

# Lecture 8 Notes

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## awk

- Awk is a scripting language used for processing and displaying text.

### Usage:

- `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 first field of `/etc/passwd` file
  - `awk -F: '{print $NF}' /etc/passwd`

## sed

- SED is a stream editor that perform operations on files and standard output. You can edit files without opening them

### Usage:

- `sed options + sed script + file`

### Examples:

- Replacing a string in given file (replace pizza for rice)
  - `sed 's/pizza/rice' shopping-list.lst`
- Replacing only the fourth occurrence per line in a file
  - `sed 's/pizza/rice/4' shopping-list.lst`
- Replacing all the occurrence of the pattern of a file
  - `sed 's/pizza/rice/g' shopping-list.lst`

## less

- a pager program used for reading files 1 page at a time.

### Usage:

- `pager program + file to read`

### Examples:

- `less ~/Documents/Books/dracula.txt`

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- Append means to add more to a file instead of overwriting its content. When we use > on a file that already exist and contains data, we overwrite whatever is already inside the file.

Usage:

- Command 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`

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- If you want to keep the old data, then you use >>.

Usage:

- Command output + >> + file

Examples:

- `ls -la >> allmyfiles.lst`

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- The pipe allows you to redirect the standard output of a command to the standard input of another.

Usage:

- `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 the of any command from its man page
  - `man ls | grep "^[[space]]*[[punct:]]"`
- Display only the 2nd line in a file
  - `head -2 file.lst | tail -1`