Lesson Module Checklist
- Slides –
- Flash cards –
- Page numbers -
- 1st minute quiz –
- Web Calendar summary –
- Web book pages -
- Commands –

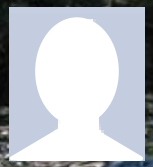
- Hide script tested –
- Practice test uploaded -

- CCC Confer wall paper –

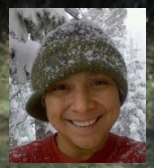
- Pick up Polycom phone/extension mics -
- Check that headset is charged –
- Wireless lapel mic backup battery -
- Backup slides, CCC info, handouts on flash drive -

CIS 90 - Lesson 9


Dieskau


Jonathan

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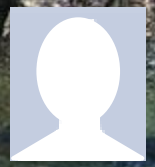

David


Obie


Dave


Cole


Corey


Nancy


Ryan

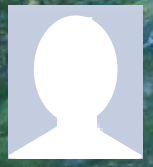

Elia

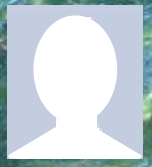

Tasha

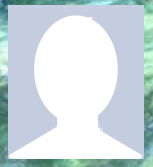

Darren


Scott


Devin


Everett


Juan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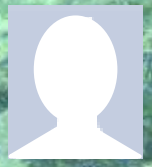
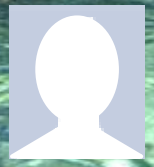

Rogan


Mike


Mook


Melissa


Cameron


Jose


Jeff


Matt


Kenneth


Ousmane


Ian


Solomon


Henry


Matthew


Mason


Chan

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

First Minute Quiz

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

email answers to: `risimms@cabrillo.edu`
(within the first few minutes of class)

[ ] Has the phone bridge been added?

[ ] Is recording on?

[ ] Does the phone bridge have the mike?

[ ] Share lesson slides, puttyx3, Chrome

[ ] Disable spelling on PowerPoint

Review

Objectives	Agenda
• Get ready for the next test • Practice skills • Introduction to processes	• Quiz • Questions • Lab 6 • Warmup • Base knowledge • Shell • Metacharacters • Environment variables • File system • File management • Permissions • I/O • Wrap up

Questions

Previous material and assignment

1. Lab 7 questions?
2. Extra credit Lab questions?
3. Questions on redirection and pipes?
4. Any other material?

More on I/O
(input/output)

Input and Output
File Redirection

There are 3 standard UNIX file descriptors:

Name	Integer Value
stdin (Standard In)	0
stdout (Standard Out)	1
stderr (Standard Error)	2

The redirection is specified on the command line using the syntax specified below …

Input and Output
File Redirection

The input and output of a program can be **redirected** from and to other files using these file descriptors:

0< *filename*

Redirects **stdin**, input will now come from *filename* rather than the keyboard.

1> *filename*

Redirects **stdout**, output will now go to *filename* instead of the terminal.

2> *filename*

Redirects **stderr**, error messages will now go to *filename* instead of the terminal.

>> *filename*

Redirects **stdout**, output will now be appended to *filename*.

