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STUDY GUIDE

Command name

date

Description

is used to display the current time in the given FORMAT, or set the system date.

Syntax

```
date + OPTIONS
```

Example

- Display time described by string
    - `date -d`
- Display the last modification time of FILE
    - `date -r`
- Print or set coordinated universal time (utc)
    - `date -u`

Command name

uname

Description

Is used to print certain system information

Syntax

```
uname + OPTIONS
```

Example

- Print all information in the following order
    - `uname -a`
- Print the operating system
    - `uname -o`
- Print the kernel name
    - `uname -s`

Command name

du

Description

Summarize disk usage of the set of FILEs, recursively for directories.

Syntax

```
du + OPTIONS + FILE
```

Example

- print sizes in human readable format
    - ```du -h ~/Documents/```
- scale sizes by SIZE before printing them
    - ```du -B Documents/```
- skip directories on different file systems
    - ```du -x Documents/```

Command name

free

Description

Can be used to show total memory, used memory, free memory, shared memory, and available memory about RAM and swap space.

Syntax

```
free + OPTIONS
```

Example

- show output in bytes
    - ```free -b```
- show total for RAM + swap
    - ```free -t```
- show human-readable output
    - ```free -h```

Command name

echo

Description

Is used to display a line of text that is passed in as an argument.

Syntax

`echo + OPTIONS`

Example

- Do not output a trailing newline.
  - `echo -n`
- Enable interpretation of backslash escape sequences
  - `echo -e`
- Disable interpretation of backslash escape sequences
  - `echo -E`

Command name

apt

Description

Is a command line package manager and provides commands for searching and managing as well as querying information about packages.

Syntax

`apt + OPTIONS`

Example

- search in package descriptions
  - `apt search`
- install packages
  - `apt install`
- update list of available packages
  - `apt update`

Command name

pwd

Description

Print the name of the current working directory.

Syntax

`pwd + OPTIONS`

Example

- print the value of $PWD if it names the current working directory
  - `pwd -L`
- print the physical directory, without any symbolic links

- `pwd -P`

Command name

cd

Description

Is used to change the shell working directory.

Syntax

`cd + DESTINATION`

Example

- to go to your home directory
    - `cd $home`
- to go to your previous directory
    - `cd`
- to go to your documents file
    - `cd ~/Documents/`

Command name

ls

Description

List information about the files

Syntax

`ls + OPTIONS + FILENAME`

Example

*to list contents of a directory or given file itself

- `ls ~/Documents/`
- to list all the files inside a current working directory
    - `ls -a`

Command name

tree

Description

Is a recursive directory listing command or program that produces a depth-indented listing of files

Syntax

```
tree + DESTINATION
```

Example

- All files are listed
  - `tree -a`
- List directories only.
  - `tree -d`
- Print the full path prefix for each file.
  - `tree -f`

Command name

man

Description

Is used to display the user manual of any command that we can run on the terminal

Syntax

```
man + OPTIONS + SECTIONS
```

Example

- search for text in all pages
  - `man -K`
- use manual pages from other systems
- `man -m`

Command name

mkdir

Description

Is used for creating a single directory or multiple directories

Syntax

```
mkdir + DIRECTORY NAME
```

Example

- create a directory in a present working directory
  - `mkdir wallpapers`
- create a directory in a different directory
  - `mdkir wallpapers/ocean`

- create multiple directories
  - `mdkir wallpapers/cars wallpapers/sunsets`

Command name

touch

Description

this command is used to create files

Syntax

`touch + FILE NAME`

Example

- to create a file called flowers
  - `touch flowers`
- to create several files
  - `touch cars sunsets`

Command name

rm

Description

this command is used to remove files and also directories only with (-r)

Syntax

`rm + FILE NAME`

Example

- remove a file names sunsets
  - `rm sunsets`
- remove a file with confirmation
  - `rm -i sunsets`
- remove a non empty directory
  - `rm -r Downloads/games`

Command name

cp

Description

Copy a source to a destination, or multiple sources

Syntax

`cp + OPTIONS + SOURCE + DESTINATION`

Example

- to copy a directory to a destination
    - `cp -r Downloads/Books Documents`
- to copy a file
    - `cp Downloads/wallpaper.jpeg Pictures/`

Command name

mv

Description

Is used to move and rename directories

Syntax

`mv + SOURCE + DESTINATION`

Example

- to move a file from a directory to another
    - `mv Downloads/cat.jpeg Pictures/`
- to rename a file
    - `mv dracula.jpeg alucard.jpeg`
- to move and rename a file in one command
    - `mv Downloads/dracula.jpeg Pictures/alucard.jpeg`

Command name

stat

Description

Display file or file system status.

Syntax

`stat + OPTIONS + FILE`

Example

- display file system status instead of file status
    - `stat -f ~/Wallpapers`

Command name

Wildcards (*,?,[])

Description

wildcards represent letters and characters used to specify a file name for searches

Command name

Brace expansion

Description

Is used to create a whole directory structure in a single command

Example

```
mkdir -p Videos/{dogs,cats}/{breed,adoption,names}
```

Command name

cat

Description

Concatenate files to standard output

Syntax

```
cat + OPTIONS + FILE
```

Example

- display the content of a file located in the pwd
    - `cat horses.jpeg`
- display the content of a file with line numbers
    - `cat -n ~/Documents/horses`

Command name

head

Description

Print the first 10 lines of each FILE to standard output.

Syntax

```
head + OPTIONS + FILE
```

Example

- display the first 10 lines of a file

- head ~/Documents/resume.txt
  - display the first 5 lines of a file
    - head -5 ~/Documents/resume.txt

Command name

tail

Description

Print the last 10 lines of each FILE to standard output

Syntax

`tail + OPTIONS + FILE`

Example

- display the last 10 lines of a file
  - tail ~/Documents/resume.txt
- display the last 5 lines of a file
  - tail -5 ~/Documents/resume.txt

Command name

cut

Description

Print selected parts of lines from each FILE to standard output

Syntax

`cut + OPTIONS + FILE`

Example

- display a list of all users from your system
  - cut -d ":" -f1 /etc/passwd
- display a list of all users from your system with their login shell
  - cut -d ":" {print f1,7} /etc/passwd

Command name

tr

Description

Translate, squeeze and/or delete characters from standard input

Syntax

```
Standard Input | tr + OPTION + SET + SET
```

Example

- Translate one character to another
  - `cat file.txt | tr ',' '.'`

Command name

paste

Description

write lines consisting of the sequentially corresponding lines from each file

Syntax

```
paste + OPTIONS + FILE
```

Example

- merge two files
  - `past cake.lst guests.lst`
- merge two files using a different delimeter
  - `paste -d ":" cake.lst guests.lst`
  -

Command name

wc

Description

is used for printing the number of lines, characters and bytes in a file

Syntax

```
wc + OPTIONS + FILE
```

Example

- display a number of characters in a file
  - `wc -m ~/Downloads/Books/HarryPotter`
- display the number of lines in a file
  - `wc -l ~/Downloads/Books/HarryPotter`
- Display the number of words in a file
  - `wc -w ~/Downloads/Books/HarryPotter`

Command name

grep

Description

Is used to search a text in a given file

Syntax

```
grep + OPTIONS + search criteria + FILE
```

Example

- search for any line that contains the word "harry" in the given file
  - `grep 'harry' ~/Downloads/Books/HarryPotter.txt`
- search for any lime that contains the word "harry" regardless of the case
  - `grep -i 'harry' ~/Downloads/Books/HarryPotter.txt`