Lesson Module Status
- Slides – draft
- Properties - done
- Flash cards –
- First minute quiz – done
- Web calendar summary – done
- Web book pages – done
- Commands – done
- Lab – done
- Supplies () - na
- Class PC's – na
- Chocolates - bringing

- Practice test uploaded
- CCC Confer wall paper – done
- Materials uploaded – done
- Backup headset charged – nope
- Backup slides, CCC info, handouts on flash drive - done



- Check that room headset is charged – done


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

## Quiz

# No Quiz Today !



[ ] Has the phone bridge been added?

[ ] Is recording on?

[ ] Does the phone bridge have the mike?

[ ] Share slides, putty (rsimms, simmsben, roddyduk), Chrome and Eko VM

[ ] Disable spelling on PowerPoint

# File Transfer and Review

| Objectives | Agenda |
| --- | --- |
| • Transfer project files to Windows and Linux systems<br>• Prepare for final exam | • No Quiz<br>• Questions from last week<br>• File transfer continued<br>• Practice Test #3<br>• Project Workshop (optional) |

# Previous material and assignment

1. Questions?

# Housekeeping

Due midnight tonight:

- Final Project submittal

Due midnight June 2:

- Test #3
- Five forum posts
- Extra credit labs

# Next week is **Cabrillo Finals Week**

- Our final exam is Test #3 (30 points)
  *Practice test is available on the website*
- Time: 1:00PM - 3:50PM
  *Note: Final exam will start 15 minutes earlier than our usual start time*
- Date: June 2nd
- Place: Online or Room 2501

**Points earned to date:**

amroth: 39% (201 of 510 points)
aragorn: 35% (183 of 510 points)
arwen: 73% (377 of 510 points)
celebrian: 69% (356 of 510 points)
cirdan: 102% (524 of 510 points)
denethor: 95% (486 of 510 points)
dwalin: 83% (425 of 510 points)
elrond: 40% (205 of 510 points)
eomer: 62% (321 of 510 points)
eowyn: 86% (441 of 510 points)
frodo: 106% (541 of 510 points)
gamling: 107% (549 of 510 points)
gimli: 77% (393 of 510 points)
gwaihir: 87% (448 of 510 points)
legolas: 109% (557 of 510 points)
orome: 102% (524 of 510 points)
quickbeam: 86% (440 of 510 points)
samwise: 93% (478 of 510 points)
shadowfax: 89% (458 of 510 points)
strider: 88% (451 of 510 points)
varda: 82% (421 of 510 points)

**Remaining points to earn:**

| | |
|---|---|
| Forum-4 | 20 |
| Test-3 | 30 + 10XC |
| Project | 60 + 30XC |
| Extra credit | 0-90XC |

| Percentage | Total Points | Letter Grade | Pass/No Pass |
|---|---|---|---|
| 90% or higher | 504 or higher | A | Pass |
| 80% to 89.9% | 448 to 503 | B | Pass |
| 70% to 79.9% | 392 to 447 | C | Pass |
| 60% to 69.9% | 336 to 391 | D | No pass |
| 0% to 59.9% | 0 to 335 | F | No pass |

*Contact the instructor if you have questions*

| Possible Points | Requirements |
|---|---|
| 30 | Implementing all five tasks (6 points each):<br>• Requirements for each task:<br>– Minimum of 10 script command lines<br>– Has comments to explain what it does<br>– Has user interaction |
| 25 | You don't have to do all of these but do at least five:<br>• Redirecting stdin (5 points)<br>• Redirecting stdout (5 points)<br>• Redirecting stderr (5 points)<br>• Use of permissions (5 points)<br>• Use of filename expansion characters (5 points)<br>• Use of absolute path (5 points)<br>• Use of relative path (5 points)<br>• Use of a PID (5 points)<br>• Use of inodes (5 points)<br>• Use of links (5 points)<br>• Use of a GID or group (5 points)<br>• Use of a UID or user (5 points)<br>• Use of a signal (5 points)<br>• Use of piping (5 points)<br>• Use of an environment variable (5 points)<br>• Use of a comment (5 points)<br>• Use of /bin/mail (5 points)<br>• Use of a conditional (5 points)<br>The maximum for this section are 25 points. |
| 5 | Present your script in front of the class |
| | |
| **Points lost** | |
| -15 | Fails to run from **allscripts** |
| -15 | Other students in the class are unable to read and execute your script. |
| -5 | For each error message displayed |
| | |
| **Extra credit** | |
| 30 | Up to three additional tasks (10 points each) |

*Please don't overlook this part of the grading rubric!*

*Please make sure you project script exists, runs without errors and can be run by other students in the class*

| Points lost | |
|---|---|
| -15 | Fails to run from **allscripts** |
| -15 | Other students in the class are unable to read and execute your script. |
| -5 | For each error message displayed |
| | |

*Instructor should run ~/cis90/project/testscripts to verify*

Additional Linux courses:

CIS 130 - Linux/UNIX Shell Programming

CIS 191 - Linux/UNIX System Administration

CIS 192 - Linux/UNIX Network Administration

CIS 193 - Linux/UNIX Security Administration

**CIS 90 Introduction to UNIX/Linux**

Provides a technical overview of the UNIX/Linux operating system, including hands-on experience with commands, files, and tools. Recommended Preparation: CS 1L or CIS 172.

Transfer Credit: CSU.

| Section | Days | Times | Units | Instructor | Room |
|---|---|---|---|---|---|
| 72345 | W | 01:15PM-04:20PM | 3.00 | J.Griffin | 2501 |
| & | Arr. | Arr. | | J.Griffin | OL |

Section 72345 is a Hybrid ONLINE course. Meets weekly throughout the semester at the scheduled times with an additional 3 hr 5 min online lab per week. For details, see instructor's web page at go.cabrillo.edu/online.

*If you have friends who are interested in UNIX/Linux, let them know about CIS 90 in the Fall term*

**CIS 191AB UNIX/Linux Installation, Configuration and Administration**

Introduces skills required to administer UNIX/Linux systems. Prerequisite: CIS 90 or equivalent.

| Section | Days | Times | Units | Instructor | Room |
|---|---|---|---|---|---|
| 73605 | T | 06:00PM-08:05PM | 4.00 | J.Griffin | 2501 |
| & | Arr. | Arr. | | J.Griffin | OL |

Section 73605 is a Hybrid ONLINE course. Meets weekly throughout the semester at the scheduled times with an additional 1 hr 40 min online lecture, and 4 hr 5 min online lab per week. Students will be required to show that they meet the course prerequisites. For details, see instructor's web page at go.cabrillo.edu/online.

*CIS 191 is a hybrid class that will meet 2 hours a week (Tuesday evening) in the classroom and another two hour session from a lecture archive which the student can choose when to view.*

*Labs are also part of the class and that time can be done remotely and scheduled to the student's convenience.*

**CIS 192A UNIX/Linux TCP/IP Administration**

Teaches building, monitoring and troubleshooting of a UNIX/Linux network infrastructure. Prerequisites: CIS 81 and CIS 90. Recommended Preparation: CIS 191A. Repeatability: May be taken 2 times.

| Section | Days | Times | Units | Instructor | Room |
|---|---|---|---|---|---|
| 73604 | T | 01:00PM-05:10PM | 2.00 | R.Simms | 2501 |
| & | Arr. | Arr. | | R.Simms | OL |

Section 73604 is a Hybrid ONLINE course. Meets 8 weeks 10/25-12/13, at the scheduled times. Students may attend in the classroom or online using CCC Confer. Additional 4 hr 5 min of arranged lab per week in the Network and Systems Technology Lab. Students will be required to show that they meet the course prerequisites. For details, see instructor's web page at go.cabrillo.edu/online or e-mail the instructor at risimms@cabrillo.edu.