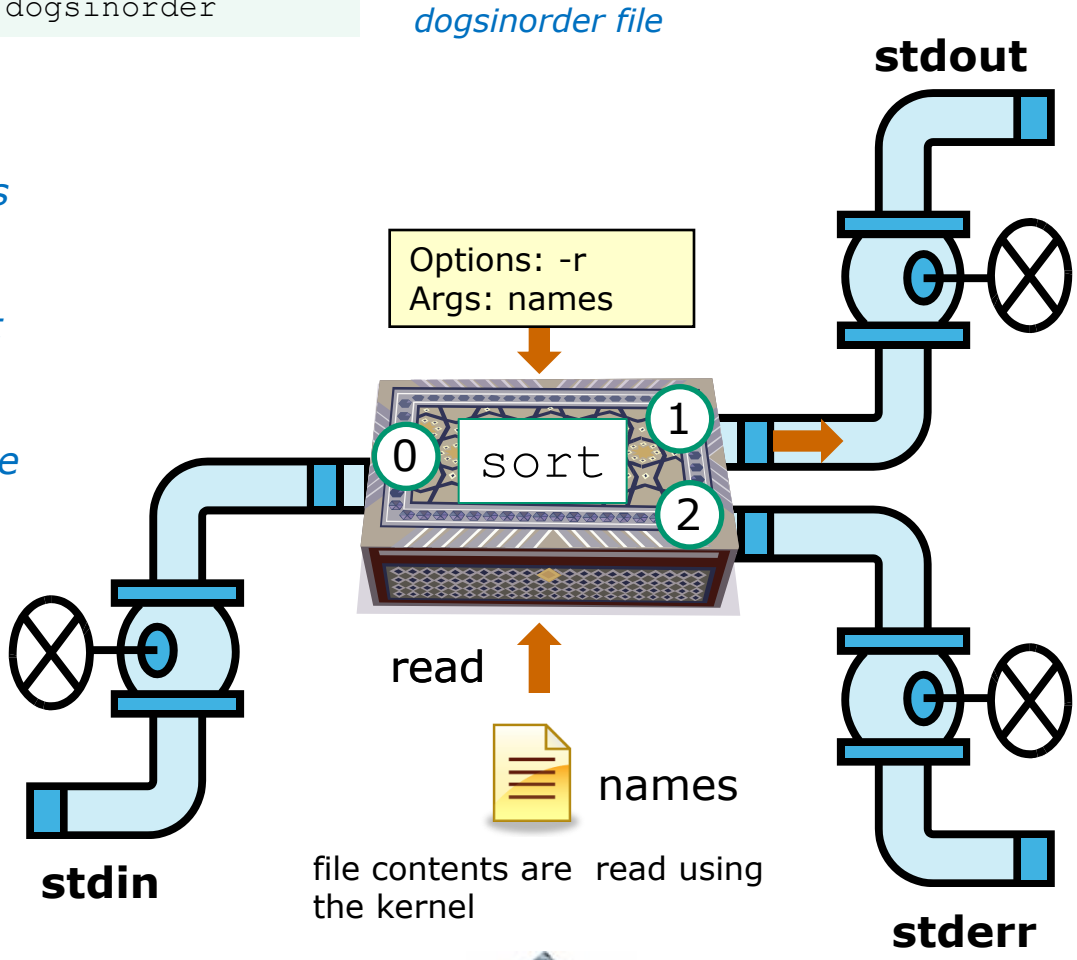
The 0 in 0< is not necessary, just use < to redirect stdin
The 1 in 1> is not necessary, just use > to redirect stdout
The 2 in 2> is necessary, always use 2> to redirect stderr

Example program to process: sort command

```
$ sort -r names > dogsinorder
```

Output is redirected to dogsinorder file

Note: sort does know about names file but doesn't know about dogsinorder file. It just reads names file and writes to stdout. It does see the -r option and modifies how it sorts.



dogsinorder

```
$ cat dogsinorder
star
homer
duke
benji
```

Example C program code

```
[rsimms@opus misc]$ cat simple.c
char question[] = "What is your name stranger? ";
char greeting[] = "Well I'm very pleased to meet you, ";
char buffer[80];
main()
{
        int len;

        write(2, question, sizeof(question));
        len = read(0, buffer, 80);
        write(1, greeting, sizeof(greeting));
        write(1, buffer, len);
}
```

Write to stderr

Read from stdin

Write to stdout

Write to stdout again

```
[rsimms@opus misc]$ make simple
cc     simple.c   -o simple
```

Compiling simple.c into a binary executable named simple

This simple program asks for a name, then responds with a greeting using the name

Example C program code

```
[rsimms@opus misc]$ ./simple
What is your name stranger? Rich
Well I'm very pleased to meet you, Rich
```

