

## Lecture 3 - Assignment

### 1. What is a hard link?

A separate virtual file that contains information about the original file and where to locate it; it contains the same contents as the linked file as they are physically the same file.

### 2. What is a symbolic link?

A physical file that points to another file somewhere in the virtual directory structure and doesn't contain the same contents as the linked file.

### 3. List three characteristics of a hard link.

- a. Physically the same file as the linked file = contains same information and file size
- b. Has the same inode number as the original linked file
- c. Can be created only between files on the same medium

### 4. List three characteristics of a symbolic link.

- a. A physical file that references the linked file
- b. Has a difference inode number than the linked original file = different files
- c. The long listing displays -> after the file to show it's symbolically linked to another file.

### 5. What does the history command do?

\$ history shows a list of recently used commands

### 6. List the function of the tail command .

When viewing a file, \$ tail shows the last 10 lines of a file automatically or -n x number of lines

### 7. List the function of the head command.

When viewing a file, \$head shows the first 10 lines of a file automatically or -n x number of lines

8. How would you find the first 14 lines of a file?

`$ head -n 14 filename`

9. What is the difference between 'searching' and 'sorting' ?

“Sorting” organizes data lines on a text file using specified sorting rules to make it easier to find what you want in the data.

“Searching” with the grep command outputs the lines of a file that contains what you were looking for.

10. What is a process?

A program that runs on the system.

11. How do you find running processes on the system?

`$ ps` shows processes running on the current terminal that belong to the current user.

12. How would you kill a running process with the PID of 1325 ?

`$ kill 1325`

13. What does it mean to 'compress' data ?

Large files that are compressed become smaller files and take up less space.

14. What is the difference between copy(cp) and move(mv) ?

Copying takes a file or directory from one location in the filesystem and makes another copy in another location as a brand new file or directory.

Moving a file or directory changes its location or name.

15. What does it mean to 'archive' a file or archive data ?

Archiving data puts it into a single file that can be easily ported to another system.