*CIS 192 is only for the second 8 weeks of the term*

*CIS 192 will hold classes in the classroom and online simultaneously. Students may attend either way.*

# Fall 2011 Linux Courses

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fall 2011 | Waitlisted | CIS-191AB-73605 (73605) UNIX/Linux Inst, Confg, Admin | Main Campus | 08/29/2011-12/17/2011 Lecture Tuesday 06:00PM - 08:05PM, Computer Information Labs, Room 2501 (more)... | J. Griffin | 0 / 24 / 3 | 4.00 | |
| Fall 2011 | Waitlisted | CIS-90-72345 (72345) Intro to UNIX/Linux | Main Campus | 08/29/2011-12/17/2011 Lecture Wednesday 01:15PM - 04:20PM, Computer Information Labs, Room 2501 (more)... | J. Griffin | 0 / 24 / 4 | 3.00 | |
| Fall 2011 | Open | CIS-192A-73604 (73604) UNIX/Linux TCP/IP Admin | Main Campus | 10/25/2011-12/13/2011 Lecture Tuesday 01:00PM - 05:10PM, Computer Information Labs, Room 2501 (more)... | R. Simms | 11 / 24 / 0 | 2.00 | |

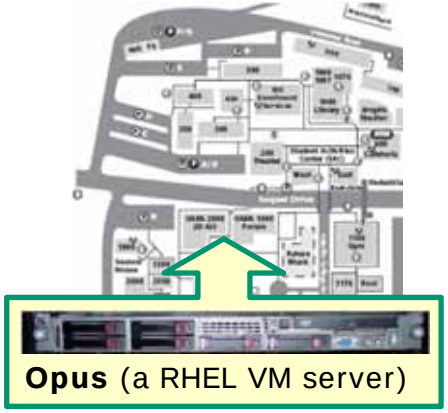
1. CIS 191 and CIS 192 will be offered on the same day, but the 192A is only for the second 8 weeks
2. CIS 191 is a hybrid class that will meet 2 hours a week (Tuesday evening) in the classroom and another two hour session from a lecture archive which the student can choose when to view. Labs are also part of the class and that time can be done remotely and scheduled to the student's convenience.
3. 3) CIS 192 will hold classes in the classroom and online simultaneously. Students may attend either way.

*If there are a few students who could not possibly make the CIS 191 two hours on campus, they can contact Jim for possible ways to make the class still work.*

# File Transfer

# File Transfer

Downloading your Opus file to your home computer




Windows

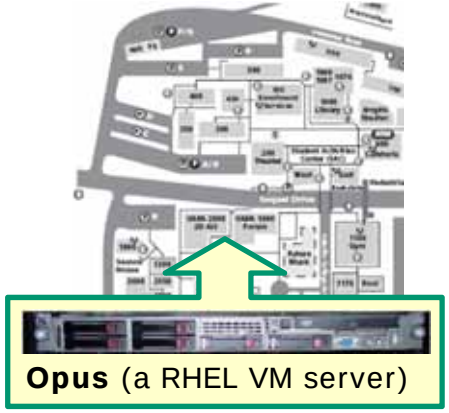

Mac

Linux

# File Transfer Windows Filezilla

# File Transfer

Downloading your Opus file to your home computer



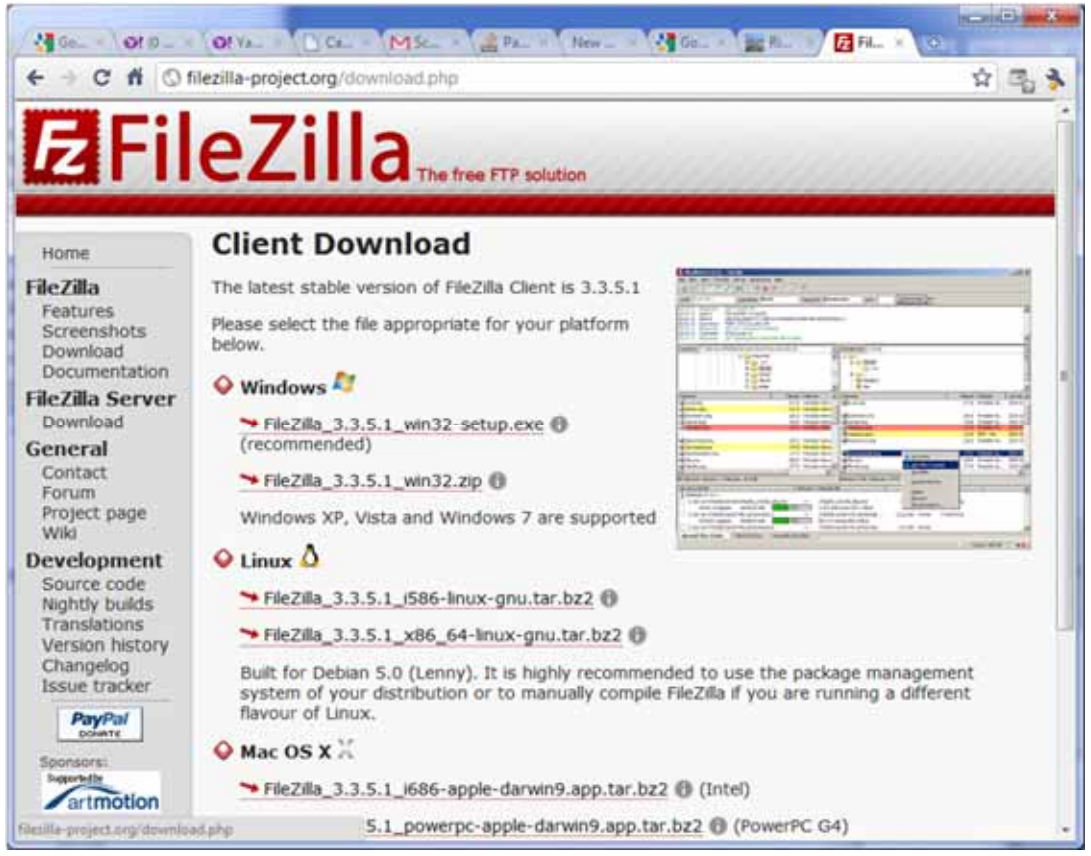

Windows

*For Windows you can use the pscp (Putty scp) program or a file transfer utility like Filezilla*

# File Transfer

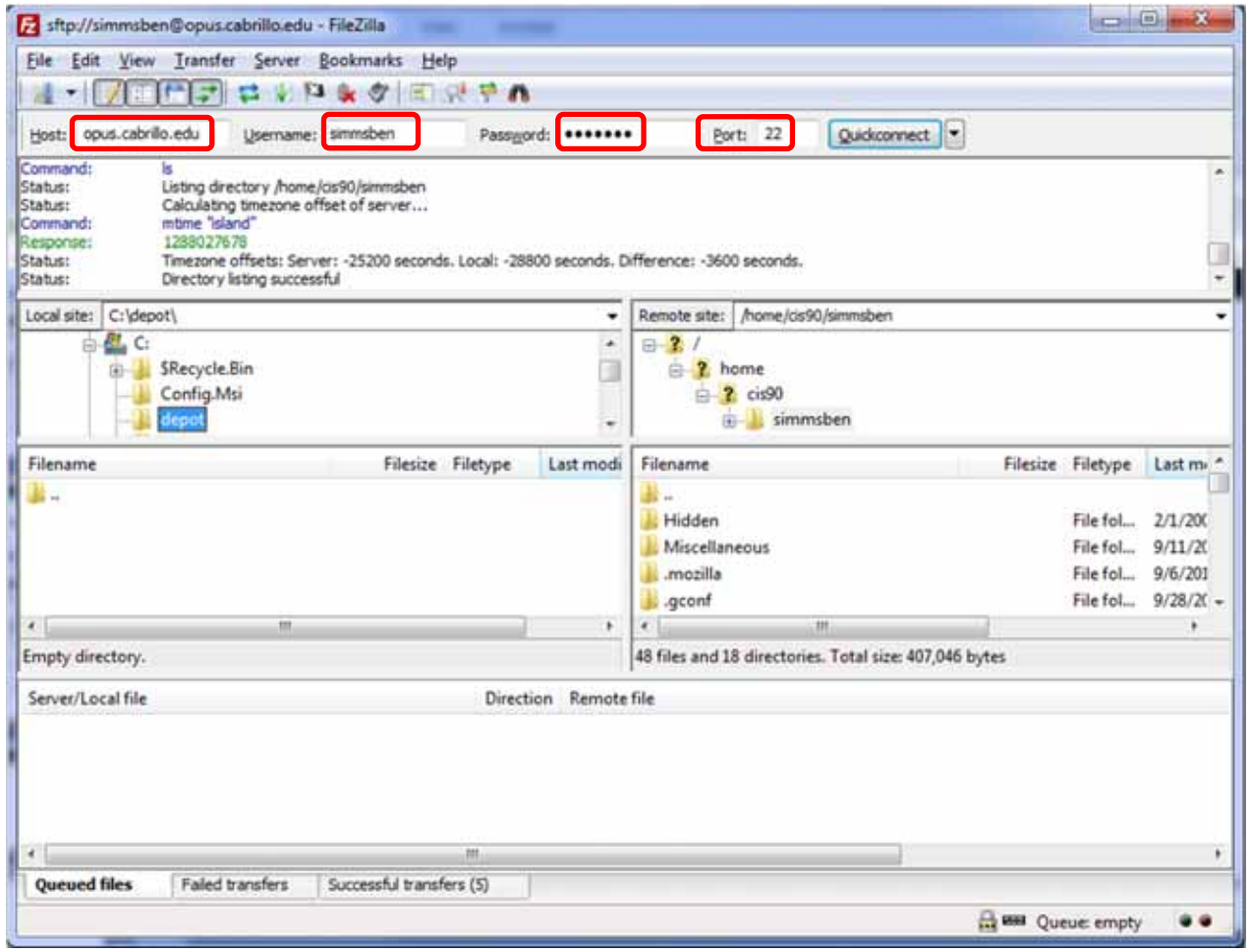
## Downloading your Opus file to Windows using Filezilla

