmsben@opus.cabrill Thu Jul 24 13:54 28/962 "test of attached message"  
> 3 simmsben@opus.cabrill Thu Jul 24 14:03 25/932 "Another test"  
  N 4 roddyduk@opus.cabrill Thu Jul 24 14:17 18/729 "Lets play ball"  
  N 5 millehom@opus.cabrill Thu Jul 24 14:20 21/746 "Linux scripts"  
& p 4-5  
Message 4:  
From roddyduk@opus.cabrillo.edu Thu Jul 24 14:17:48 2008  
Date: Thu, 24 Jul 2008 14:17:47 -0700  
From: Duke Roddy <roddyduk@opus.cabrillo.edu>  
To: simmsben@opus.cabrillo.edu  
Subject: Lets play ball  
  
Hey, lets meet at Blue Ball Park and bring some tennis balls.  
How about 3 this afternoon?  
-Duke  
  
Message 5:  
From millehom@opus.cabrillo.edu Thu Jul 24 14:20:51 2008  
Date: Thu, 24 Jul 2008 14:20:51 -0700  
From: Homer Miller <millehom@opus.cabrillo.edu>  
To: simmsben@opus.cabrillo.edu  
Subject: Linux scripts  
  
Hi Benji,  
Do you have a script that checks if the Nimbus installation has finished?  
Let me know,  
  
Thanks,  
Homer  
&
```

print messages 4 -5

mail command e(x)it sub-command

```

simmsben@opus:~
& h
  1 simmsmar@opus.cabril  Wed Jul 23 16:25  19/677  "Re: Salsa on Friday"
  2 simmsben@opus.cabril  Thu Jul 24 13:54  28/962  "test of attached message"
  3 simmsben@opus.cabril  Thu Jul 24 14:03  25/932  "Another test"
  4 roddyduk@opus.cabril  Thu Jul 24 14:17  18/729  "Lets play ball"
> 5 millehom@opus.cabril  Thu Jul 24 14:20  21/746  "Linux scripts"
& x
/home/cis90/simmsben $ mail
Mail version 8.1 6/6/93.  Type ? for help.
"/var/spool/mail/simmsben": 5 messages 5 new
>N 1 simmsmar@opus.cabril  Wed Jul 23 16:25  19/677  "Re: Salsa on Friday"
  N 2 simmsben@opus.cabril  Thu Jul 24 13:54  28/962  "test of attached message"
  N 3 simmsben@opus.cabril  Thu Jul 24 14:03  25/932  "Another test"
  N 4 roddyduk@opus.cabril  Thu Jul 24 14:17  18/729  "Lets play ball"
  N 5 millehom@opus.cabril  Thu Jul 24 14:20  21/746  "Linux scripts"
&

```

x will quit mail. All messages revert back to their original state (unread and undeleted). When you return to mail again all the messages will still be there.

mail command (q)uit sub-command