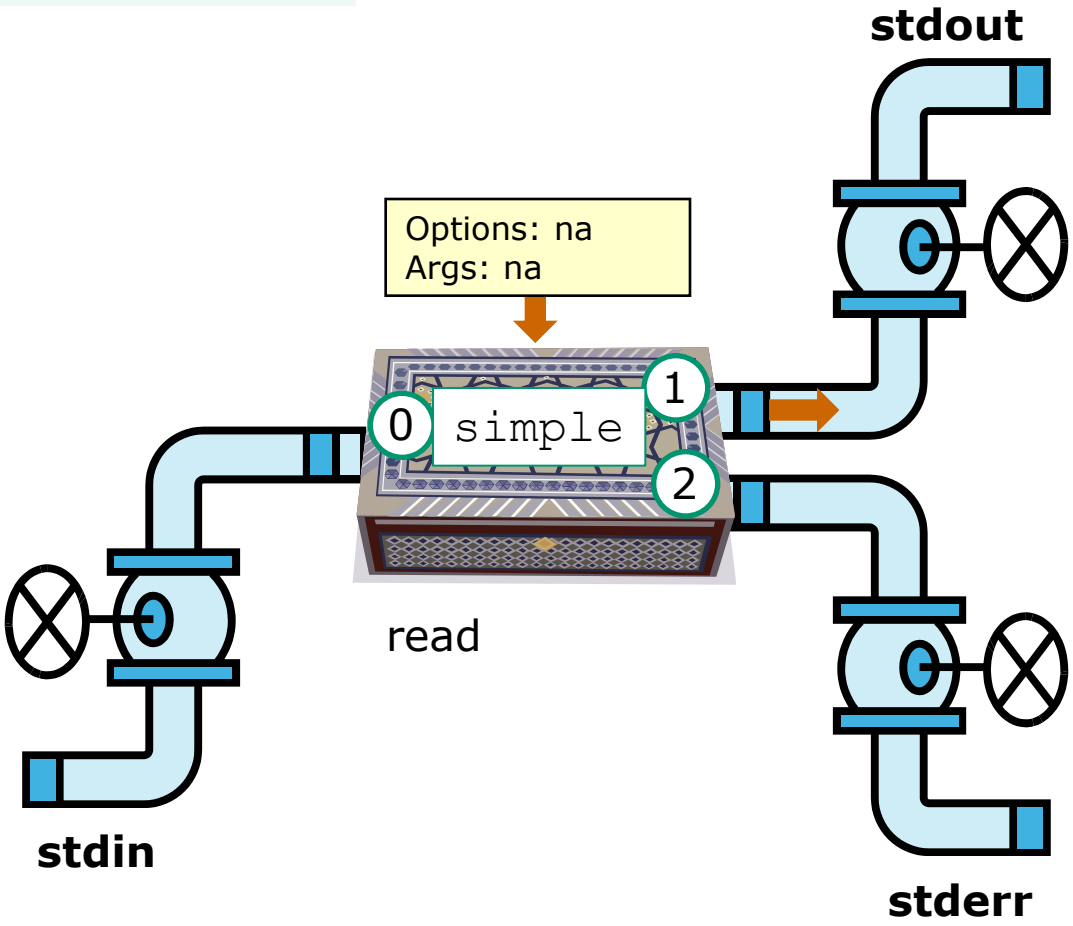
```
[rsimms@opus misc]$ ./simple > myfile
What is your name stranger? Rich
[rsimms@opus misc]$ cat myfile
Well I'm very pleased to meet you, Rich
```

In the second example, output has been redirected to a file named myfile. The simple program has no special knowledge (coding instructions) for a file named myfile. It just writes to stdout and that output will go to wherever stdout had been directed to.

Example program to process: simple program

```
$ ./simple
```

simple writes a prompt to stderr, reads input from stdin, then writes to stdout




```
Well I'm very
pleased to meet
you, Rich
```