http://filezilla-project.org/download.php



# File Transfer

## Downloading your Opus file to Windows using Filezilla

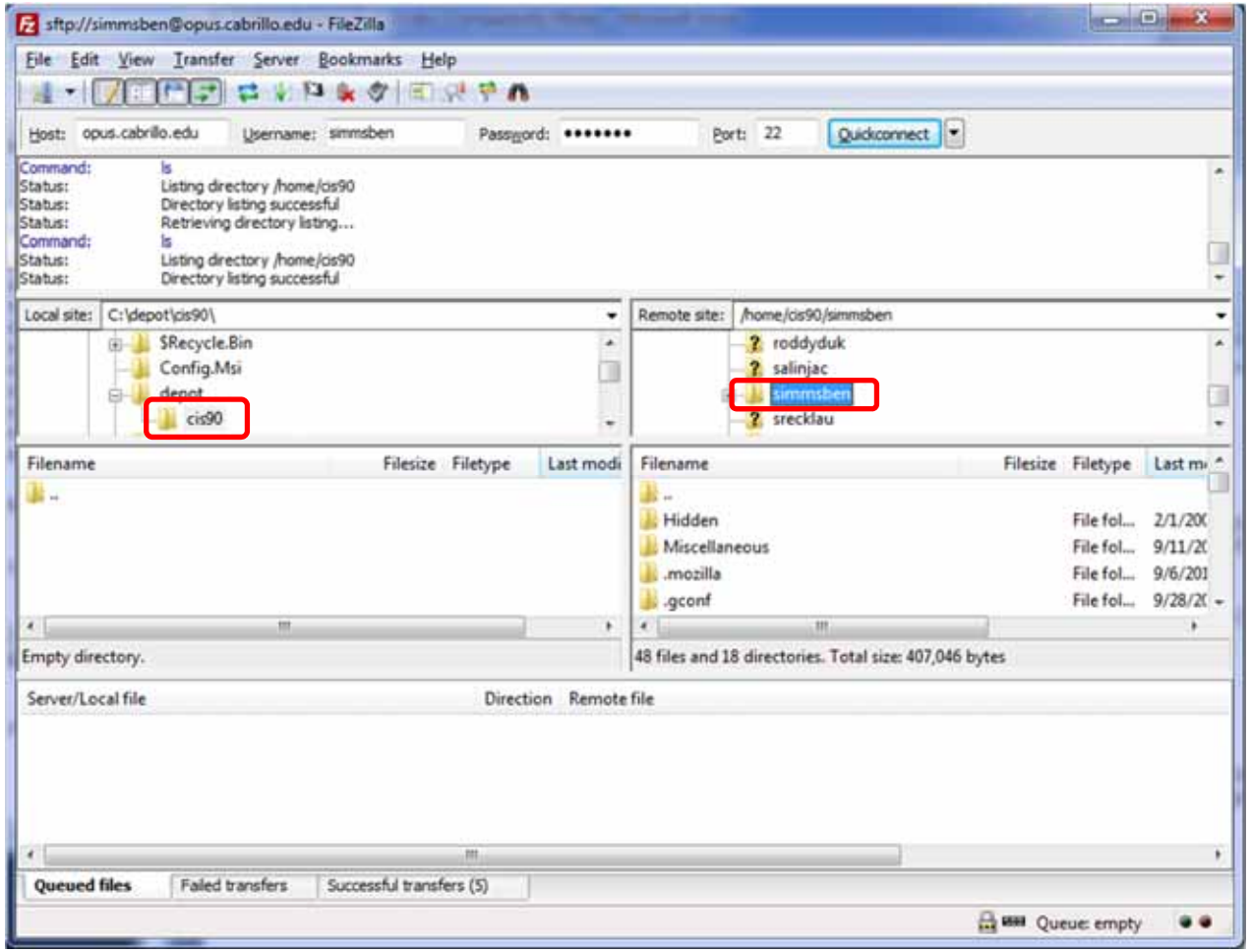



*Specify opus.cabrillo.edu as the host name with your Opus username, password and port 22 then click Quickconnect*

# File Transfer

## Downloading your Opus file to Windows using Filezilla

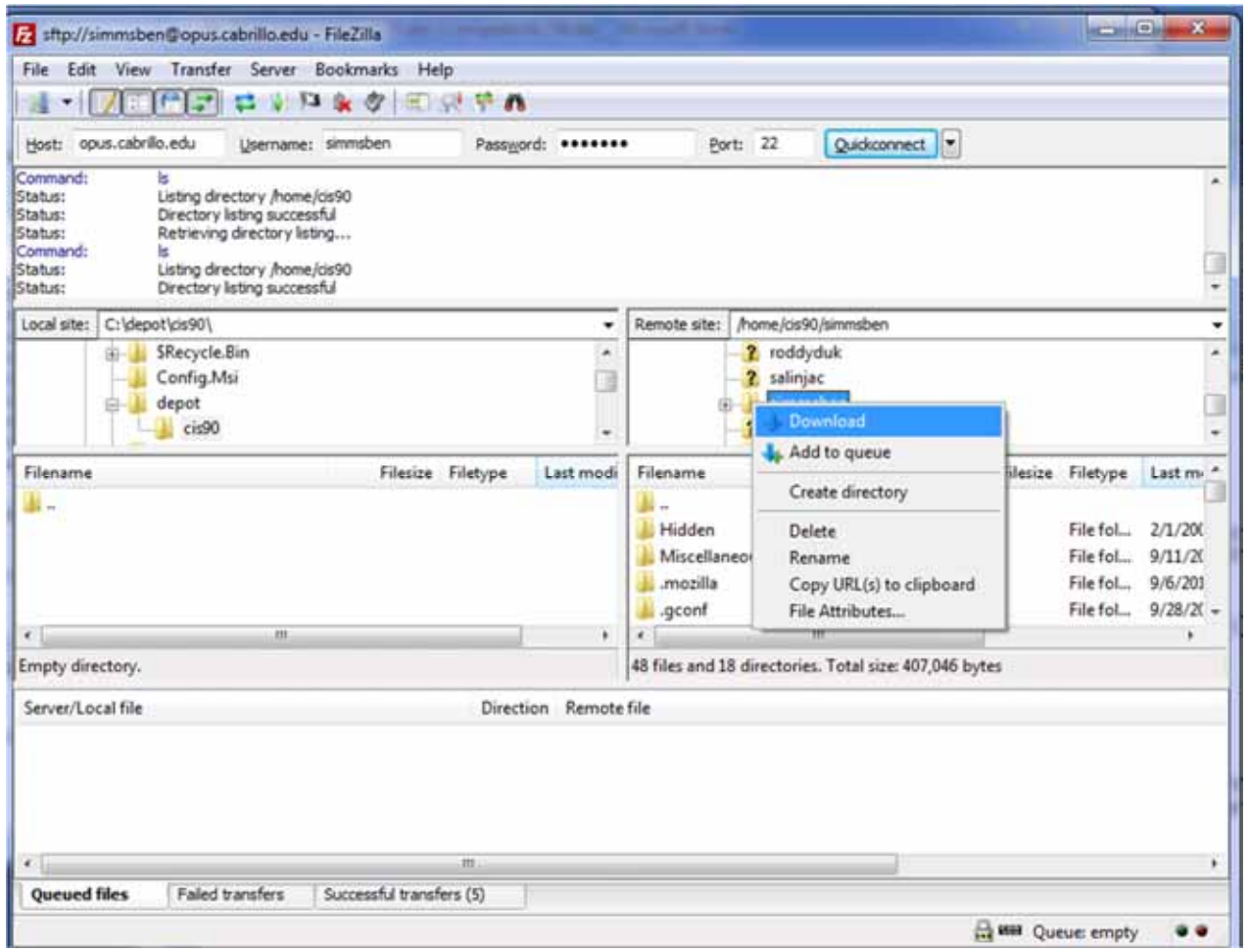
*Select local folder to download file into*