```

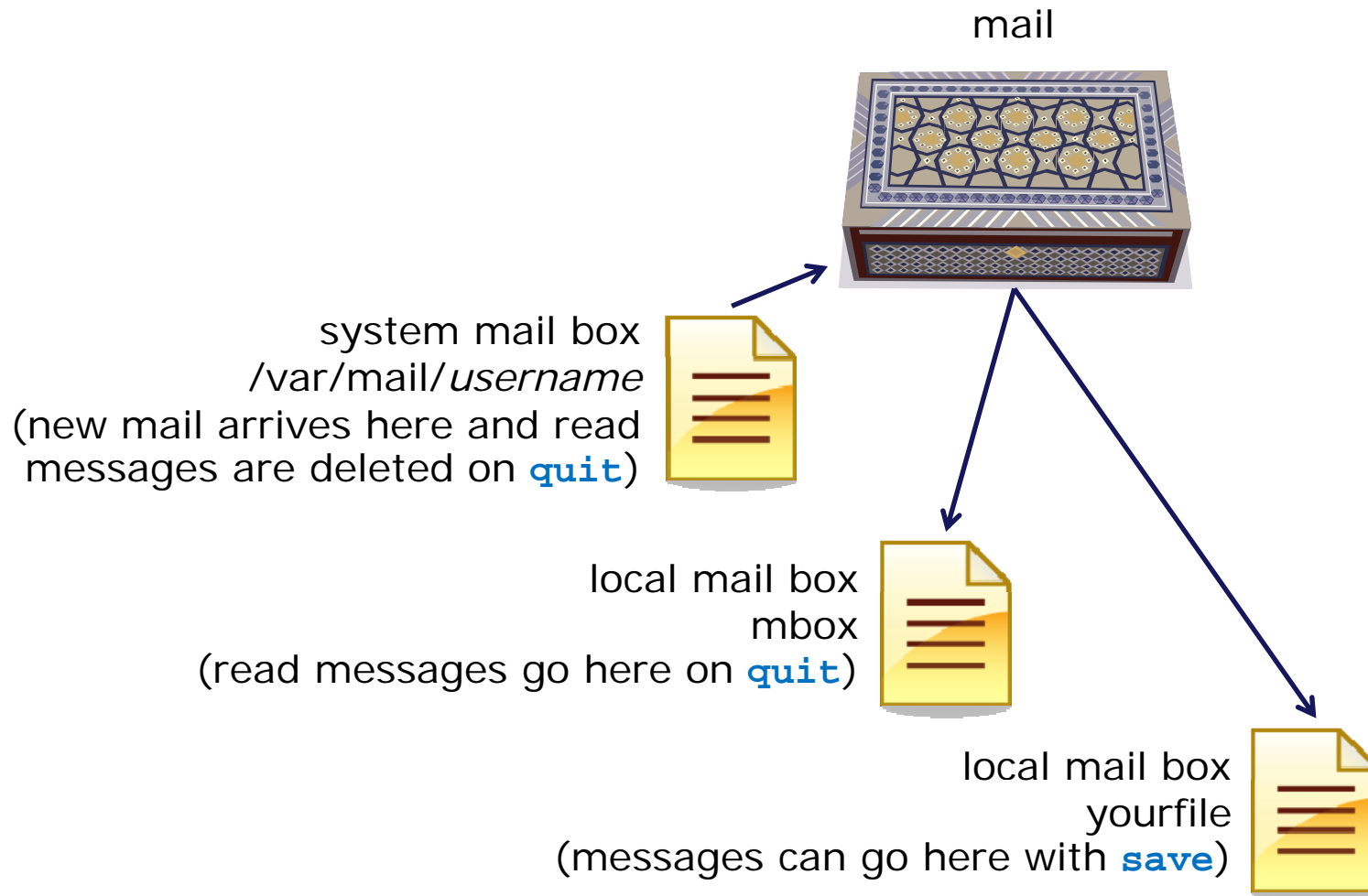
simmsben@opus:~
& h
  1 simmsmar@opus.cabril Wed Jul 23 16:25 19/677 "Re: Salsa on Friday"
  2 simmsben@opus.cabril Thu Jul 24 13:54 28/962 "test of attached message"
  3 simmsben@opus.cabril Thu Jul 24 14:03 25/932 "Another test"
  4 roddyduk@opus.cabril Thu Jul 24 14:17 18/729 "Lets play ball"
>  5 millehom@opus.cabril Thu Jul 24 14:20 21/746 "Linux scripts"
& q
Saved 5 messages in mbox
/home/cis90/simmsben $ mail
No mail for simmsben
/home/cis90/simmsben $ mail -f mbox
Mail version 8.1 6/6/93. Type ? for help.
"mbox": 5 messages
>  1 simmsmar@opus.cabril Wed Jul 23 16:25 20/688 "Re: Salsa on Friday"
  2 simmsben@opus.cabril Thu Jul 24 13:54 29/973 "test of attached message"
  3 simmsben@opus.cabril Thu Jul 24 14:03 26/943 "Another test"
  4 roddyduk@opus.cabril Thu Jul 24 14:17 19/740 "Lets play ball"
  5 millehom@opus.cabril Thu Jul 24 14:20 22/757 "Linux scripts"
&

```

*q will quit mail. All read messages are moved to a local file named **mbox**. When you return to mail again those message will not appear. To read your old messages you must specify the mbox file with the **-f** option.*

mail command

Various mailbox files



mail command

Various mail boxes example

```
[rsimms@opus ~]$ mail
Mail version 8.1 6/6/93.  Type ? for help.
"/var/spool/mail/rsimms": 6 messages 6 new
>N  1 jimmg@opus.cabrillo.e  Sun Jun 22 13:53  21/826  "Hot days and servers"
   N  2 simmsben@opus.cabril  Thu Jul 24 12:27  16/697  "Nisene Hike"
   N  3 simmsmar@opus.cabril  Thu Jul 24 12:28  18/728  "Don't forget to bring"
   N  4 simmsben@opus.cabril  Thu Jul 24 12:29  17/696  "Bone lost"
   N  5 rsimms@opus.cabrillo  Thu Jul 24 12:33  20/808  "Re: Hot days and serv"
   N  6 roddyduk@opus.cabril  Thu Jul 24 15:41  18/691  "Salsa"
```

Print 2
messages

```
& p 3-4
Message 3:
From simmsmar@opus.cabrillo.edu  Thu Jul 24 12:28:38 2008
Date: Thu, 24 Jul 2008 12:28:38 -0700
From: Mary Simms <simmsmar@opus.cabrillo.edu>
To: rsimms@opus.cabrillo.edu
Subject: Don't forget to bring pen drive
```

I need to use it again to back up some files and practice partitioning.
Thanks
Mary

```
Message 4:
From simmsben@opus.cabrillo.edu  Thu Jul 24 12:29:27 2008
Date: Thu, 24 Jul 2008 12:29:27 -0700
From: Benji Simms <simmsben@opus.cabrillo.edu>
To: rsimms@opus.cabrillo.edu
Subject: Bone lost
```

Did you see that old bone I was chewing? I can't find it anywhere!
- Ben

mail command

Various mail boxes example

save
message 4
in bone

messages 3
and 4 are
read. 4 is
saved (*)

