Notes 8

awk

- **Definition**
    - Used for processing and displaying text.
- **Formula**
    - `awk` + `options` + `{awk command}` + `file` + `file to save (optional)`
- **Examples**
    - Print the first column of every line of a file.
        - `awk '{print $1} ~/Documents/Csv/cars.csv`
    - Print first field of /etc/passwd file.
        - `awk -F: '{print $1}' /etc/passwd`
    - Print the first and last field of the /etc/passwd file.
        - `awk -F: '{print $1," = ",$NF}' /etc/passwd`

sed

- **Definition**
    - Performs operations on files and standard output.
- **Formula**
    - `sed` + `options` + `sed script` + `file`
- **Examples**
    - Replacing a string in given file (replace pizza for rice).
        - `sed 's/pizza/rice/' shopping-list.lst`
    - Replacing the number of occurrences of a pattern in a file.
        - `sed 's/pizza/rice/4' shopping-list.lst`
    - Replacing from the given number occurrence to the rest occurrences in a file. Start at the second time the word appears and continue to till the end of the file.
        - `sed 's/pizza/rice/3g' shopping-list.lst`

less

- **Definition**
    - Used to display the contents of a file or a command output one page at a time.
- **Formula**
    - `less` + `options` + `filename`
- **Examples**
    - Viewing a small file.
        - `less -F ~/Documents/godzilla/godzilla2014.erl`
    - Viewing a file using absolute path.
        - `less ~/Documents/dbz.txt`
    - Viewing a file using relative path.
        - `less ../dbz/goku.txt`

>

- **Definition**
  - Used to save standard output.
- **Formula**
  - `output` + `>` + `file`
- **Examples**
  - Save the output of a command to a file.
    - `ls -lA ~ > all-files-in-home.txt`
  - Save the error generated by a command to a file.
    - `ls -lA downloads/ 2> error-of-ls`
  - Save the error to a file and the success to another.
    - `ls -lA downloads/ Pictures > success.txt 2> error.txt`

>>

- **Definition**
  - Used to add more to a file instead of overwriting its content.
- **Formula**
  - `command` + `>>` + `file`
- **Examples**
  - Add the output of ls -la to the end of the file allmyfiles.lst
    - `ls -la >> allmyfiles.lst`
  - Add text to the end of a file.
    - `echo "I like dinosaurs" >> jurassic_park.txt`
  - Add content of one file to another.
    - `cat file1.txt >> file2.txt`

|

- **Definition**
  - Used to redirect the standard output of a command to the standard input of another.
- **Formula**
  - `command_1` + `|` + `command_2` + `|` + `command_3` + `|` + ... + `|` + `command_N`
- **Examples**
  - Use grep to look for a string in a particular man page.
    - `man ls | grep "human-readable"`
  - Display only the options of any command from its man page.
    - `man ls | grep "^[[:space:]]*[[:punct:]]"`
  - Display only the ip addresses from the output of the ip command.
    - `ip addr | grep -Eo '[[:digit:]]{1,3}\.[[:digit:]]{1,3}\.[[:digit:]]{1,3}\.[[:digit:]]{1,3}'`