Notes 2:

chsht

chsht

Notes 3:

1. Linux terminal

1.1. two ways to access:

- terminal emulator
- linux terminal

1.1.1. Bash shell is the most common shell used.

Some commands: date (shows date) - cal (calendar) - clear (clear screen) - uname (system info)

1.1.2. SUDO - APT - COMMAND:

Sudo: Root Permisions APT: Advanced package tool commands: - update: updates information about every source configured previously. - upgrade: update the program installed before. - install : install a program located in a source configured previously. - remove: uninstall programs - purge: uninstall programs erasing residual files. - search: search a package in the repositories.

1.1.3. Navigating using CLI

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- pwd: shows you where are you working.
- ls : list all files (including directories) in the current directory.
- cd : lets you navigate through directories.
```

cheatsheet

Note 4:

2. Creating files and directories:

mkdir : create directories touch : create files rm: delete files/directories

3. Moving and copying files and directories:

mv : moves and renames directories cp : copies files or directories

4. Working with links:

ln : Create a hard link ln -s : Create a soft link.

5. Using wildcards:

5.1. * Wild Card:

Matches anything and nothing and matches any number of characters. example: ls *.txt will match any .txt file.

5.2. ? Wild Card:

Matches precisely one character.

5.3. [] Wild Card:

matches a single character in a range of values. example: ls*[0-9]* will match all files whose name has at least one number.

5.4. Using Brace Expansion:

It is not considered a wildcard but allows you to generate arbitrary string to use with commands. example: mkdir -p music/{jazz,rock}

note5:

6. Cat command:

Displays the content of one or two files. cat + file1 + file2

7. Tac Command:

It is the same thing as CAT but it displays the content of the file in reverse order. tac + file1 + file2

8. More Command:

A Pager pgram used for displaying the content of a text file one page at a time. more + file

9. Less command:

Same thing as more command. The only difference is that "less" uses less memory , because "more" loads the entire file and "less" does not. less + file

10. head command:

Displays the top N number of lines of a file. By default prints 10. head + option + file example: head -5 file.txt displays the first 5 lines.

11. tail command:

Displays the last N number of lines of a file. By default prints 10. tail + option + file example: tail -5 file.txt displays the last 5 lines.

12. cut command:

Used to extract a specific section of each line of a file. cut + option + file example: cut -d : -f1 /etc/passwd Shows all the users using delimiters.

13. Paste command:

Used to join files horizontally in columns. paste + option + file

14. Sort command:

sort the content of the file in alphabetical order , reverse , by number or by month. sort + option + file example: sort -r file.txt sort the file in reverse order.

15. wc command:

used to print the number of lines , characters and bytes in a file. wc + option + file example: wc -c file.txt displays the number of bytes in the file

16. tr command:

Translate or delete characters from standard output. output | tr + option + set + set example: cat file.txt | tr '.' ',' file.txt replace a period by a comma.

17. diff command:

Compares files and display the differences between them. diff + option + f1 + f2

18. Grep command (Holy Grail)

Command used to match a string pattern from a file or standard output.

grep + option + pattern + file example: grep "ip" file.txt search for lines that contains "IP".

19. Input and Output

to save the output of a file: ls > file.txt save the output and append it ls >> file.txt

The pipe "|" allows you to redirect the standard output of a command to the standard input of another. example: man ls | grep "human-readable"

note 6:

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20. Vim Text editor:

https://vim.rtorr.com "CheatSheet"

21. Tar Program:

Creates a file by combining files an directories into a single file. create: tar + option + archive name + files to add extract: tar + options + file to extract

22. CPIO Program ::

Creates an archive , restore files from an archive , or copies a directory hierarchy. requires a list of files. example: ls | cpio -ov > archive.cpio

23. File ownership:

chown command used for changing group owner. chown user:group file example: chown john file.txt

chmod : used to change permissions on files and directories. chmod + permissions file/directory

chmod

note7

The /etc/passwd file contains all information about users.

24. Users:

To add an user:

sudo adduser "username"

To delete an user:

sudo userdel -r "username"

25. Groups:

to add a group:

sudo addgroup "groupname"

to delete a group:

sudo delgroup "groupname"

note 8

26. How to begin:

Insert the following line in any text editor: #!/bin/bash echo : used as a COUT in c++ or print in python. read : used as a CIN in c++.

27. If/else statement:

if: starts the condition being tested then: starts the portion of code specifying what to do if the condition evaluates to true: else: Starts the portion of code specifying what to do if the condition evaluates to false

if command then command else command fi.

28. Case statement:

Uses one variable to specify multiple values and matches a portion of the script to each value. example:

> case $answer in 1) command 2) command 3) command esac

29. Looping:

while loop: Do the command while the condition is true. while [conditon] do command done

until loop: Do the command while the condition is false. until [conditon] do command done

for loop: Repeats the commands between do and done a specified number of times. Every time the script carries out the commands in the loop , a new value is given to a variable.

for $variable in 1 2 3 4 5 .. N do commands done.