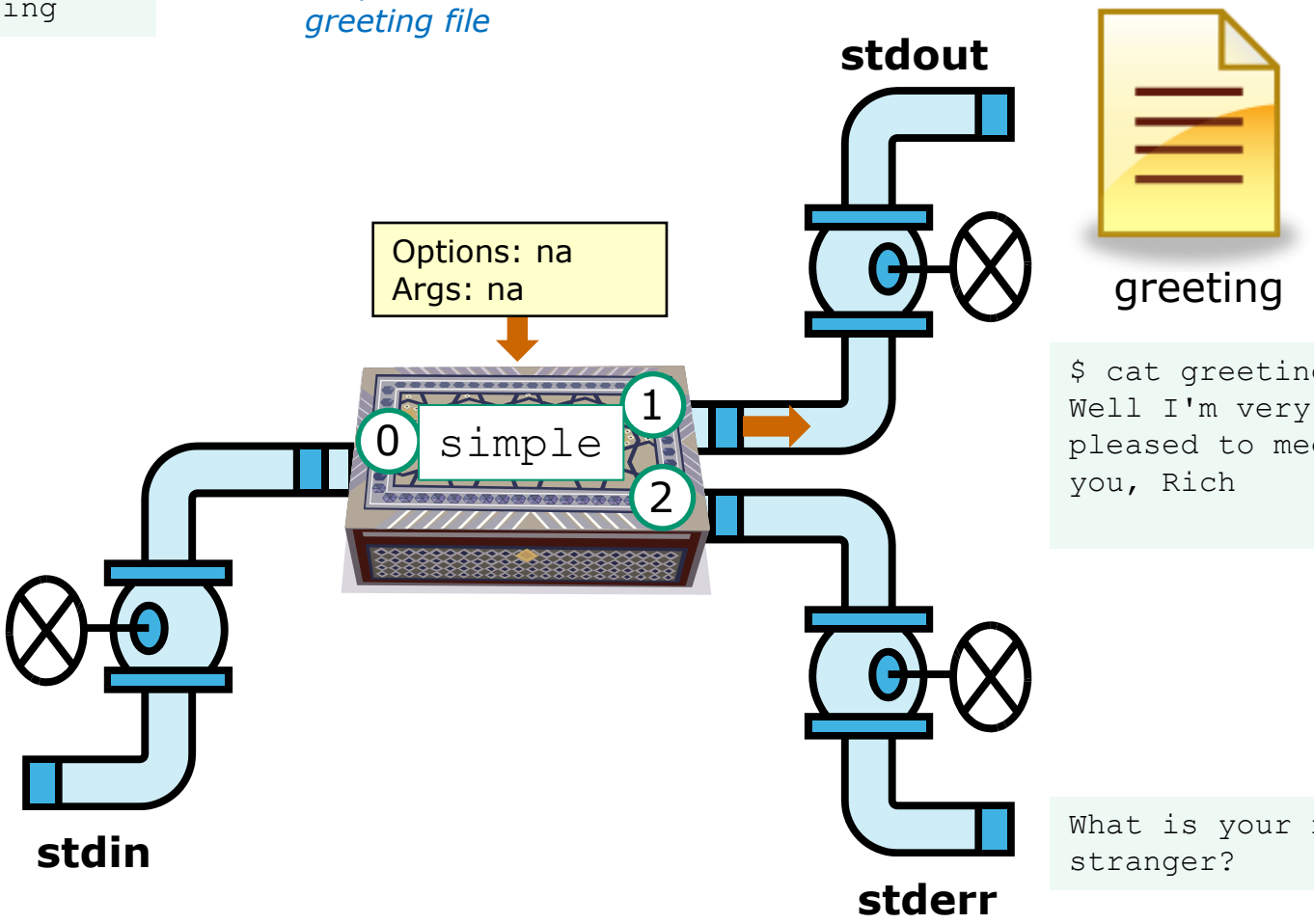
```
Rich
```

```
What is your name
stranger?
```

Example program to process: simple program

```
$ ./simple > greeting
```

Output is redirected to greeting file




```
$ cat greeting
Well I'm very
pleased to meet
you, Rich
```

```
Rich
```

```
What is your name
stranger?
```

More on umask

(input/output)

umask = "user file-creation mask"

```
/home/cis90/roddyduk/lesson9 $ umask
0002
```

```
 666
-002
 ---
 664
```

```
/home/cis90/roddyduk/lesson9 $ touch newfile
/home/cis90/roddyduk/lesson9 $ ls -l newfile
-rw-rw-r-- 1 roddyduk cis90 0 Oct 27 07:22 newfile
```