*Select directory on Opus to download*

# File Transfer

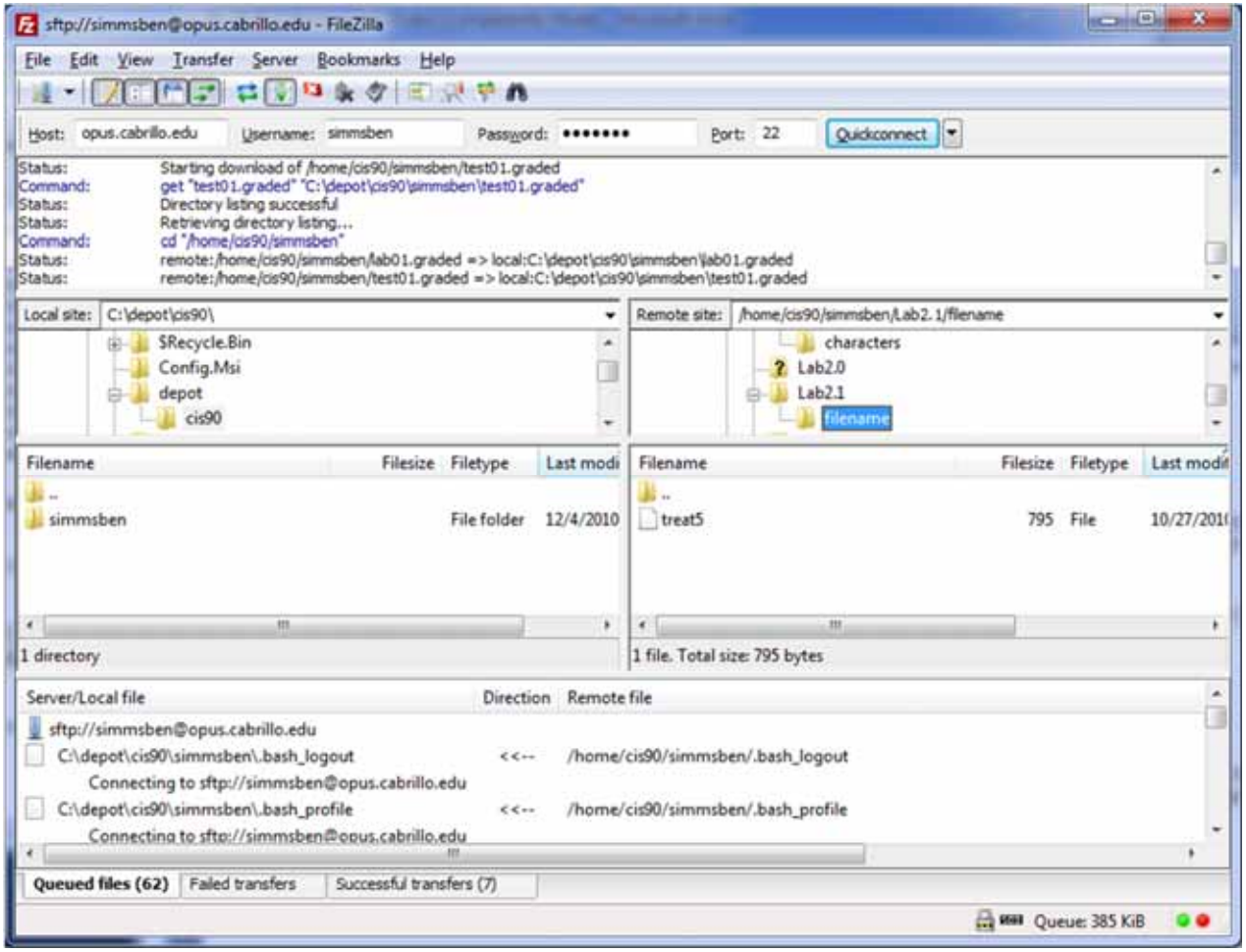
## Downloading your Opus file to Windows using Filezilla




*Right-click on the Opus directory and select Download*

# File Transfer

## Downloading your Opus file to Windows using Filezilla

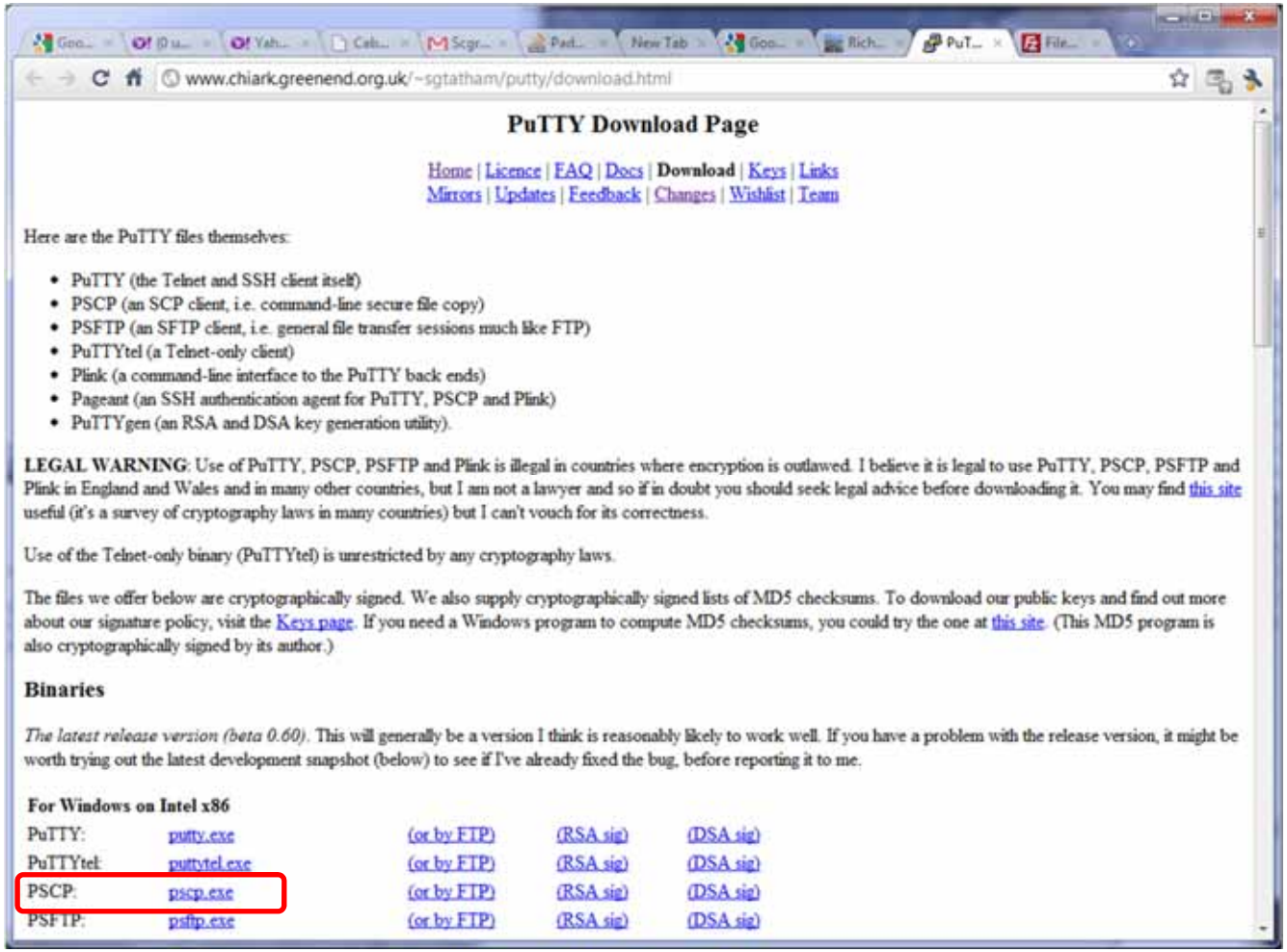



*And away it goes downloading every file and directory it finds in the Opus directory you selected to your local folder*

