Project 1: Familiarity with UNIX/Linux

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Part 1

1. Changing Directory (cd): When you use the cd command, the computer looks through the directory it’s currently in for the file name you give (e.g. cd Desktop) and sees if the directory exists. It then checks if the user calling the command has permission to access the file. If the user has sufficient permission, it changes directory by passing the instruction down through the Linux ‘onion’, from the shell to the kernel and so on until it reaches hardware.
2. Listing files (ls): When using ls, the computer browses the current directory the terminal is in for all the folders/files that are contained within it. It then outputs the names of all the files it found for the user to see in their console.
3. Making a directory (mkdir): If the user calls mkdir and gives the name of the file they want to create, the computer will check to see if the user has sufficient permission to create a file in the current directory. If they do, the computer will create a new file with the user’s chosen name and file type. This is, however, only used for directories, for actual folders it would be better to use a command like ‘touch’.
4. Find file (find): This command finds a file within a certain directory that matches the specified search criteria given by the user. When the command is used, the computer takes the directory provided and the search criteria and if the file is found, it returns its location and name to the user.
5. Remove (rm): Removes a file or multiple files specified by the user. When called, this command first checks the permission of the user and whether it is sufficient to delete the given files. If the user has permission, it will then delete all selected files from the file management system, however if these files are stored on the hard drive, I think they will still technically exist until overwritten with new data. If the file being removed is a directory, it will return an error unless the -r option is specified.