New file

```
 777
-002
 ---
 775
```

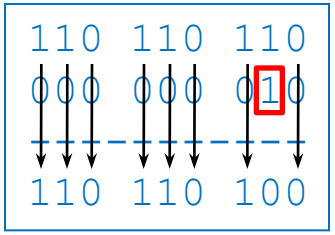
```
/home/cis90/roddyduk/lesson9 $ mkdir newdir
/home/cis90/roddyduk/lesson9 $ ls -ld newdir
drwxrwxr-x 2 roddyduk cis90 4096 Oct 27 07:23 newdir
```

New directory

*Short cut: For new files, when each digit in the **mask** is less than the corresponding digit of the **default permissions** then doing a simple arithmetic subtraction works to determine the permissions of the new file.*

umask = "user file-creation mask"

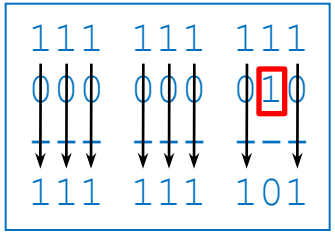
```
/home/cis90/roddyduk/lesson9 $ umask
0002
```




```
/home/cis90/roddyduk/lesson9 $ touch newfile
/home/cis90/roddyduk/lesson9 $ ls -l newfile
-rw-rw-r-- 1 roddyduk cis90 0 Oct 27 07:22 newfile
```

New file

Start with 666 for new files and apply the mask




```
/home/cis90/roddyduk/lesson9 $ mkdir newdir
/home/cis90/roddyduk/lesson9 $ ls -ld newdir
drwxrwxr-x 2 roddyduk cis90 4096 Oct 27 07:23 newdir
```

New directory

Start with 777 for new directories and apply the mask

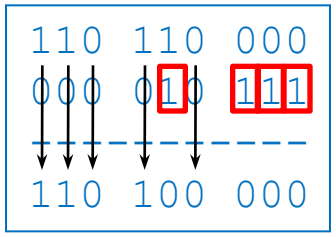
*It's not really subtraction, but masking that is being done to create the new file's permissions. Any permission bit in the **mask** will block the **default permission** bit from being set in the new file's permissions.*

umask = "user file-creation mask"

```
/home/cis90/roddyduk/lesson9 $ umask 027
/home/cis90/roddyduk/lesson9 $ umask
0027

/home/cis90/roddyduk/lesson9 $ chmod 660 myfile
/home/cis90/roddyduk/lesson9 $ cp myfile myfile.bak
/home/cis90/roddyduk/lesson9 $ ls -l myfile*
-rw-rw---- 1 roddyduk cis90 0 Oct 27 08:02 myfile
-rw-r----- 1 roddyduk cis90 0 Oct 27 08:04 myfile.bak
```

Copied file



Start with original file's permissions and apply the mask

*For new copied files, instead of using the **default permissions** (666 for file and 777 for directory), use the **original file permissions** as the starting point for the mask to be applied to.*

Housekeeping

Housekeeping

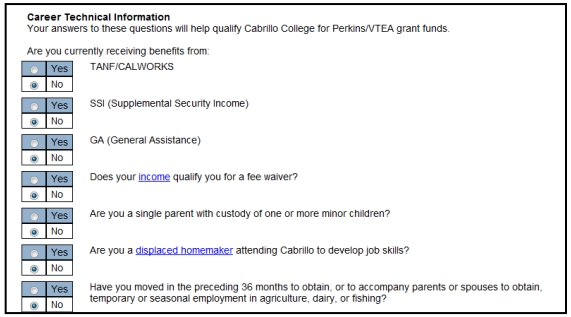
1. Lab 7 due today
2. Test #2 in two weeks with the Practice Test available now
3. No class next week (Spring Break)
4. Test #3 (final exam) must be face-to-face (not online using CCC Confer). We will have two rooms 2501 and 2502.