```
& s 4 bone
"bone" [New file]
& h
N 1 jimg@opus.cabrillo.e Sun Jun 22 13:53 21/826 "Hot days and servers"
N 2 simmsben@opus.cabril Thu Jul 24 12:27 16/697 "Nisene Hike"
N 3 simmsmar@opus.cabril Thu Jul 24 12:28 18/728 "Don't forget to bring"
>* 4 simmsben@opus.cabril Thu Jul 24 12:29 17/696 "Bone lost"
N 5 rsimms@opus.cabrillo Thu Jul 24 12:33 20/808 "Re: Hot days and serv"
N 6 roddyduk@opus.cabril Thu Jul 24 15:41 18/691 "Salsa"

& q
Saved 1 message in mbox
Held 4 messages in /var/spool/mail/rsimms
[rsimms@opus ~]$ mail
Mail version 8.1 6/6/93. Type ? for help.
"/var/spool/mail/rsimms": 4 messages 4 unread
>U 1 jimg@opus.cabrillo.e Sun Jun 22 13:53 22/836 "Hot days and servers"
U 2 simmsben@opus.cabril Thu Jul 24 12:27 17/707 "Nisene Hike"
U 3 rsimms@opus.cabrillo Thu Jul 24 12:33 21/818 "Re: Hot days and serv"
U 4 roddyduk@opus.cabril Thu Jul 24 15:41 19/701 "Salsa"

& q
Held 4 messages in /var/spool/mail/rsimms
[rsimms@opus ~]$ mail -f mbox
Mail version 8.1 6/6/93. Type ? for help.
"mbox": 1 message
> 1 simmsmar@opus.cabril Thu Jul 24 12:28 19/739 "Don't forget to bring"

& q
[rsimms@opus ~]$ mail -f bone
Mail version 8.1 6/6/93. Type ? for help.
"bone": 1 message 1 new
> 1 simmsben@opus.cabril Thu Jul 24 12:29 18/706 "Bone lost"

& q
"bone" complete
[rsimms@opus ~]$
```

mail command (d)elelete and (u)ndelete

```
rsimms@opus:~  
[rsimms@opus ~]$ mail -f mbox  
Mail version 8.1 6/6/93.  Type ? for help.  
"mbox": 4 messages  
>  1 simmsmar@opus.cabril  Thu Jul 24 12:28  19/739  "Don't forget to bring"  
  2 simmsben@opus.cabril  Thu Jul 24 12:27  17/708  "Nisene Hike"  
  3 rsimms@opus.cabrillo  Thu Jul 24 12:33  21/819  "Re: Hot days and serv"  
  4 roddyduk@opus.cabril  Thu Jul 24 15:41  19/702  "Salsa"  
& d 4  
& h  
  1 simmsmar@opus.cabril  Thu Jul 24 12:28  19/739  "Don't forget to bring"  
  2 simmsben@opus.cabril  Thu Jul 24 12:27  17/708  "Nisene Hike"  
>  3 rsimms@opus.cabrillo  Thu Jul 24 12:33  21/819  "Re: Hot days and serv"  
& u 4  
& h  
  1 simmsmar@opus.cabril  Thu Jul 24 12:28  19/739  "Don't forget to bring"  
  2 simmsben@opus.cabril  Thu Jul 24 12:27  17/708  "Nisene Hike"  
  3 rsimms@opus.cabrillo  Thu Jul 24 12:33  21/819  "Re: Hot days and serv"  
>  4 roddyduk@opus.cabril  Thu Jul 24 15:41  19/702  "Salsa"  
&
```


mail command

Copying messages from mbox back to system mail box

```

rsimms@opus:~
[rsimms@opus ~]$ mail
Mail version 8.1 6/6/93.  Type ? for help.
"/var/spool/mail/rsimms": 1 message 1 unread
>U 1 jimg@opus.cabrillo.e  Sun Jun 22 13:53  22/836  "Hot days and servers"
& q
Held 1 message in /var/spool/mail/rsimms
[rsimms@opus ~]$ mail -f mbox
Mail version 8.1 6/6/93.  Type ? for help.
"mbox": 4 messages
> 1 simmsmar@opus.cabril  Thu Jul 24 12:28  19/739  "Don't forget to bring"
  2 simmsben@opus.cabril  Thu Jul 24 12:27  17/708  "Nisene Hike"
  3 rsimms@opus.cabrillo  Thu Jul 24 12:33  21/819  "Re: Hot days and serv"
  4 roddyduk@opus.cabril  Thu Jul 24 15:41  19/702  "Salsa"
& s 1-4 /var/mail/rsimms
"/var/mail/rsimms" [Appended]
& q
You have new mail in /var/spool/mail/rsimms
[rsimms@opus ~]$ mail
Mail version 8.1 6/6/93.  Type ? for help.
"/var/spool/mail/rsimms": 5 messages 1 unread
>U 1 jimg@opus.cabrillo.e  Sun Jun 22 13:53  22/836  "Hot days and servers"
  2 simmsmar@opus.cabril  Thu Jul 24 12:28  19/739  "Don't forget to bring"
  3 simmsben@opus.cabril  Thu Jul 24 12:27  17/708  "Nisene Hike"
  4 rsimms@opus.cabrillo  Thu Jul 24 12:33  21/819  "Re: Hot days and serv"
  5 roddyduk@opus.cabril  Thu Jul 24 15:41  19/702  "Salsa"
&

```

mail command

Forwarding a message with ~m

