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| **Piping and Redirection** | | |
| ls -l | nl | take the output of ls -l and pipe it to nl (number the lines) |  |
| ls -l > output.txt | take the output of ls -l put it in output.txt (overwrite existing contents) |  |
| ls -l >> output.txt | take the output of ls -l and put it in output.txt (append to existing contents) |  |
| **ls -l | nl > output.txt**  take the output of ls -l and pipe it to nl (line numbers) and put the output in output.txt overwriting existing content.  **find /usr -iname “y\*” | nl >> output.txt**  find all the files beginning with “y” or “Y” in /usr or below, pipe the output to nl (line numbers) and append the output to output.txt | | |
| **Linking Files and Directories** | | |
| ln /mydir/myfile /myotherdir/myotherfile | hard link myfile to myotherfile | cannot hardlink directories and cannot hardlink across filesystems |
| ln -s /mydir/myfile /myotherdir/otherfile | symbolic link myfile to otherfile |  |
| ln -s /mdir /myotherdir | symbolic link directories |  |
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| nl mytextfile.txt | list mytextfile.txt and put line numbers at the beginning of each line |  |

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| **grep** | |
| grep “tree” lumberjack.txt | list all instances of string “tree” in file lumberjack text. The string can be a part of other words. |
| grep -w “tree” lumberjack.txt | list all instances of the word “tree” in file lumberjack text. The word must be standalone. |
| grep -n “tree” lumberjack.txt | list all instances of string “tree” in file lumberjack text. The string can be a part of other words. Also list the line number it was found on. |
| **history | grep “find”**  search your command history for all the find commands you’ve typed  **grep -n “S\|T” myfile.txt**  search myfile.txt for any strings that have S or T in it. Print the line number.  **grep -n “^My” myfile.txt**  search myfile.txt for lines beginning with “My”. The ^ means the string must be at the beginning of the line. Print the line number  **find /usr -iname “Y\*” -exec grep -n “linux” {} \;**  find all files beginning with “Y” or “y” in /usr or below. With each file found, grep for the standalone word “linux” | |

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| **Wildcard** | **Meaning** |
| \* | Matches any characters |
| ? | Matches a single character |
| [characters] | Matches any character that is a member of the set characters. The set represents one character. |
| [!characters] | Matches any character that is **not** a member of the set characters. The set represents one character. |
| **ls -l [A-Z]\***  List all files in /etc that have an uppercase letter as the first character  **ls -l /etc/T??l\***  List all files in /etc that have a 'T' as the first letter and have an 'l' as the fourth letter  **ls -l /etc/[sT][hr]\***  List all files in /etc/ that have a first letter of 's' or 'T' and have a second letter of 'h' or 'r' | |