	5/30	**Test #3** **Time** • 1:00PM - 3:50PM **Materials** • Presentation slides (download) • Test (download) **CCC Confer** • Enter virtual classroom • Class archives		5 posts Lab X1 Lab X2

Perkins (VTEA) Web Advisor Survey Instructions

- Log on to "www.cabrillo.edu" and go to the Cabrillo College Home Page
  - Select "WEBADVISOR" (bottom, lower left)
  - Select the "LOG IN" tab
  - Fill-in the "User ID" and "Password"
  - Click on "SUBMIT"

- Select "STUDENTS: Click Here" (navy blue bar)
  - Under "Academic Profile" Click on "Student Update Form"
    - Use drop down list under "Select the earliest term for which you are registered" and click on the current term (Spring 2012).
    - Select "SUBMIT"
- Scroll down to the "Career Technical Information"
  - **Answer questions** by clicking on the circle to the left of your "Yes" or "No" answers
    - You can get details about a question by clicking on blue underlined phrase
  - After answering all questions Select "SUBMIT"
  - Then "LOG OUT"



If you filled out this survey online or on paper, then notify me today by email for 3 points extra credit!

Warmup

Egg Hunt

A number of colored eggs have been distributed within your home directory and sub-directories!

1. Can you find them? There should be an obvious one in your home directory. Who is the owner and group for this egg file? The rest are scattered in the various subdirectories you own.

2. Make a new directory named basket in your home directory and see how many egg files you can move into it.

3. Put a Green Check in CCC Confer next to your name when you have collected 3 eggs, electronically "clap" if you collect all 17.

Test 2 Prep

Round 2

debian	redhat	suse	CentOS	ubuntu	
ahrmat90	lowmic90	cofcol90	milmic90	plajua90	gueous90
blerav90	macrya90	colabd90	olscam90	porjon90	helrog90
bodian90	maxsco90	deltas90	pacnan90	pummas90	hovdav90
bunsol90	mcidar90	doucor90	phacha90	rafdav90	huljef90
cheken90	Milhen90	Flamat90	plajos90	Reedie90	jimmel90
Shidev90			Veleli90		Varana90
Points:	**Points:**	**Points:**	**Points:**	**Points:**	**Points:**

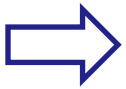
Flashcards
L6=20
L7=15
L8=16

Rules

- Chat window belongs to team that is up (no one else can use)
- Spokesperson rotates
- "Final Answer" must be from spokespersion
- All team members can help each other and suggest answers

Jim's Summary Pages

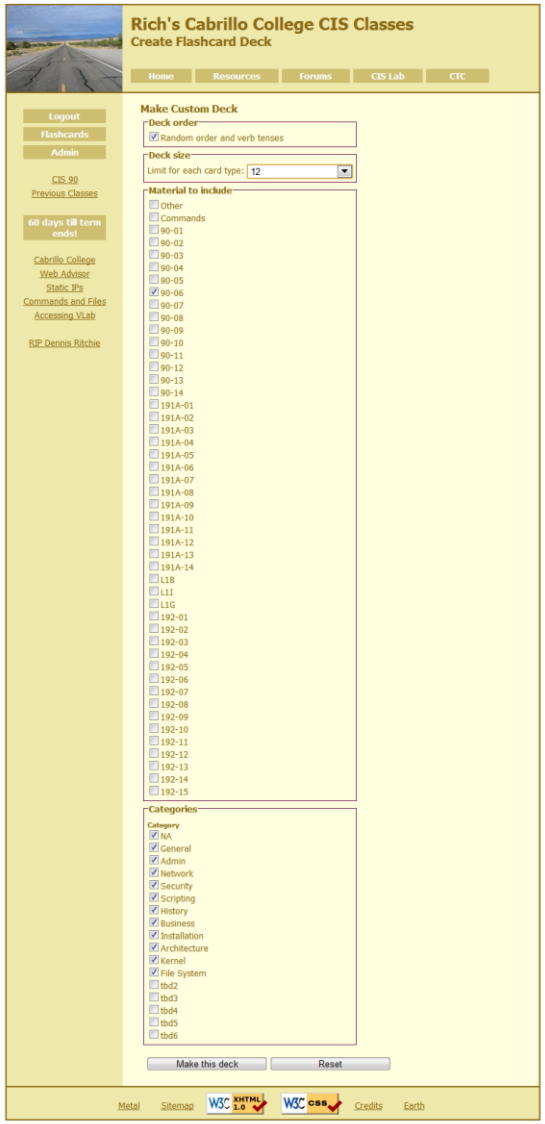
Jim has some really good summary information on Lessons 6-8 on his web site:



