final assignment

Question 1

for every command in this list, include the following:

1. Description
2. formula/syntax
3. 3 examples that you understand well

- awk: Allows users to process and manipulate data to produce formatted reports.
  - Ex1: print a list of all the users in your system `awk ~F '{print $1}' /etc/passwd`
  - Ex2:print a list of all users in your system with their login shell: `awk ~F{print $1,$NF}' /etc/passwd`
  - Ex3: Repeat the previous command but make the usernames uppercase: `awk ~F '{print toupper$1,$NF}' /etc/passwd`
- cat: reads each file parameter in sequence and writes it to standard output.
  - Ex1: `cat todo. list`
  - Ex2: `cat ~/Documents/todo.list`
  - Ex3: `cat ~b ~Documents/todo.md`
- cp: use the cp command to create a copy of the contents of the file or directory.
  - Ex1: `cp ~/Picturers/Dogs/ ~/Documents/Pets/`
  - Ex2: `cp ~/Documents/cats/ ~/Documents/Tabby/`
  - Ex3: `cp ~/Downloads/file1 ~/Documents/file`
- cut: cut out sections of a specified file or piped data and print the result to standard output.
  - Ex1: `cut ~d '"' ~f1 /etc/passwd`
  - Ex2: `cut ~d '"' ~f1,7 /etc/passwd`
  - Ex3: `cut ~b 1-5 usernames.txt`
- grep: search for a sting in groups of files.
  - Ex1:`grep 'Harry potter' ~/Documents/Prisoner0fAzkaban,txt`
  - Ex2:`grep ~v 'Voldemort' ~/Documents/Prisoner0fAzkaban,txt`
  - Ex3:`grep ~o 'Ron Wesley' ~/Documents/Prisoner0fAzkaban,txt`
- head: writes to standard output a specified number of lines or bytes of each of the specified files, or of the standard input.
  - Ex1: `Head ~/Documents/Book/Dracula,txt`
  - Ex2: `Head -5 ~/Documents/Book/Dracula,txt`
  - Ex3: `Head -10 ~/Documents/Book/Dracula,txt`
- ls: list the names and features of files and directories0.

  - Ex1: `ls ~/Documents/`
  - Ex2: `ls ~/Documents/Dogs/`
  - Ex3: `ls ~ ~/Weekly Reports/`

- man: display the user manual of any command that we can run on the terminal.

  - Ex1: `man printf`
  - Ex2: `man 2 intro`
  - Ex3: `man ~f ls`

- mkdir: create or make new directories.

  - Ex1: `mkdir HomeDecor`
  - Ex2: `mkdir {dir1,dir2}`
  - Ex3: `mkdir ~v Pets`

- mv: move files and directories from one directories to another or to rename a file or directory.

  - Ex1: `mv sample.txt ~/Documents/`
  - Ex2: `mv dir1 dir2`
  - Ex3: `test.txt ~/TextFiles/`

- tac: display the file content in reverse order.

  - Ex1: `tac todo.md`
  - Ex2: `tac ~/Documents/todo.md`
  - Ex3: `tac ~/Final Project/Deliverable 2.pdf`

- tail: prints the last few number of line (10 lines by default) of a certain file, then terminates.

  - Ex1: `tail ~/Documents/Book/dracula.txt`
  - Ex2: `tail -5 ~/Documents/Book/dracula.txt`
  - Ex3: `tail -10 ~/Documents/Book/dracula.txt`

- touch: creates new files, modifies timestamp, changes access time for any file.

  - Ex1: `touch cats.txt`
  - Ex2: `touch Project.docx`
  - Ex3: `touch Grocery.lst`

- tr: used to translate a string of text from one language to another.

  - Ex1: `cat file.txt | tr '.' ','`
  - Ex2: `cat program.py | tr "[:space:]" '/t'`
  - Ex3: `cat file.py | tr -5 "[:space:]" ''`

- tree: displays directory path and files in each subdirectory.

  - Ex1: `tree cars`
  - Ex2: `tree Lab1`
  - Ex3: `tree Homework`

Question 2

answer each question:

- How to work with multiple terminals open?
- You can use applications such as Tilix to open multiple terminals, or if you're using the default terminal press CTRL+Shift+T.
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- How to work with manual pages?
- Open your terminal and use the `man` command in order to open the manual.
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- How to parse (search) for specific words in the manual page
- You can parse for specific words in the manual using the `grep` command.
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- How to redirect output (> and |)
- You can redirect output using the greater than or pipe symbols.
- Ex: $ echo line 1 > users $ cat users line 1
- How to append the output of a command to a file
    1. open terminal
    2. Append text to end of file using `echo` command: `echo 'text' >> filename`
    3. Append command output to end of file: commandname >> filename
    - How to use wildcards For copying and moving multiple files at the same time: Ex: file1 file2 file3 can be moved all at once using the * wildcard by typing `mv file*` in order to move all files that start with that same first ward.
- How to use brace expansion
    - For creating entire directory structures in a single command
    - Ex: `mkdir ~p subjects/{Math,Art,IT}/{Homework,Projects}`.