# File Transfer

## Downloading your Opus file to Windows using pscp (Putty scp)

http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html



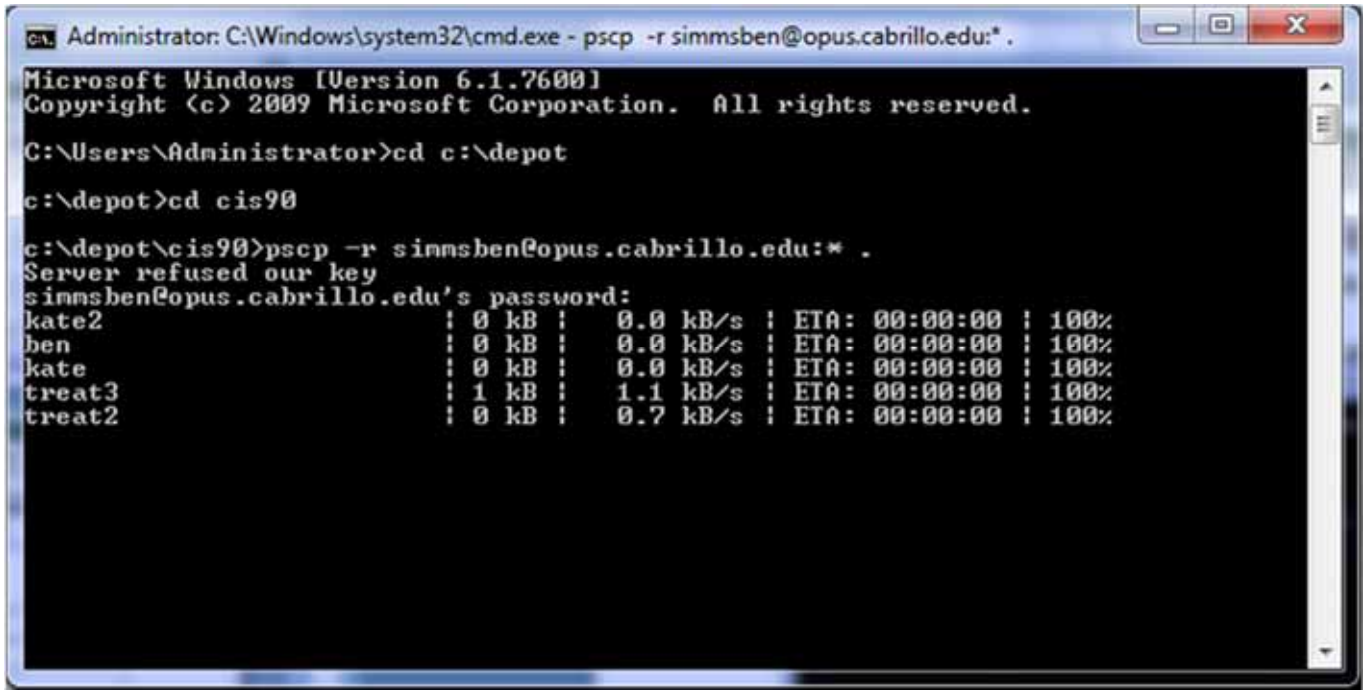

*Download the pscp file and place it in your windows folder*

# File Transfer Windows pscp

# File Transfer

Downloading your Opus file to Windows using pscp (Putty scp)

**pscp -r *username*@opus.cabrillo.edu:* .**

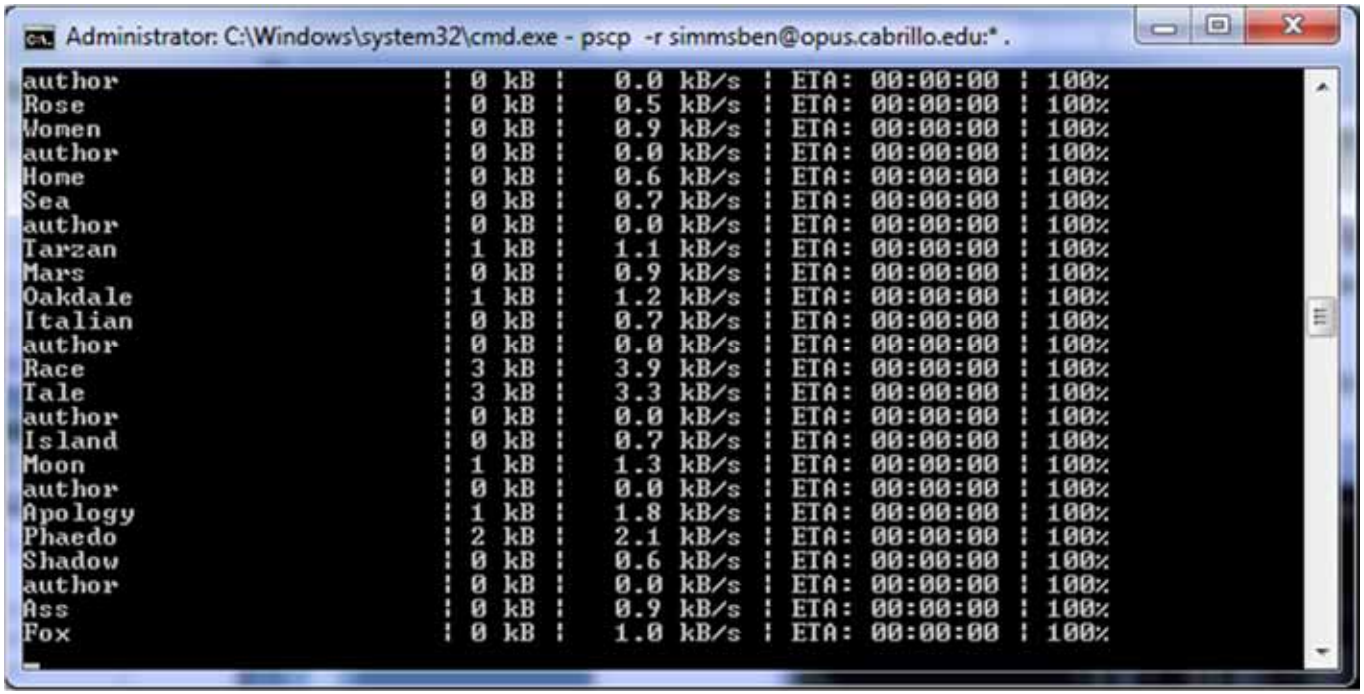



*Navigate to the local folder where you want to download your Opus file to then use the pscp command with the -r option to recursively download all the files in your home directory*

# File Transfer

Downloading your Opus file to Windows using pscp (Putty scp)

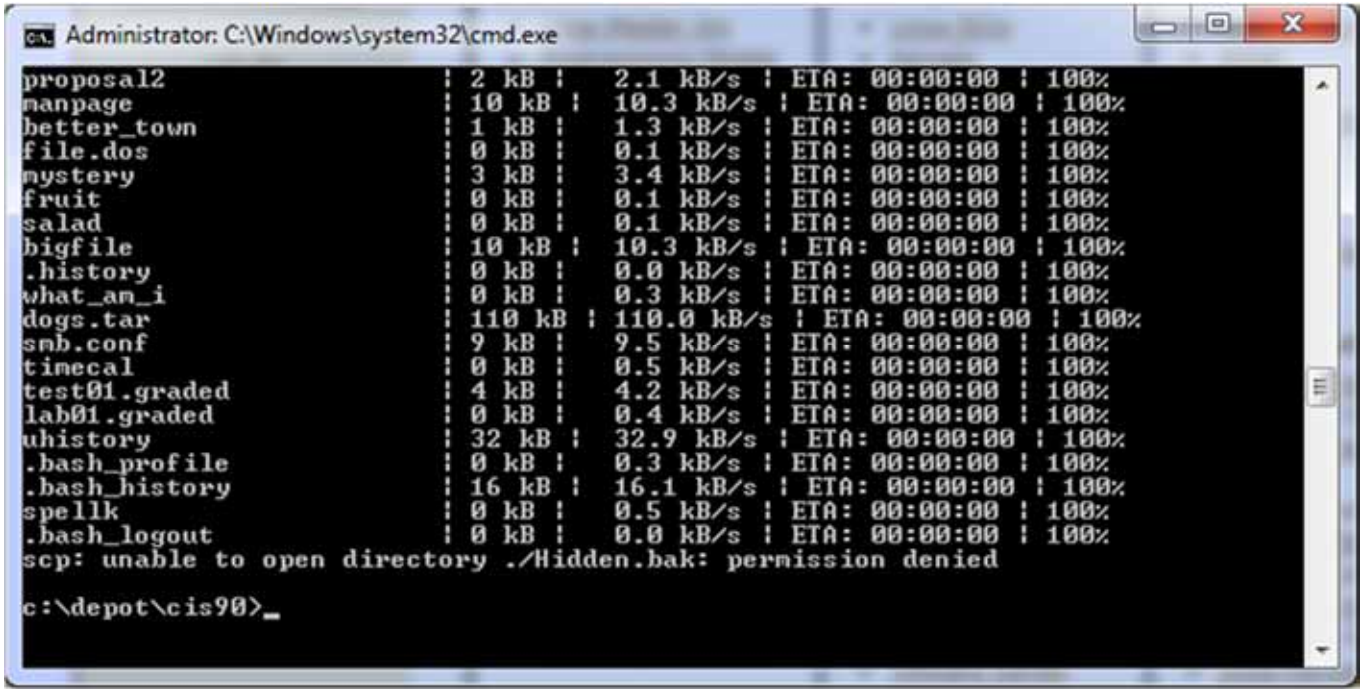
**pscp -r *username*@opus.cabrillo.edu:* .**



