CIS 90 –Test 2 – Spring 2011

30 points + 10 points extra credit

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

1. If two files are hard linked do they have the same or different inode numbers?

   (A1) _____

2. What command shows the options for the **rm** command?

   (A2) _____

3. What command would remove read permission for the group on a directory named Frost?

   (A3) _____

4. What is the numeric permission equivalent of `rwx r-x r--` ?

   (A4) _____

5. What three file descriptors are opened automatically for every UNIX process?

   (A5) _____

Part 2 – Operational Questions (2 points each)

6. What single command would list the accounts in */etc/passwd* belonging to students in the CIS 90 Online group (cis90ol) and use the bash shell?

   (A6) _____

7. If the contents of the file named *Lost* is:
   > Hugo
   > Sun
   > Ben
   > Sawyer
   > Jin
   > Jack
   > Kate

   What is the result of doing the following command?

   sort -r Lost | tail -3 | head -1 > Jack

   (A7) _____

8. Make a new directory that has a couple of files. Configure this directory so that:
   > - you (the owner) can **cd** into it, remove files from it, but not list its files,
   > - group users (like cis90) can cd into the directory, list files but not remove files,
   > - and all others have no permissions at all
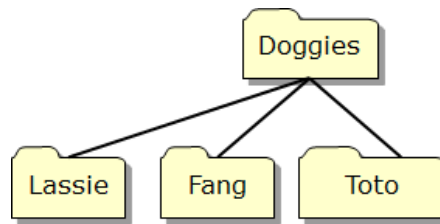
   What are the permissions on this directory (in numeric form)?

   (A8) _____

9. What are the permissions (in numeric form) on the file in */etc/httpd/conf* with inode 1278942?

   (A9) _____

10. What single command (no ";"s) creates a new directory named *Doggies* containing three new sub-directories, named *Lassie, Fang* and *Toto*?
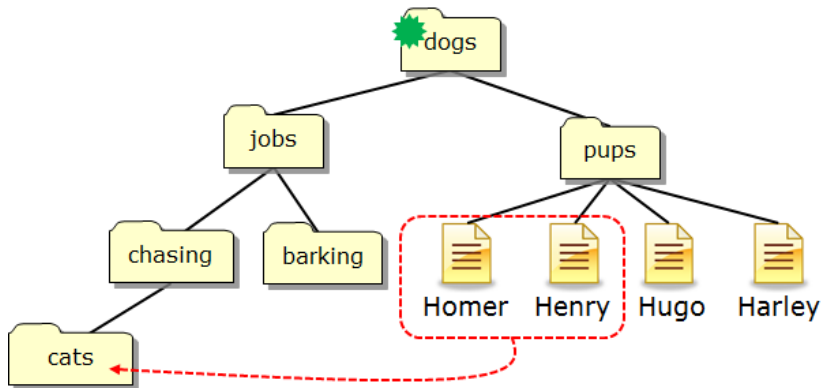

(A10) _____

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

```
roddyduk@opus:~
/home/cis90ol/roddyduk $ ls -l bin
total 0
?--------- ? ? ? ?              ? app
?--------- ? ? ? ?              ? banner
?--------- ? ? ? ?              ? enlightenment
?--------- ? ? ? ?              ? hi
?--------- ? ? ? ?              ? I
?--------- ? ? ? ?              ? treed
?--------- ? ? ? ?              ? tryme
?--------- ? ? ? ?              ? zoom
/home/cis90ol/roddyduk $ [2~
```

What command should Duke issue so he can see all his file information again?
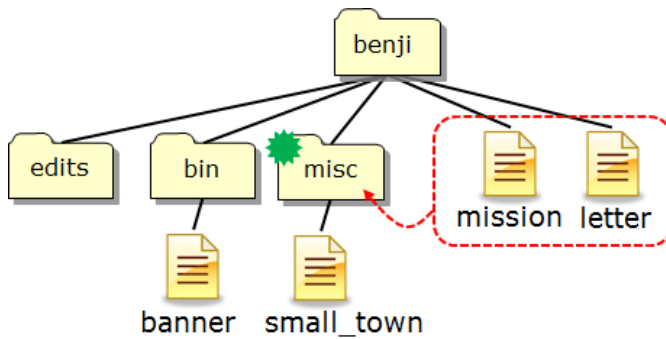
(A11) _____

12. Given this directory structure:

If your current working directory is *dogs*, what single command using filename expansion characters would move just the files *Homer* and *Henry* to the *cats* directory?

(A12) _____

13. Given this directory structure:

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

(A13) _____

14. There is a ASCII English text file in */home/cis90ol/depot* that is 33,939 bytes in size. 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 that file, with a subject of "Test 2 Q14"?

(A14) _____

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*?

    (A15) _____

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:

    file -i /dev/[sh]d* > q16-report 2> q16-errors

    (A16)

    command: _____

    option(s):   _____
                   _____
                   _____

    argument(s):_____
                 _____
                 _____
                 _____
                 _____
                 _____
                 _____
                 _____

    redirection: _____ redirected to _____
                    _____ redirected to _____

    Note: when filling out the redirection portion above, you must specify the actual file descriptors being redirected.

17. On Opus, how many directories and sub-directories are in the /usr/src branch of the UNIX file tree?

    (A17) _____

18. **cd** into */home/cis90ol/simmsben*, why does

find –name *egg

only find one egg file, yet

find –name '*egg'

finds multiple egg files?

(A18)

_____
_____
_____

19. If the umask is 246 and the permissions on the file *sayid* are rw-r--r--, then what would
    be the permissions of the file sayid.*bak* after doing the following command?

    cp sayid sayid.bak

    (A19) _____

20. What complete command (with no ";"s) **counts** all the files on Opus belonging to the
    cis90 **user**, places a sorted list of them in the file *cis90files,* and redirects error
    messages to the bit bucket?

    (A20) _____

21. What command would set these permissions, rwxrw-r--, on a file named *juliet*?

    (A21) _____

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

    (A22) _____

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

Hugo
Sun
Ben
Sawyer
Jin
Jack
Kate

(A23)

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

24. What command, from your home directory, would print only line 504 of the file *dickens* in the */home/cis90ol/depot* directory?   Hint: Use both **head** and **tail**.

(A24) _____

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

(A25) _____