```
[rsimms@opus ~]$ mail
Mail version 8.1 6/6/93.  Type ? for help.
"/var/spool/mail/rsimms": 5 messages 1 unread
>U  1 jimg@opus.cabrillo.e  Sun Jun 22 13:53  22/836  "Hot days and servers"
   2 simmsmar@opus.cabril  Thu Jul 24 12:28  19/739  "Don't forget to bring"
   3 simmsben@opus.cabril  Thu Jul 24 12:27  17/708  "Nisene Hike"
   4 rsimms@opus.cabrillo  Thu Jul 24 12:33  21/819  "Re: Hot days and serv"
   5 roddyduk@opus.cabril  Thu Jul 24 15:41  19/702  "Salsa"
& m simmsben
Subject: re: Salsa
Hi Benji,

Did you see this:
~m5
Interpolating: 5
(continue)

Later,

- Rich
.
Cc:
&
```

This is how you forward message 5

```
/home/cis90/simmsben $ mail
Mail version 8.1 6/6/93.  Type ? for help.
"/var/spool/mail/simmsben": 1 message 1 new
>N  1 rsimms@opus.cabrillo  Thu Jul 24 18:51  33/935  "re: Salsa"
& p 1
Message 1:
From rsimms@opus.cabrillo.edu  Thu Jul 24 18:51:55 2008
Date: Thu, 24 Jul 2008 18:51:55 -0700
From: Rich Simms <rsimms@opus.cabrillo.edu>
To: simmsben@opus.cabrillo.edu
Subject: re: Salsa

Hi Benji,

Did you see this:

From roddyduk@opus.cabrillo.edu  Thu Jul 24 15:41:35 2008
Date: Thu, 24 Jul 2008 15:41:35 -0700
From: Duke Roddy <roddyduk@opus.cabrillo.edu>
To: rsimms@opus.cabrillo.edu
Subject: Salsa

You and Elizabeth coming to the Palomar this Friday?
Let me know,
- Duke

Later,

- Rich
&
```

mail command

The mail boxes are all ascii text

```
/home/cis90/simmsben $ cat /var/mail/simmsben
From millehom@opus.cabrillo.edu Thu Jul 24 16:26:56 2008
Return-Path: <millehom@opus.cabrillo.edu>
Received: from opus.cabrillo.edu (opus [127.0.0.1])
    by opus.cabrillo.edu (8.13.8/8.13.8) with ESMTTP id m6ONQuBk016775
    for <simmsben@opus.cabrillo.edu>; Thu, 24 Jul 2008 16:26:56 -0700
Received: (from millehom@localhost)
    by opus.cabrillo.edu (8.13.8/8.13.8/Submit) id m6ONQuqw016774
    for simmsben; Thu, 24 Jul 2008 16:26:56 -0700
Date: Thu, 24 Jul 2008 16:26:56 -0700
From: Homer Miller <millehom@opus.cabrillo.edu>
Message-Id: <200807242326.m6ONQuqw016774@opus.cabrillo.edu>
To: simmsben@opus.cabrillo.edu
Subject: RC4 review
```

Meeting at 4:00 today in Big Sur room. Looks like we have 2 showstoppers and need to rebuild tonight.

Homer