Lesson 6 - Managing Files
http://cabrillo.edu/~jgriffin/CIS90/files/lecture5.html

Lesson 7 - File Permissions
http://cabrillo.edu/~jgriffin/CIS90/files/lecture6.html

Lesson 8 - Input/Output Processing
http://cabrillo.edu/~jgriffin/CIS90/files/lecture7.html



Managing Files
12 Cards
Lesson 6

Jim's Summary Pages

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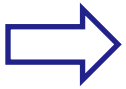
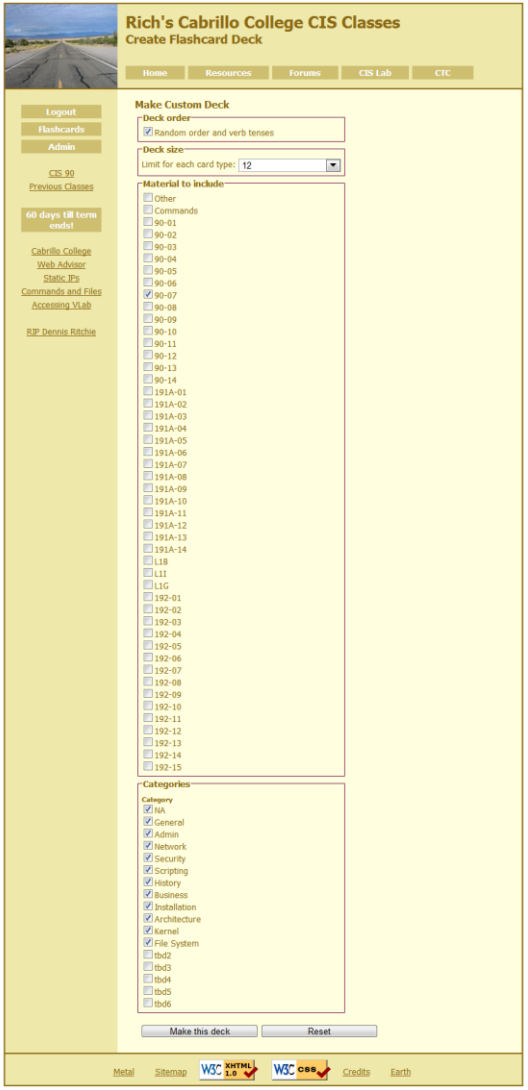
Lesson 6 - Managing Files
http://cabrillo.edu/~jgriffin/CIS90/files/lecture5.html



Lesson 7 - File Permissions
http://cabrillo.edu/~jgriffin/CIS90/files/lecture6.html

Lesson 8 - Input/Output Processing
http://cabrillo.edu/~jgriffin/CIS90/files/lecture7.html



