Notes 7

cat

- **Definition**
    - Used for displaying the content of a file.
- **Formula**
    - `cat` + `option` + `file(s) to display`
- **Examples**
    - Display the content of a file located in the pwd.
        - `cat todo.lst`
    - Display the content of a file using absolute path.
        - `cat ~/Documents/todo.lst`
    - Display the content of a file with line numbers excluding empty lines.
        - `cat -b ~/Documents/todo.md`

tac

- **Definition**
    - Used for displaying the content of a file in reverse order.
- **Formula**
    - `tac` + `option` + `file(s) to display`
- **Examples**
    - Display the content of a file located in the pwd.
        - `tac todo.md`
    - Display the content of a file using absolute path.
        - `tac ~/Documents/todo.md`
    - Display the content of a file with line numbers.
        - `tac -n ~/Documents/todo.md`

head

- **Definition**
    - Displays the top N number of lines of a given file.
- **Formula**
    - `head` + `option` + `file(s)`
- **Examples**
    - Display the first 10 lines of a file.
        - `head ~/Documents/Book/dracula.txt`
    - Display the first 5 lines of a file.
        - `head -5 ~/Documents/Book/dracula.txt`
    - Display the first line of multiple files using wildcards.
        - `head -n 1 *.csv *.py`

tail

- **Definition**
  - Displays the last N number of lines of a given file.
- **Formula**
  - `tail` + `option` + `file`
- **Examples**
  - Display the last 10 lines of a file.
    - `tail ~/Documents/Book/dracula.txt`
  - Display the last 5 lines of a file.
    - `tail -5 ~/Documents/Books/dracula.txt`
  - Display the last 5 lines of multiple files.
    - `tail -n 5 dracula.txt bible.txt war-and-peace.txt`

cut

- **Definition**
  - Used to extract a specific section of each line of a file and display it to the screen.
- **Formula**
  - `cut` + `option` + `file(s)`
- **Examples**
  - Display a list of all the users in your system.
    - `cut -d ':' -f1 /etc/passwd`
  - Display a list of all the users in your system with their login shell.
    - `cut -d ':' -f1,7 /etc/passwd`
  - Cut a range of bytes per line.
    - `cut -b 1-5 usernames.txt`

sort

- **Definition**
  - Used for sorting files.
- **Formula**
  - `sort` + `option` + `file`
- **Examples**
  - Sort a file.
    - `sort users.lst`
  - Sort a file and save the output to a new file.
    - `sort -o sorted.lst users.lst`
  - Sort a file in reverse order.
    - `sort -r users.txt`

wc

- **Definition**
  - Used for printing the number of lines.
- **Formula**
  - `wc` + `option` + `file(s)`
- **Examples**
  - Display the number of characters in a file.

- - ▪ `wc -m users.txt`
  - Display the number of lines in a file.
    - ▪ `wc -l users.txt`
  - Display the number of words in a file.
    - ▪ `wc -w users.txt`

tr

- **Definition**
  - Used for translating or deleting characters from standard output.
- **Formula**
  - `Standard output | tr` + `option` + `set` + `set`
- **Examples**
  - Translate one character to another.
    - ▪ `cat file.txt | tr '.' ','`
  - Translate white space into tabs.
    - ▪ `cat file.py | tr -s "[:space:]" ' '`
  - Translate tabs into space.
    - ▪ `cat file.py | tr -s "[:space:]" '/t'`

diff

- **Definition**
  - Compares files and displays the difference between them.
- **Formula**
  - `diff` + `option` + `file1` + `file2`
- **Examples**
  - Display the difference between two files.
    - ▪ `diff cars.csv cars-backup.csv`
  - Display the difference between two files in a column format.
    - ▪ `diff -y cars.csv cars-backup.csv`
  - Treats all files as text.
    - ▪ `diff -a cars.csv cars-backup.csv`

grep

- **Definition**
  - Used to search text in a given file.
- **Formula**
  - `grep` + `option` + `search criteria` + `file(s)`
- **Examples**
  - Search any line that contains the word 'dinosaur' in the given file.
    - ▪ `grep 'dinosaur' ~/Documents/jurassicpark.txt`
  - Search any line that contains the word 'spinosaurus' regardless of the case.
    - ▪ `grep -i 'spinosaurus' ~/Documents/Movies/jurassicpark3.txt`
  - Search any line that contains the word 'velociraptor' regardless of case and with number line.
    - ▪ `grep -in 'velociraptor' ~/Documents/Movies/jurassicpark1.txt`