CIS 90 – Practice Test 2 – Spring 2011

30 points + 10 points extra credit

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 permissions (in numeric form) on the file in /usr/bin with inode 1452431?

   _____

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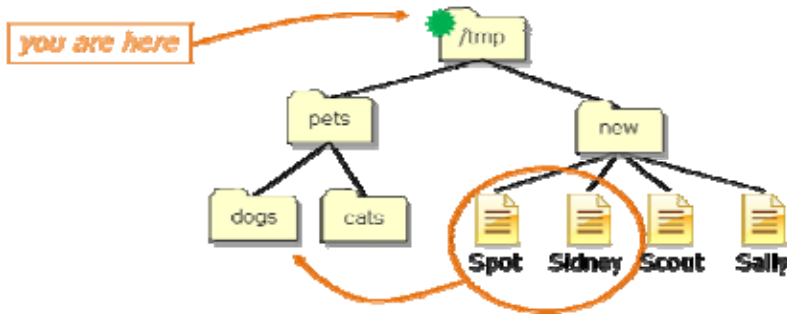   three new sub-directories, named *USA, Mexico* and *Canada*?

   _____

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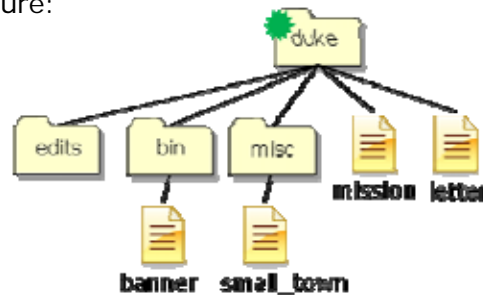
   What command should Benji issue so he can see all his file information again?

   _____

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/cis90ol/simmsben*, why does

       find –name *egg

    only find one egg file, yet

       find –name '*egg'

    finds multiple egg 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 command would set these permissions, rw-r--r--, on a file named *dogs*?

    _____

22. What complete one-liner command (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?

_____