Final Linux Assignment

awk

Description:

awk is a scripting language that is used for processing and displaying text as well

Formula:

awk + options + {awk command} + file

Examples:

- How to print the first field of a file:

```
awk -F : {print $1} /etc/passwrd
```

- How to start printing from a different line

```
awk NR > 3 {print} /etc/passwrd
```

- How to change a filed to upper case

```
awk -F : {print topper($1)}
```

cat command

Description:

Cat command is 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 content of a file using absolute path

```
cat ~/Documents/todo.lst
```

- Display content of a file with line numbers

```
cat -n ~/Documents/todo.md
```

Cp Command

Description:

copies files/directories from a source to a destination

Formula

cp + files to copy + destination

Examples

- To copy directories using r function

```
tp -r + directory to copy +destination
```

- To copy a file

```
cp Downloads/pizza.png Pictures/
```

- To copy a directory using absolute path

```
cp -r ~/Downloads/wallpapers ~/Pictures/
```

cut command

Description:

cut command is 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 the 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 file excluding a given field

```
cut -d ',' --complement -s -f3 users.txt
```

Grep Command

Description

Grep is used to search text in given file. Grep works line by line

Formula:

grep + option + search criteria + file(s)

Examples

- search any line given that contains the word dracula in the file

grep 'peperoni' ~/Documents/pizza.txt

- enables case sensitivity

grep -i

- Matches only the given word (pattern) by itself.

grep -w

Head Command

Description

Displays top number of lines given file

Formula

head + option + file(s)

Examples

Display the first ten lines of a file

- head ~/Documents/movies/IT.txt

Display the first 5 lines of a file

- head -5 ~/Documents/movies/IT.txt Display the first 20 lines of a file
- head -20 ~/Documents/Book/dracula.txt

ls command

Description:

ls is used for listing the content of a given directory or the file/directory itself

Formula:

ls + option + directory to list

Example:

List all files inside current working directory including hidden files

- ls -a List all files inside given directory
- ls -a ~/Pictures List all the options of the ls command

- ls --help

man command

Description:

Describes/shows the Linux shell commands

Formula

man + command

Examples:

- Show all available pages of a command

man -a passwd

- open man page of passwd command

man passwd

- Shows the man page section of the passwd command

man -f passwd

mkdir

Description:

is used for creating single directories or multiple

Formula

mkdir + name of directory

Examples

- Creating a directory

mkdir wallpapers

- Creating a directory using absoloute path

mkdir ~/wallpapers/nightsky

- Creating a directory with a parent directory

mkdir -p wallpapers_1/final

mv

Description:

Moves and renames directories

Formula

mv + source + destination

Examples:

- Renaming files or directories

mv + file/directory to rename + new name

- To move a file from a directory to another using relative path

mv Downloads/map.pdf Documents/

- To move a file from one directory to another combining absolute path and relative path

mv Downloads /music1.docx /media/music/songs/

tac

Description:

Used for displaying the content of a file in reverse order

Formula:

tac + option + file(s) to display

Examples:

- Displaying the content of a file located in pwd

tac final.md

- Displaying the content of a file using absolute path

tac ~/Documents/movies.md

- Displaying the content using relative path

tac /home/downloads/movies.md

tail command

Description

tail commands displays last number of lines give by a file

Formula

tail + option + file

Examples

- Displays the last 10 lines of a file

```
tail ~/Documents/book/dracula.txt
```

- Display the last 5 lines of a file

```
tail -5 ~/Documents/Book/dracula.txt
```

- Display the last 30 lines of a file

```
tail -30 ~/Documents/Book/Dracula.txt
```

touch

Description

Used for creating files

Formula:

touch +file name

Examples

- Create a file

```
touch list
```

- Create a file using absolute path

```
touch ~/Downloads/games.txt
```

- Create several files

```
touch list_of_cars.txt document.txt
```

tr

Description

tr command is 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 program.py | tr "[:space:"] '\t'
```

- Translate tabs into space

```
cat file.py | tr -s "[:space:]" ' '
```

tree

Description

A recursive directory listing program that produces a depth-indented

Formula

tree + directory

Examples

- Tree list current directory

```
tree
```

- Tree list a directory

```
tree Downloads/
```

- Tree list using absolute path

```
tree ~/Downloads/
```

vim/nano

Description:

a text editor

Formula:

nano + file name vim + file name

Examples:

- Enter nano UI

```
nano
```

- Enter Vim UI

```
vim
```

Question 2

How to work with multiple terminals open?

Short cut is CTRL + Shift + N

How to work with manual pages?

To open the man page you type man and the linux command that you would like to read the manual pages for

How to parse (search) for specific words in the manual page

man -K keyword

How to redirect output (> and |)

'>' command saves the output to a file name on the other hand, the | applies the output to the next command

How to append the output of a command to a file

'>' use command with file name

How to use wildcards

Wildcards use letters and characters to specify a file name for searches ls -A *.txt *.py

For copying and moving multiple files at the same time

cp dir2/*.png dir2/*.png dir 3

How to use brace expansion (For creating entire directory structures in a single command) mkdir -p {audio/{aac,mp3},docs/{docx,pdf,xls}}