Final Assignment Submission

Question 1

Awk

- Description
    - Awk is used to display and process text. Cna work with text file or standard output.
- Syntax/Formula
    - awk + options + {awk command} + file + files to save (optional)
- Examples
    - Print first column of every line of a file
        - awk '{print $1}' ~/Documents/Csv/cars.csv
    - Prints last field of a file
        - awk -F: '{print $NF}' /etc/passwd
    - Converts first field to upper/lower case
        - awk -F: '{print toupper($1)}' /etc/passwd

Cat

- Description
    - Cat is used for displaying a files content.
- Syntax/Formula
    - cat + option + file(s) to display
- Examples
    - Display content of a file
        - cat todo.lst
    - Display content with line numbers
        - cat -n ~/Documents/todo.lst
    - Displays content of a file using absolute path
        - cat ~/Documents/todo.lst

Cp

- Description
    - Cp is used to copy files from one place to another. Similar to mv command.
- Syntax/Formula
    - cp + files to copy + destination
- Examples
    - Copy directories with absolute path
        - cp -r ~/Downloads/Wallpapers ~/Pictures/
    - Copy multiple files in a single command
        - sudo cp -r script.sh program.ny home.html assets/ /var/www/html/
    - Copy content of a directory to another directory
        - cp Downloads/Wallpapers/* ~/Pictures/

Cut

- Description
    - Cut is used to extract a specific section of a file and display it on screen.
- Syntax/Formula
    - cut + options + files
- Examples
    - Display list of all users in your system
        - cut -d ':' -f1 /etc/passwd
    - Display range of bytes per line
        - cut -b 1-5 usernames.txt
    - Display a file excluding the given field
        - cut -d ',' --complement -s -f3 users.txt

Grep

- Description
    - Grep is used to search text in given files.
- Syntax/Formula
    - grep + option + search criteria + file(s)
- Examples
    - Search any line that contains the word dracula
        - grep 'dracula' ~/Documents/Dracula.txt
    - Search for all the lines that ends with the string "nologin"
        - grep -n 'nologin$' /etc/passwd
    - ^ symbol matches the empty string at the beginning of a line.
        - grep -ni '^dracula' ~/Documents/Books/dracula.txt

Head

- Description
    - Head is used to display the top N number of lines of a given file.
- Syntax/Formula
    - head + option + file(s)
- Examples
    - Display first 10 lines
        - head ~/Documents/Book/dracula.txt
    - Display first 5 lines
        - head -5 ~/Documents/Books/dracula.txt
    - display first 20 lines
        - head -20 ~/Documents/Books/dracula.txt

Ls

- Description
    - Ls is used to list content of a directory or file/directory.
- Syntax/Formula
    - ls + option + directory to list

- Examples
  - list all files including hidden files
    - ls -a
  - list all files inside a given directory
    - ls -a ~/Pictures
  - long list all the files inside a given directory recursively
    - ls -lR ~/Pictures

Man

- Description
  - Man is used to display the user manual of any command that can run on the terminal.
- Syntax/Formula
  - man + command name
- Examples
  - manual pages of printf command
    - man printf
  - using manual to get the section where command ls is present by using f
    - man -f ls
  - using manual to search the command ls location in a file using w
    - man -w ls

Mkdir

- Description
  - Mkdir is used to make/create single or multiple directories.
- Syntax/Formula
  - mkdir + name o directory
- Examples
  - make a directory in present working directory
    - mkdir wallpapers
  - create a directory with a space in the name
    - mkdir wallpapers/new\ cars or mkdir wallpapers/'cities usa'
  - create a directory with a parent directory at the same time
    - mkdir -p wallpapers_others/movies

Mv

- Description
  - Mv is used to move and rename directories.
- Syntax/Formula
  - mv + source + destination
  - mv + file/directory to rename + new name
- Examples
  - move a file to a directory to another using relative path
    - mv Downloads/homework.pdf Documents/
  - move multiple directories/files to a different directory
    - mv games/ wallpapers/ rockmusic/ /media/student/flashdrive/

- move and rename in one command
    - mv Downloads/cis106homework.docx Documents/new_cis106homework.docx

Tac

- Description
    - Tac is used to display content of a file in reverse order.
- Syntax/Formula
    - tac + option + file(s) to display
- Examples
    - display content of file located in pwd
        - tac todo.md
    - display content of file using absolute path
        - tac ~/Documents/todo.md
    - display content of the /etc/passwd file
        - tac /etc/passwd

Tail

- Description
    - Tail display the last N number of a given file.
- Syntax/Formula
    - tail + option + file
- Examples
    - display last 10 lines of a file
        - tail ~/Documents/Book/dracula.txt
    - display last 5 lines of a file
        - tail -5 ~/Documents/Book/dracula.txt
    - Display last user in file
        - tail -1 /etc/passwd

Touch

- Description
    - Touch is used to create files
- Syntax/Formula
    - touch + file name
- Examples
    - create file called list
        - touch list
    - create file with space in its name
        - touch Downloads/games2.txt
    - create several files at once
        - touch list_of_cars.txt script.py names.csv

Tr

- Description

- Tr is used to translate and delete characters from standard output
- Syntax/Formula
    - standard output | tr + option + set + set
- Examples
    - translate one character to another
        - cat file.txt | tr '.' ','
    - translate space to tab
        - cat program.py | tr "[:space:]" '\t'
    - translate tab to space
        - cat cars.csv | tr -s "[:space:]" ' '

Tree

- Description
    - Tree is used to display the entire structure of a file system, directories and files.
- Syntax/Formula
    - tree + options + directory
- Examples
    - display all files including hidden files
        - tree -a
    - display directories only
        - tree -d
    - display directory structure
        - tree

Question 2

*How to work with multiple terminals open?

- How to work with multiple terminals open?
    - You can with multiple directories open by opening multiple windows within tilix or the terminals.
- How to work with manual pages?
    - You would use the scroll wheel or arrows to navigate the the pages.
- How to parse (search) for specific words in the manual page?
    - You can search for specific words by doing / and then what you are looking for.
        - ex: /reverse you would see all the places the word reverse takes place
- How to redirect output (> and |)
    - You would use > to redirect output to a file and you would use | to redirect output to another command.
        - ex: name > file.txt
        - ex: page1 | page3
- How to append the output of a command to a file?
    - You would use the operator >>.
        - ex: name >> truth.py
- How to use wildcards For copying and moving multiple files at the same time
    - You would use cp and mv commands.
        - ex: cp *.py ~/Documents

- ex: mv *.py ~/Documents
- How to use brace expansion For creating entire directory structures in a single command
  - You would use mkdir -p and {}.
    - ex: name/{F1,F2,F3}/{first,last}