# File Transfer

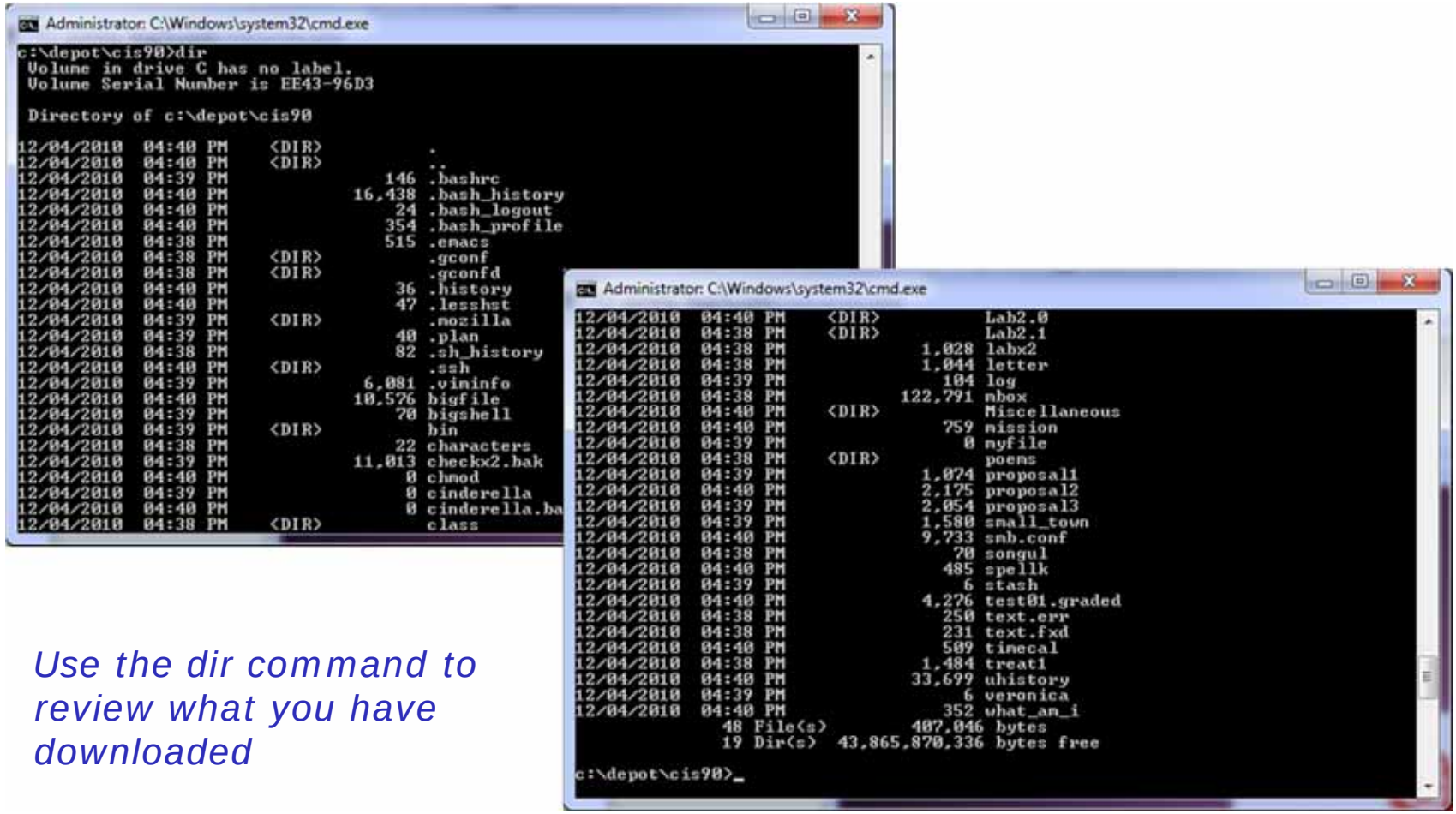
Downloading your Opus file to Windows using pscp (Putty scp)

**pscp -r *username*@opus.cabrillo.edu:* .**



# File Transfer

## Downloading your Opus file to Windows using pscp (Putty scp)




*Use the dir command to review what you have downloaded*

# File Transfer

## Downloading your Opus file to Windows using pscp (Putty scp)

*More example **pscp** commands*

```
c:\depot\bin>pscp -r simmsben@opus.cabrillo.edu:/home/cis90/answers/* .
simmsben@opus.cabrillo.edu's password:
lab04                     | 0 kB |   0.5 kB/s | ETA: 00:00:00 | 100%
lab10                     | 1 kB |   1.6 kB/s | ETA: 00:00:00 | 100%
lab07                     | 10 kB |  11.0 kB/s | ETA: 00:00:00 | 100%
lab05                     | 0 kB |   0.8 kB/s | ETA: 00:00:00 | 100%
lab09                     | 2 kB |   2.8 kB/s | ETA: 00:00:00 | 100%
lab06                     | 4 kB |   4.4 kB/s | ETA: 00:00:00 | 100%
lab03                     | 32 kB |  32.9 kB/s | ETA: 00:00:00 | 100%
lab02                     | 1 kB |   1.1 kB/s | ETA: 00:00:00 | 100%
lab01                     | 0 kB |   0.2 kB/s | ETA: 00:00:00 | 100%
test01                    | 1 kB |   1.2 kB/s | ETA: 00:00:00 | 100%
test02                    | 1 kB |   1.4 kB/s | ETA: 00:00:00 | 100%
lab08                     | 5 kB |   5.2 kB/s | ETA: 00:00:00 | 100%

c:\depot\bin>
```