```
/home/cis90/simmsben $ mail
Mail version 8.1 6/6/93. Type ? for help.
"/var/spool/mail/simmsben": 1 message 1 new
>N 1 millehom@opus.cabril Thu Jul 24 16:26 18/741 "RC4 review"
& 1
Message 1:
From millehom@opus.cabrillo.edu Thu Jul 24 16:26:56 2008
Date: Thu, 24 Jul 2008 16:26:56 -0700
From: Homer Miller <millehom@opus.cabrillo.edu>
To: simmsben@opus.cabrillo.edu
Subject: RC4 review
```

Meeting at 4:00 today in Big Sur room. Looks like we have 2 showstoppers and need to rebuild tonight.

Homer

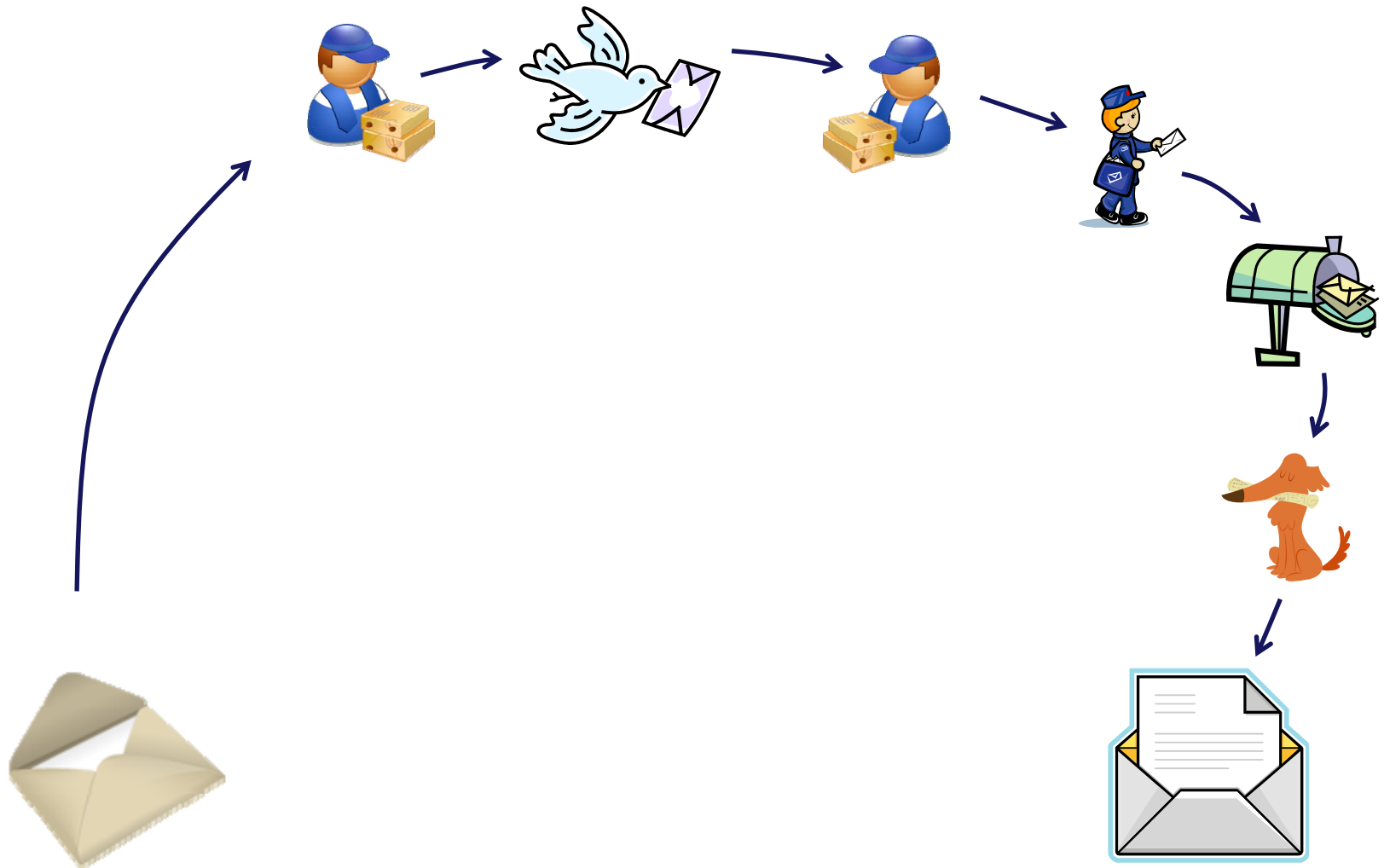
Class Exercise

UNIX mail

- Ask your pair mate for an email if you need some more messages
- Save a couple of messages to a file named `in2008`
- Forward a message to one of your classmates
- Send a message to yourself
- Delete and undelete some messages
