

Final Assignment

Question 1

awk

- Description: Awk is useful for manipulation of data files, text retrieval and processing
- Syntax: `awk + options + {awk command} + file`
- Examples:
 - First field: `awk -F';' '{print $1}' /etc/passwd`
 - Start from a line: `awk 'NR > 3 {print}' /etc/passwd`
 - Change field to uppercase: `awk -F: {print toupper($1)}`

cat

- Description: Concatenate files and print on the standard output
- Syntax: `cat + options + file`
- Examples:
 - See content: `cat /Documents/test.md`
 - See content with line numbers: `cat -n /Downloads/settings.py`
 - Show line ends: `cat -E /Documents/test.md`

cp

- Description: copy files and directories
- Syntax: `cp + option + file`
- Examples:
 - Copy a file: `cp /Downloads/settings.py /Documents/python/`
 - Copy multiple files: `cp /Downloads/settings.py /Downloads/menu.py /Documents/python/`
 - Copy directories recursively: `cp -r /Downloads/python/ /Documents/python-backup/`

cut

- Description: Remove sections from each line of files
- Syntax: `cut + option + file`
- Examples:
 - First field: `cut -d ';' -f1 /etc/passwd`
 - Replace delimiter: `cut -d ';' -f1,2 --output-delimiter=' is ' /etc/passwd`
 - Range of characters: `cut -c 1-7,16-23 database.txt`

grep

- Description: searches for patterns in each file
- Syntax: `grep + option + file`
- Examples:

- Ignore case: `grep -i 'toyota' /Documents/cars.txt`
- Show line number: `grep -n 'toyota' /Documents/cars.txt`
- Count number of matches: `grep -c 'toyota' /Documents/cars.txt`

head

- Description: Display beginning of a file, default 10
- Syntax: `head + option + file`
- Examples:
 - Show first 10 lines: `head /Documents/games.txt`
 - Show first line: `head -n 1 /Documents/games.txt`
 - Show first 20 characters: `head -c 20 /Documents/games.txt`

ls

- Description: List directory contents
- Syntax: `ls + option + directory`
- Examples:
 - List directories: `ls /Pictures`
 - Long-list directories: `ls -l /Pictures`
 - List and classify: `ls -F /Pictures`

man

- Description: Display the manual page for a command
- Syntax: `man + option + command`
- Examples:
 - Show manual page for command: `man ls`
 - Show description: `man -f ls`
 - Search for commands related to keyword: `man -k pattern`

mkdir

- Description: Creates new directories
- Syntax: `mkdir + options + directory`
- Examples:
 - Create directory: `mkdir newFolder`
 - Create nested directories: `mkdir -p newFolder/files`
 - Create multiple nested directories: `mkdir -p newFolder/files/{old,new}`

mv

- Description: Move or rename files
- Syntax: `mv + options + files`
- Examples:
 - Move a file: `mv /Downloads/games.txt /Documents/`
 - Rename a file: `mv /Downloads/unknown.txt /Downloads/games.txt`
 - Move all .txt files: `mv /Downloads/*.txt /Documents/txtFiles`

tac

- Description: Display a file in reverse
- Syntax: `tac + option + file`
- Examples:
 - Display file in reverse order: `tac file.txt`
 - Reversed with delimiter: `tac -s delimiter file.csv`
 - Concatenate and display files in reverse order: `tac file.txt file2.txt`

tail

- Description: Display last part of files
- Syntax: `tail + option + files`
- Examples:
 - Display last 10 lines: `tail ../file.txt`
 - Display last 5 lines: `tail -5 ../file.txt`
 - Display last line: `tail -1 ../file.txt`

touch

- Description: Create empty files
- Syntax: `touch + options + file`
- Examples:
 - Create new file: `touch newFile.md`
 - Create multiple files: `touch newFile.md ../newFile.txt`
 - Update access and modification times: `touch -c file.txt`

tr

- Description: Translate or delete characters
- Syntax: `tr + options + file`
- Examples:
 - Convert lowercase to uppercase: `cat assignment.txt | tr 'a-z' 'A-Z'`
 - Delete delimiter: `cat /etc/passwd | tr ';' ''`
 - Delete vowels: `echo 'remove vowels' | tr -d 'aeiou'`

tree

- Description: Display directory structure as a tree
- Syntax: `tree + options + directory`
- Examples:
 - Display current directory tree: `tree`
 - Display tree up to 2 depth levels: `tree -L 2`
 - Display only directories: `tree -d`

Question 2

How to work with multiple terminals open?

Press add terminal right or bottom in tilix. (Top left buttons)

How to work with manual pages?

Use the man command along with the command name. Press Q to exit.

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

Use -k option to search for keywords.

How to redirect output (> and |)

The ">" allows to redirect output to a file. "|" can be used to pipe output from one command to another

How to append the output of a command to a file

Use ">>" to append output to a file

How to use wildcards

The "*" matches any character, the "?" matches a single character

For copying and moving multiple files at the same time

Use cp for copying files and mv for moving

How to use brace expansion

Brace expansion generates sequences. For example, `mv file{1,2,3} destination`, enables moving multiple files named "file1, file2, file3" to be moved.

For creating entire directory structures in a single command

Use mkdir -p to create parent directories along with the target directory. For example, `mkdir -p parent/child/grandchild`