# File Transfer

## Downloading your Opus file to Windows using pscp (Putty scp)

*More example **pscp** commands*

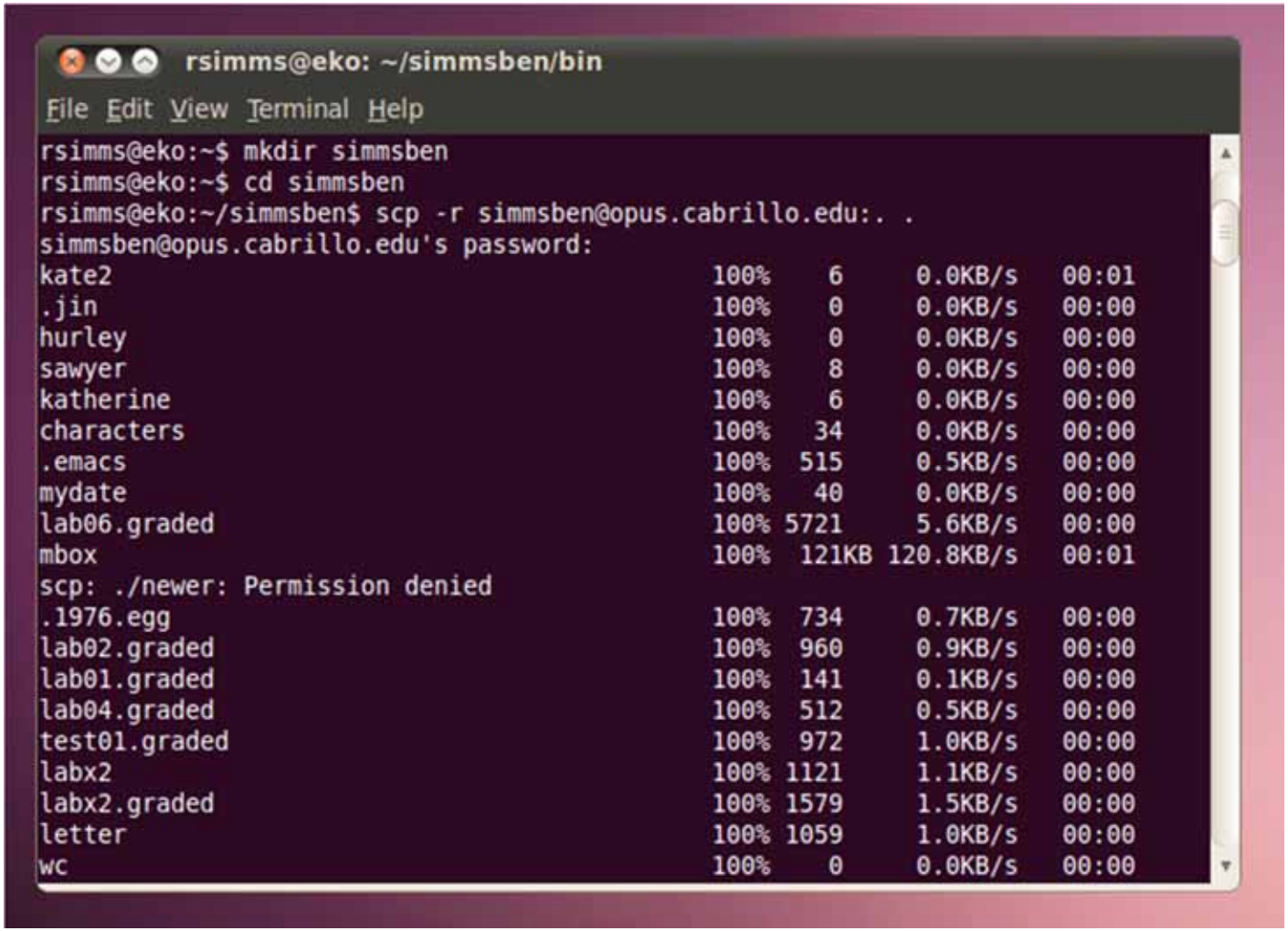
```
c:\depot>pscp -r simmsben@opus.cabrillo.edu:/home/cis90/bin/riddle* .
simmsben@opus.cabrillo.edu's password:
riddle                    | 0 kB |   0.9 kB/s | ETA: 00:00:00 | 100%
riddle2                   | 0 kB |   0.9 kB/s | ETA: 00:00:00 | 100%
riddle1                   | 0 kB |   0.9 kB/s | ETA: 00:00:00 | 100%

c:\depot>pscp -r simmsben@opus.cabrillo.edu:/home/cis90/bin/all* .
simmsben@opus.cabrillo.edu's password:
allscripts                | 4 kB |   4.3 kB/s | ETA: 00:00:00 | 100%
allscripts.v1             | 3 kB |   4.0 kB/s | ETA: 00:00:00 | 100%
allscripts.v2             | 4 kB |   4.3 kB/s | ETA: 00:00:00 | 100%
```

# File Transfer Linux or Mac scp

# File Transfer

Downloading your Opus files to Linux or Mac using scp

**scp -r simmsben@opus.cabrillo.edu:. .** *To download all files*



rsimms@eko: ~/simmsben/bin

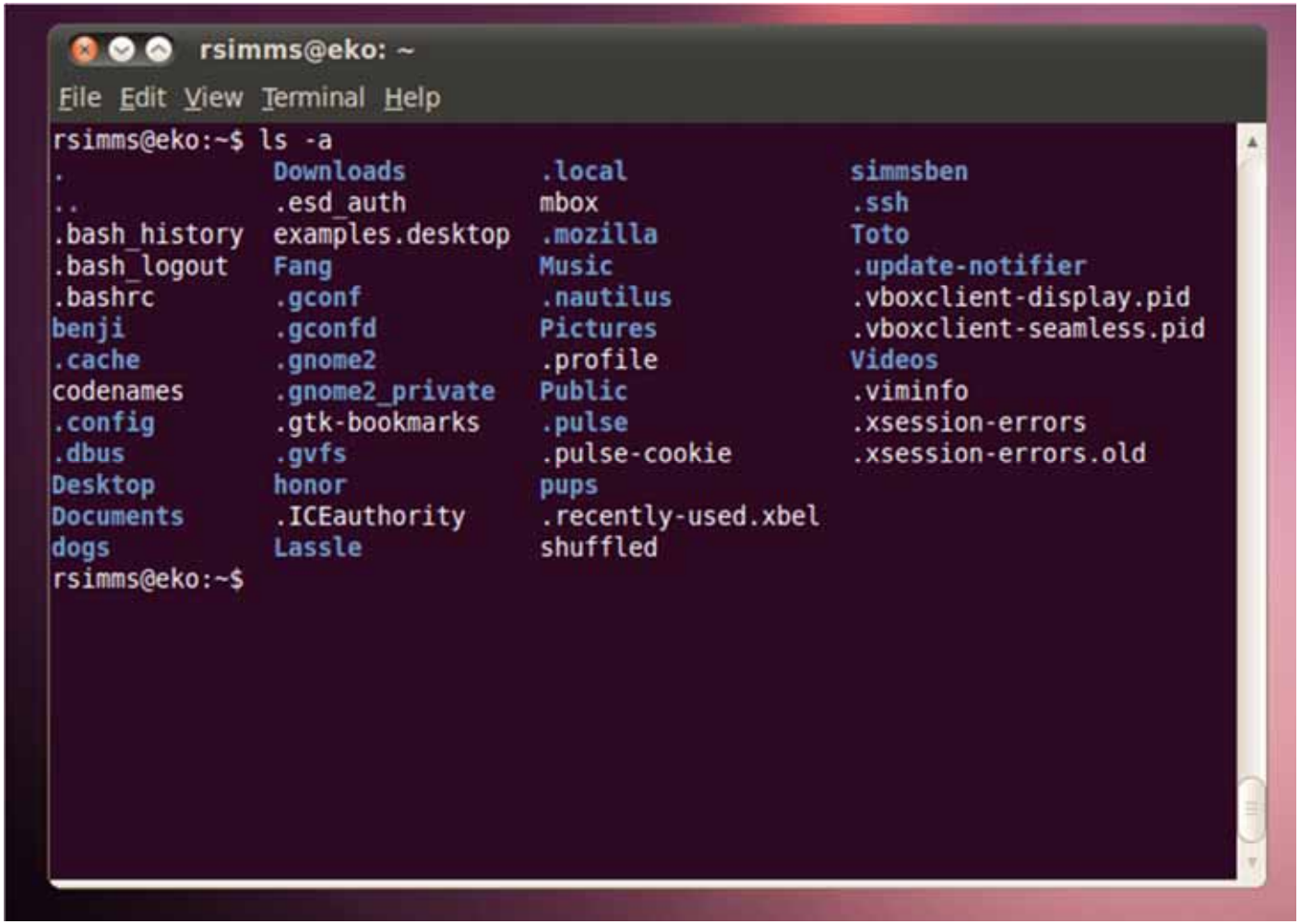
File Edit View Terminal Help

```
rsimms@eko:~$ mkdir simmsben
rsimms@eko:~$ cd simmsben
rsimms@eko:~/simmsben$ scp -r simmsben@opus.cabrillo.edu:. .
simmsben@opus.cabrillo.edu's password:
kate2                                         100%    6     0.0KB/s   00:01
.jin                                          100%    0     0.0KB/s   00:00
hurley                                        100%    0     0.0KB/s   00:00
sawyer                                        100%    8     0.0KB/s   00:00
katherine                                     100%    6     0.0KB/s   00:00
characters                                    100%   34     0.0KB/s   00:00
.emacs                                        100%  515     0.5KB/s   00:00
mydate                                        100%   40     0.0KB/s   00:00
lab06.graded                                  100% 5721     5.6KB/s   00:00
mbox                                          100%  121KB 120.8KB/s   00:01
scp: ./newer: Permission denied
.1976.egg                                     100%  734     0.7KB/s   00:00
lab02.graded                                  100%  960     0.9KB/s   00:00
lab01.graded                                  100%  141     0.1KB/s   00:00
lab04.graded                                  100%  512     0.5KB/s   00:00
test01.graded                                 100%  972     1.0KB/s   00:00
labx2                                         100% 1121     1.1KB/s   00:00
labx2.graded                                  100% 1579     1.5KB/s   00:00
letter                                        100% 1059     1.0KB/s   00:00
wc                                            100%    0     0.0KB/s   00:00
```