- Experiment with `q` (quit) and `x` (exit) to see how read messages are handled
- Use mail with `-f` option to read `mbox` and `in2008` mailbox files

end-to-end email

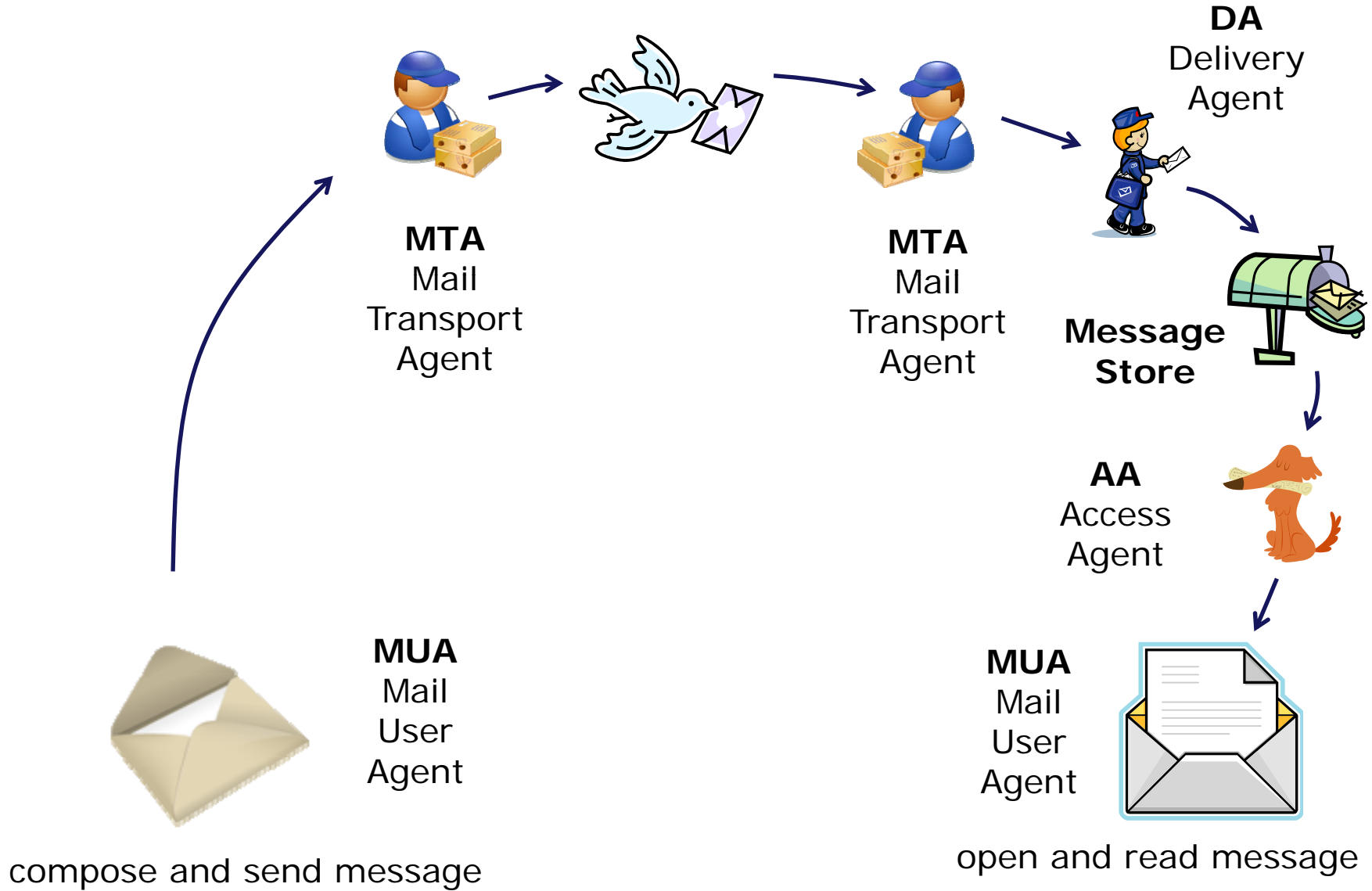
end-to-end email



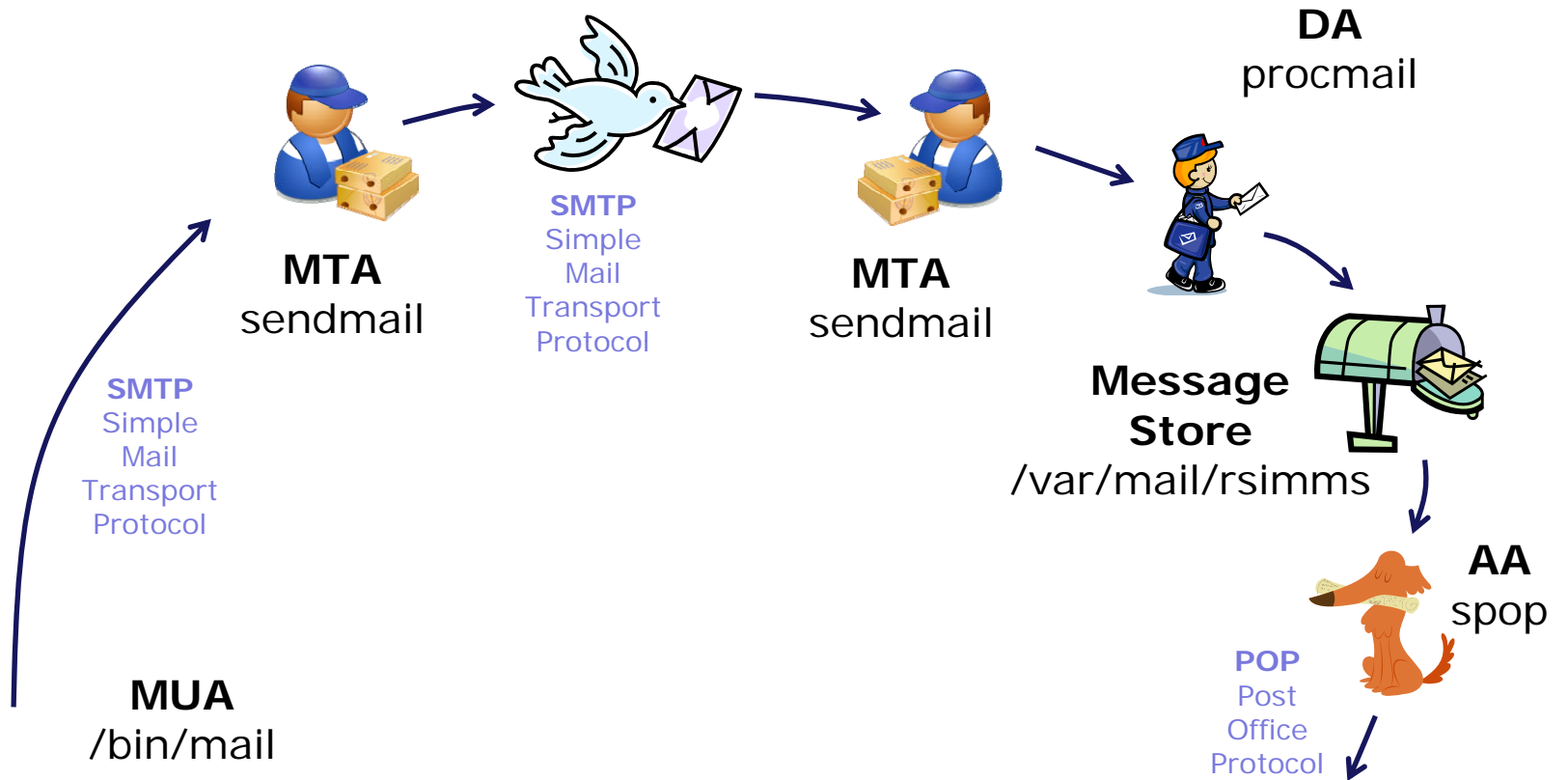
compose and send message

open and read message 78

end-to-end email



end-to-end email: example Implementation

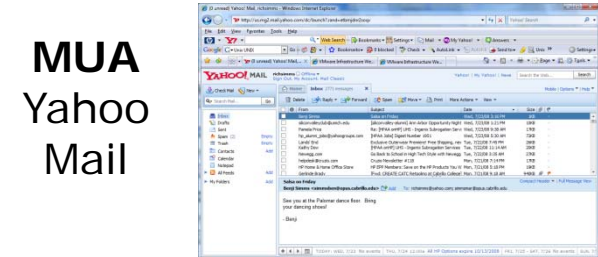


