cat >Filename.txt - Create
cat Filename.txt - Read (works for multiple files)
cat Filename1.txt Filename2.txt >Filename3.txt (Replaces Filename3 Content with that of Filename1 & 2)
cat Filename1.txt Filename2.txt | sort > Filename3.txt (Sorts (1 and 2) in 3 alphabetically)
cat Filename1.txt >> Filename2.txt (Adds content of 1 at the end of 2)
cat >> Filename1.txt (add New text to an already existing file.)
ls usb = usb devices

cp - Copy
cp [option] file Destination
-f = force -r = copy Directory
-p = Permissions -b = backup
cp *.txt Folder (copy .txt's to Folder)

less etc/passwd

Uname (returns OS)
Uname -r (OS version) = echo $(Uname -r)
Uname -a (returns all info)

chgrp owner file

.sh 2>file stderr redirect

date (Date + Time)
date "+%T" (Time only)
date "+%d" (returns day) also works with T, m, y
date "+%m - %D - %Y" (returns it in own format)
date --date = "3 days ago" (returns date of 3 days ago)

d = day number
D = month = h
T = time
M = month
Y = year

Pipes (geef command als input aan andere command)
ls -l | more
cat file.txt | grep "word" | tee file2.txt | wc -l
(tee = stop content in file.)
Left → Right

Usermode = Programma runnen
Kernelmode = modus om hardware resources te gebruiken
userspace = Memory waar User processen runnen
Kernelspace = Waar de kernel draait "het hart van de OS"
(0) Stdin = input stream, accepts text as input
(1) Stdout = Text output from command to shell, output
(2) Stderr = Error messages are sent through standard error stream
Standard Streams
Compiler = compiles programma naar assembly programma
assembler = translates assembly prog. naar Machine Code
Linker = tool om alle stukken van het programma aan elkaar te linken voor de uitvoering
Loader = load alles in het geheugen en dan is het programma uitgevoerd.
Boot Partition: bevat Kernel, root-systeem in PC-memory and GRUB
partitions on system: Fdisk -l
Rescue Partition: Partition om het systeem terug naar Fabrieksinstelling en te doen. Voor het geval van systeemissue.

chmod "options" "permissions" Filename (change permissions for a file)
example:
chmod u=rwx,g=rx,o=r myFile ← user can r,w,x, group can read, x, others = r
u = user
g = group
o = other
r = read
w = write
x = execute
-R (recursively) = for all files in directory
0 = no permission 1 = execute 2 = write 4 = read

chown root file1.txt file2.txt
change owner for file1 and file2 to root

root file*
all files that start with file....

to show file permission, use: ls -l filename
returns something like: -rwx rw- r-- 1 root root 3072 Jan 19 20:11 Filename.exe
- filetype (- = file, d = directory, l = symbolic link)
- rwx = File owner permission
- rw- = Filegroup
- r-- = others
- 1 = Hardlinks
- root = owner
- root = group owner
- 3072 = size in blocks
- Jan 19 20:11 = Last modified
- Filename.exe = filename

BASH SCRIPTING
start: #!/bin/bash ~/Name
var = Hello
$var = Hello
$USER
$$ = PID
$1 - $9 = Arguments

Get IP: hostname -I
Login via ssh: sudo service ssh status (check if active)
ssh localhost → yes → password from server
1. ssh username@ipadress or ssh username@DomainName
2. Password
show key's (Public and Private): ls .ssh
Stop Connection using $exit

PS -aux
df: taakbeheer
$ps -aux (show processes)
root 1 0.0 0.0 22568 9760 19.10 init
- root = Username
- 1 = Process id
- 0.0 = CPU
- 0.0 = MEM
- 22568 = VSZ
- 9760 = RSS
- 19.10 = Proces Start time
- init = Actual Proces

Kill Processes
Kill ProcessID
Force Kill:
Kill -KILL ProcessID

Grep (if file contains certain word)
grep "keyword" Filename
Pgrep "Processname (i.e vim, nano)"
-i = Case insenseitivity
-c = count
grep -r "keyword: zoekt directory door naar keyword

sudo systemctl start rsync, systemctl enable rsync
nano /etc/rsyncd.conf
path = destination_directory
hosts allow = Source_IP_ADDRESS
hosts deny = *
list = true
uid = root
gid = root
read only = false
sudo systemctl restart rsync
rsync -avz Source_dir dest_ip
(install rsync -y)
Backup

find
Search directory: Find / -type d -name "directory name"
Search file: Find / -type f -name "filename and extension"
Search by extension: Find / -type f -name '*.extension name'
-iname for case insensitive search
-not to find files that dont contain this extension.
extension Amount: Find / -type f -name '*.extension' | wc -l