# File Transfer

## Downloading your Opus files to Linux or Mac using scp

**ls -a** *To review what was downloaded*



# File Transfer

## Downloading your Opus files to Linux or Mac using scp

More examples of using scp on your local Mac or Linux system:

**scp –r simmsben@opus.cabrillo.edu:* .**

*Recursive copy of remote home directory to current local directory (doesn't copy home directory hidden files)*

**scp –r simmsben@opus.cabrillo.edu:. .**

*Recursive copy of remote home directory to current local directory (includes hidden files in home directory)*

**scp simmsben@opus.cabrillo.edu:simmsben.tar .**

*Copies archive file in remote home directory to current local directory*

**scp –r simmsben@opus.cabrillo.edu:/home/cis90ol/answers answers/**

*Recursive copy of class answers directory to local directory named answers (which must be created first)*

# Archives

# Archiving

## tar command (on Opus)

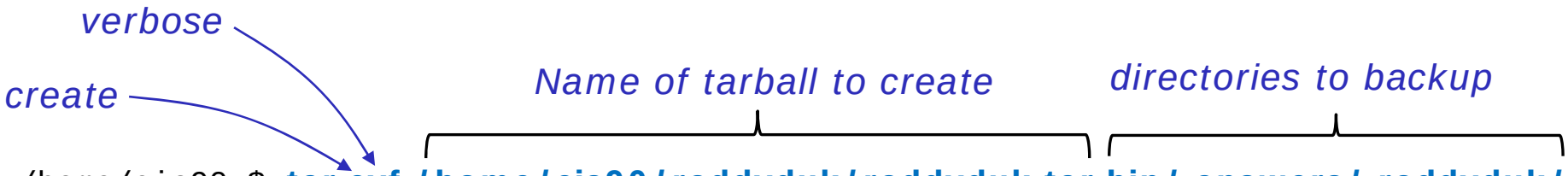
*Use wc to count the number of files in the three directories*

```
/home/cis90 $ find bin/ answers/ roddyduk/ | wc -l
263
/home/cis90 $
```

*The bin directory has allscripts, riddles and other files used in class. The answers directory has answers for each lab. Your home directory has all the files you made during the course.*

# Archiving

## tar command (on Opus)

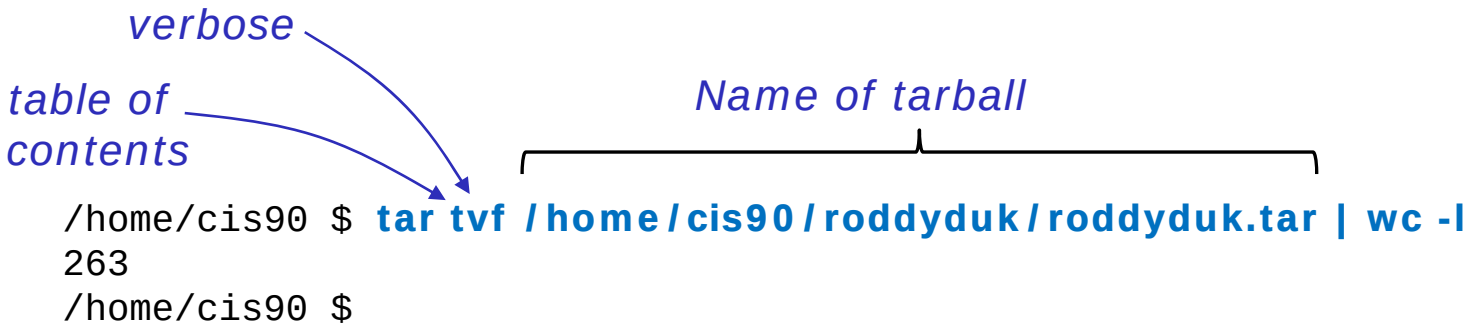



```
/home/cis90 $ tar cvf /home/cis90/roddyduk/roddyduk.tar bin/ answers/ roddyduk/
bin/
bin/submit
bin/submit.bak
bin/exam
bin/allscripts

< snipped >

tar: roddyduk/roddyduk.tar: file is the archive; not dumped
roddyduk/program
roddyduk/exitscript
roddyduk/red-12-09-08
roddyduk/red-12-09-2008
roddyduk/blue-12-09-2008
/home/cis90 $
```

*Backup all these files into a single tarball*

# Archiving

## tar command (on Opus)




*Use the t option (table of contents) to list the contents of the tarball which are then piped to wc to count*

# Archiving

## tar command (on Opus)

*Archive everything in your home directory (including all sub directories) plus the class bin and answer directories into one tarball.*

```
cd /home/cis90/
find bin/ answers/ $LOGNAME/ | wc -l
```
*Count the files to be archived*

```
tar cvf /home/cis90/$LOGNAME/$LOGNAME.tar bin/ answers/ $LOGNAME/
tar tvf /home/cis90/$LOGNAME/$LOGNAME.tar | wc –l
```
*This counts the files in the archive*

# Archiving

## tar command (on home Linux computer)

*extract*

```
[cis90@frodo opus-files]# tar xvf roddyduk.tar
bin/
bin/submit
bin/submit.bak

< snipped >

roddyduk/program
roddyduk/exitscript
roddyduk/red-12-09-08
roddyduk/red-12-09-2008
roddyduk/blue-12-09-2008
[cis90@frodo opus-files]#
```

*Extract the tarball*

# Archiving

## tar command (on home Linux computer)

```
[cis90@frodo opus-files]# ls -l
total 1044
drwxr-xr-x  2  201  103    4096 Nov 28 17:41 answers
drwxr-x---  2  201  103    4096 Nov 30 23:25 bin
drwxr-xr-x 28 1156  103    4096 Dec 10 13:50 roddyduk
-rw-r--r--  1 root root 1034240 Dec  8 23:43 roddyduk.tar
[cis90@frodo opus-files]#
```

*The bin, answer and home directories have been recreated*

# Archiving

## tar command (on home Linux computer)

```
[cis90@frodo opus-files]# cd roddyduk/bin
[cis90@frodo bin]# ls
app      banner     datecal        hi    I          myscript.bak  treat5  tryme
backups  benscript  enlightenment  home  myscript   myscript.v1   treed   zoom
[cis90@frodo bin]# myscript
-bash: myscript: command not found
[cis90@frodo bin]# ./myscript

                Duke's CIS 90 Final Project
        1) Color
        2) My Find Command
        3) More practice
        4) Duke's friend made this one - Thank You
        5) Task 5
        6) Exit

        Enter Your Choice:
```

*Note we have a different path on this system so may have to specify a relative path to script file to run*

# Final Exam

# Final Exam

The CIS 90 Final Exam is Test #3

- **The Final Exam is June 2 - 1:00 to 3:50PM**
- **The final exam will be Test #3 (worth 30 points + 10 points extra credit)**
  - Open book, open notes, open computer.
  - During the test you must work alone and not ask or give assistance to others.
  - If you need more time, you may take the exam home and email it to me by midnight.

# Final Exam

The CIS 90 Final Exam is Test #3

- **A Practice Test 3 is available on the web site**
  - You may work with others and use the forum to discuss questions and answers on the practice test prior to the final exam.
  - Just like the real test, the first 15 questions correlate to the 15 lessons we've covered in this class.
  - Just like the real test, there are five extra credit questions at the end taken from the website Flashcards.

# Project Presentations

# Wrap up

New commands:

| | |
|---|---|
| tar | Backup and restore files |

New Files and Directories:

## Next Class is the Final Exam

# Test #3
# Five Posts
# Lab X1 (extra credit)
# Lab X2 (extra credit)

# Project Workshop (optional)

# Backup

# Archiving

## tar command (on Opus)

*Next, compress the archive with **gzip***

```
/home/cis90/roddyduk $ ls -l roddyduk.tar
-rw-rw---- 1 roddyduk cis90 1034240 Dec 10 13:50 roddyduk.tar
/home/cis90/roddyduk $

/home/cis90/roddyduk $ gzip roddyduk.tar
/home/cis90/roddyduk $ ls -l roddyduk.tar*
-rw-rw---- 1 roddyduk cis90 168996 Dec 10 13:50 roddyduk.tar.gz
/home/cis90/roddyduk $
```

*Note: gzip renames the tarball by adding the .gz suffix*