```

simmsben@opus:~
/home/cis90/simmsben $ mail simmsmar richsimms@yahoo.com
Subject: Salsa on Friday
See you at the Palomar dance floor. Bring
your dancing shoes!

- Benji
.
Cc:
/home/cis90/simmsben $
    
```

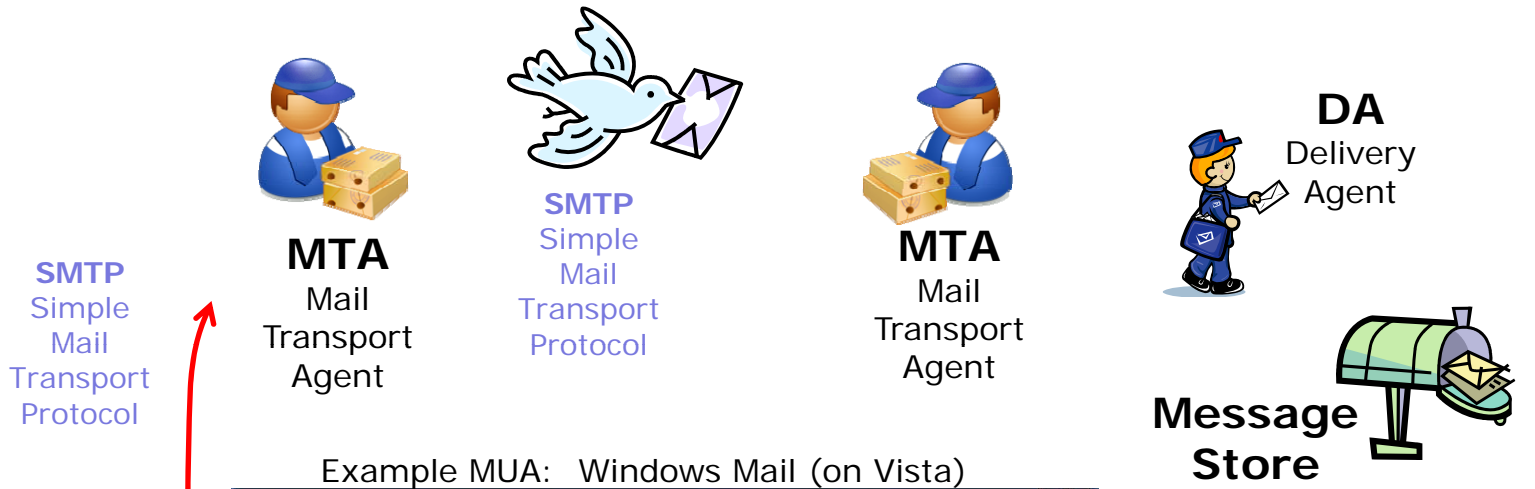
compose and send message



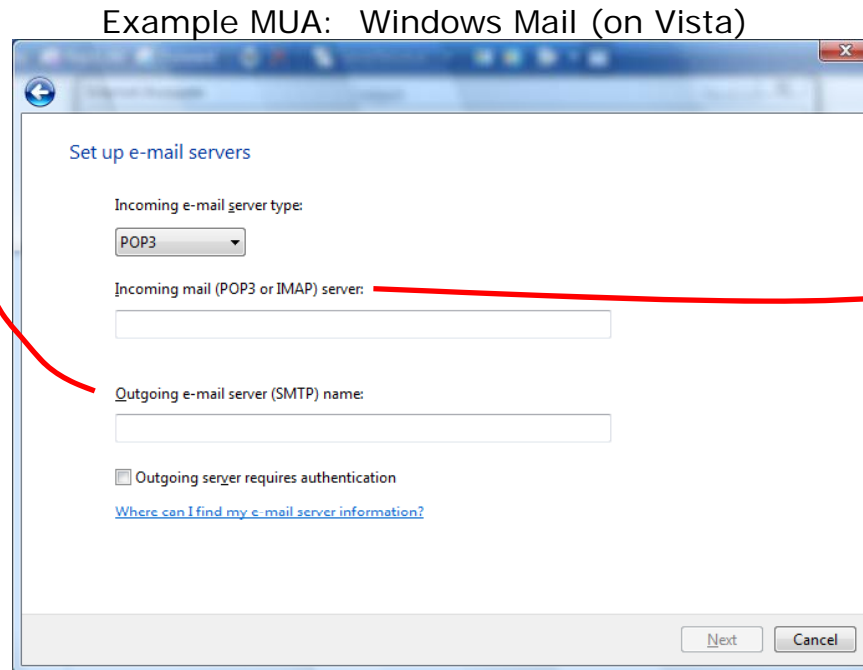
MUA
Yahoo
Mail

open and read message 80

end-to-end email: configuring your MUA (Mail User Agent)



This is why you get asked for the SMTP server and the POP3/IMAP server when you set up email on your PC. Your MUA needs to know this to send and receive messages.



Other MUAs MTAs, DAs, AAs

end-to-end email

some of the many players

MTA



sendmail, Exim, Microsoft Exchange Server, Postfix

DA



/bin/mail, procmail, smrsh

AA



imapd, spop

MUA



/bin/mail, pine, elm, Outlook, gmail, Evolution, Yahoo Mail

Lab 3

Notes to Rich



[] - Send out UNIX historical events for Lab 3
use mail-lab03 script in /cis90/misc/uhist directory

Procedure

Log on to the Opus machine so that you have a command line shell at your service. Be sure you are in your home directory to start this lab.

In class you will have received another mail message from me that describes a UNIX historical event for a particular year from 1968 to 2003. Save this message to a mailbox called *uhistory*. Then send email to your other classmates asking them to send you any other dates that they may have received. Each time you get UNIX event that you haven't already saved, save it to your *uhistory* mailbox. See how many dates you can accumulate. Can you get all 18? When someone asks you for the date that you received, you have to send it to them with the subject of date (YYYY).

When you get all the UNIX event messages saved in your *uhistory* mailbox you should have up to 18 messages, each with a different date for the **Subject** field. Delete any duplicate dates you may have.

When you have acquired at least 15 UNIX historical events, you can submit your *uhistory* mailbox by entering the `submit` command. When asked for which lab, enter 3.

Lab 3 (and all future labs) must be done on Opus

Wrap up

New commands:

mail

?
p <message list>
n
e <message list>
d <message list>
s <message list> file
u <message list>
R <message list>
r <message list>
m <user list>
q
x
h

- UNIX mail

print these commands
print messages
goto and print next message
edit messages
delete messages
save (append) messages to file
undelete messages
reply to sender(s)
reply to all
mail to specific users
quit, saving read messages to local mbox file
quit, mark all mail as unread and undeleted.
print out active message headers

mesg

write

- Enable or disable writes to your terminal
- Write message to another user

New Files and Directories:

/var/mail

/var/mail/*username*

mbox

- Message store for mail
- Incoming mailbox for *username*
- File in users home directory where read messages are archived to

Next Class

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

**1st 5 forum posts
and Lab 3**

Quiz questions for next class:

- What command can you use to "chat" with another user?
- How do you forward a message with /bin/mail?
- With /bin/mail, where do all messages that have been read go after using the quit command?

Backup

Variable Names and Values

Analogy: knobs and settings

*Users can create their own variables,
lets make a new one called FAN*



```
$ echo $FAN
```

```
$ FAN=HI
```

```
$ echo $FAN
```

```
HI
```

```
$ echo "The fan is set to: " $FAN
```

```
The fan is set to: HI
```

```
$ FAN=LO
```

```
$ echo "The fan is set to: " $FAN
```

```
The fan is set to: LO
```