

CIS 90 - Test 2 – Fall 2010

30 points + 10 points extra credit

Honor Code:

This test is open book, open notes, and open computer. The one restriction is that you must work alone and answer all test questions by yourself. You may not give or receive help from others.

Name: _____
(type your name to indicate your agreement to abide by the honor code above)

When finished, email your completed test to: risimms@cabrillo.edu

The deadline to email your test is Midnight tonight. Tests emailed after the deadline will not be accepted.

Part 1 – From the flash cards (2 points each)

1. How many inodes are needed for two files hard linked to each other?

2. Where are the permissions for a file kept?

3. What command would set the permissions on the file dogs so that the owner would have full permissions, the group read and write, and no permissions for anyone else?

4. What is added to a command to redirect standard error (stderr) to the bit bucket?

5. What happens if you type this command?
> **mythesis**

Part 2 – Operational Questions (2 points each)

6. What single command line would count the number of accounts in */etc/passwd* that use */sbin/nologin* as the shell?

7. If the contents of the file named *states* is:

Michigan
California
Ohio
New York

What is the result of doing the following command?

```
sort < states > states
```

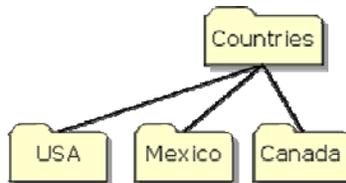
8. Make a new directory that has a couple of files. Configure this directory so that:

- you (the owner) cannot `cd` into it or remove its files, but you can list its files,
- group users have no permissions,
- and all others can `cd` into it, remove files from it, but not list files in it.

What are the permissions on this directory (in numeric form)?

9. What are the (numeric) permissions on the `/usr/bin` file with the inode `rsimms` emailed you?

10. What single command (no ";"s) creates a new directory named *Countries* containing three new sub-directories, named *USA*, *Mexico* and *Canada*?

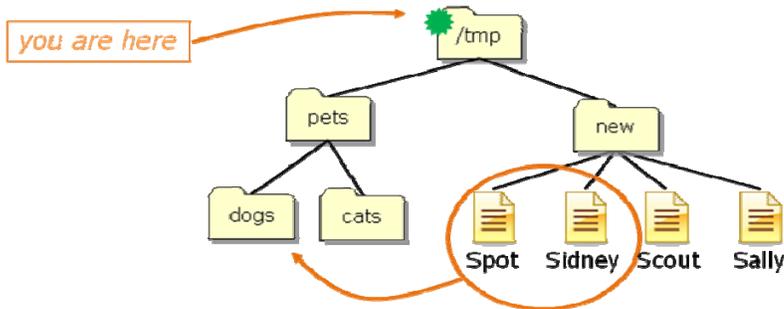


11. Benji messed up his *edits* directory. His long listings now look like the following:

```
/home/cis90/simmsben $ ls -l edits
total 0
?----- ? ? ? ?      ? 1995.egg
?----- ? ? ? ?      ? better_town
?----- ? ? ? ?      ? small_town
?----- ? ? ? ?      ? spellk
?----- ? ? ? ?      ? text.err
?----- ? ? ? ?      ? text.fxd
/home/cis90/simmsben $
```

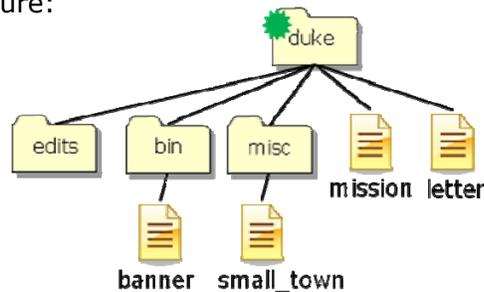
What command should Benji issue so he can see all his file information again?

12. Given this directory structure:



If your current working directory is */tmp*, what single command using filename expansion characters would move just the files *Spot* and *Sidney* to the *dogs* directory?

13. Given this directory structure:



If your current working directory is *duke*, what single command (no ";"s) would copy the *mission* and *banner* files to the */tmp* directory?

14. From your home directory, what single command line **using at least one filename expansion character** and an **environment variable**, could be used to mail yourself and rsimms, a count of the misspelled words in all of Yeat's poems, with a subject of "Yeats"?

15. Given the file *expressions* contains these two lines:

```
5+5
9/0
```

What complete command using **bc** would input the math problems in *expressions*, **append** the calculated answers to the file *results* and write any errors to the file *errors*?

Extra Credit (1 point each)

16. You have been hired as a parser. You will need to parse command lines and identify the command, options, arguments and any redirection. This includes doing any filename expansion. Parse the command below and complete the section that follows:

stat -tZ /usr/bin/sta*[ts] > myreport

command: _____

option(s): _____

argument(s): _____

redirection: _____ redirected to _____

17. On Opus, how many directories and sub-directories are in the /lib portion of the file tree?

18. **cd** into */home/cis90/roddyduk*, why does

find -name treat?

only find one treat file, yet

find -name 'treat?'

finds multiple treat files?

19. If the umask is 022 and the permissions on the file *cinderella* are *rw--w--w-*, then what would be the permissions of the file *cinderella.bak* after doing the following command?

cp cinderella cinderella.bak

20. What complete command (with no ";"s) **counts** all the files belonging to you on the system, places a sorted list of them in the file *allmine*, and redirects error messages to the bit bucket?

21. What are 2 files or directories on Opus that use inode number 1? Hint: see last slide in Lesson 10.

22. What complete command line (with ";"s) creates a file named *hiro*, changes that file's group to be *users*, then removes all permissions for others on the file?

23. Using only **echo** commands and file redirection, how could you create a file named *characters* so it would contain the following lines?

Hiro
Ando
Sylar
Nikki

24. What command would print only line 24 of the file *nursery* in your *poems/Anon* directory? Hint: Use both **head** and **tail**.

25. What is the actual absolute pathname to the **/etc/passwd** file?