Permissions
12 Cards
Lesson 7

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Lesson 6 - Managing Files
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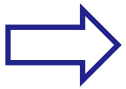
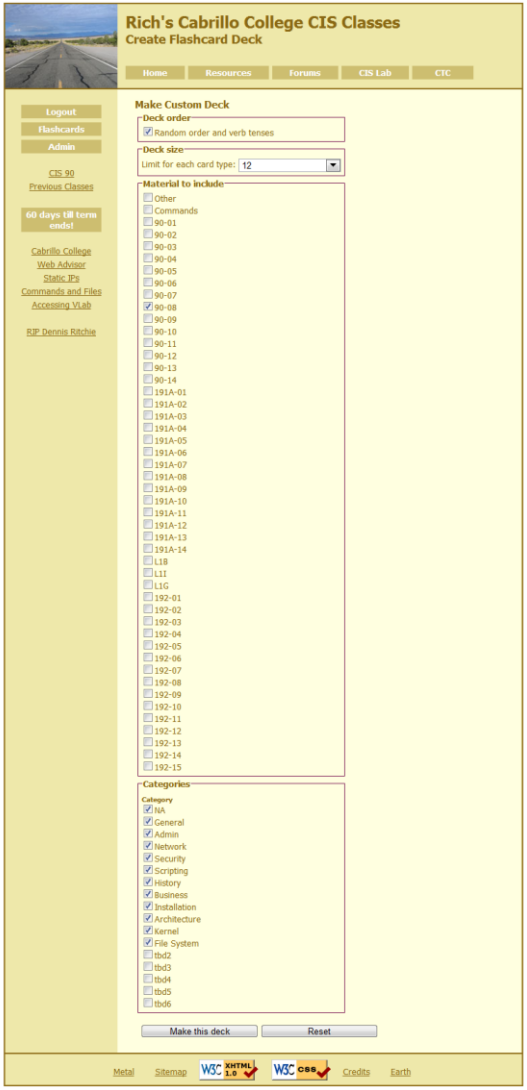
Lesson 7 - File Permissions
http://cabrillo.edu/~jgriffin/CIS90/files/lecture6.html

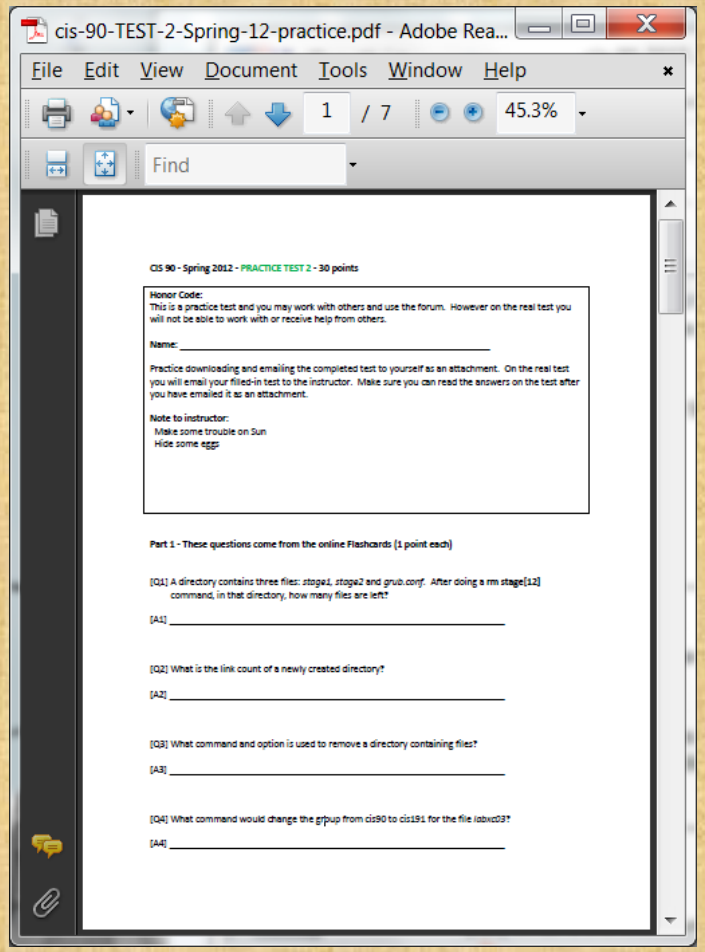


Lesson 8 - Input/Output Processing
http://cabrillo.edu/~jgriffin/CIS90/files/lecture7.html



Input/Output
12 Cards
Lesson 8

Practice Test



Work the practice test

- Collaborate!
- Ask questions!
- You may leave class once you know how to approach and hopefully answer each question

Wrap up

Next Class

No Quiz

Cumulative Test (30 points) with focus on Lessons 6-8:

- Recommended preparation:
  - Review Lessons 6-8 slides and Labs 5-7
  - Try doing some or all of Lab X2 (pathnames)
  - Practice with flash cards
  - Scan previous Lessons so you know where to find things if needed

  - Work the practice test
  - Collaborate with others on the forum to compare answers!