DOS

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DOS

- Disk operating system
- Interpreter between user and computer
- Starting DOS
  - Start -> All Programs -> Aux programs -> Command Prompt
- Start -> "cmd" -> Enter
- At file Explorer -> (Shift + right-click)

DOS commands

- Internal commands
  - memory resident
  - ver, vol, date, time, cls, dir, md, cd, path, rd, copy con, type, copy, del, ren, prompt
- External commands
  - disk resident
  - xcopy, move, fc, doskey, mem, more, sort, find, attrib, deltree, edit, tree
- Capital or small letters are treated the same

help

```
C:>help
```

```
C:\Users\Philipp Moritzer>help
Geben Sie HELP "Befehlsname" ein, um weitere Informationen zu einem bestimmten
Befehl anzuzeigen.
ASSOC          Zeigt Dateierweiterungszuordnungen an bzw. ändert sie.
ATTRIB         Zeigt Dateiattribute an bzw. ändert sie.
BREAK          Schaltet die erweiterte Überprüfung für STRG+C ein bzw. aus.
BOOTCFG        Legt Eigenschaften zur Steuerung des Startladenvorganges in der
               Startdatenbank fest.
CACLS          Zeigt Datei-ACLs (Access Control List) an bzw. ändert sie.
CALL           Ruft eine Batchdatei von einer anderen Batchdatei aus auf.
CD             Zeigt den Namen des aktuellen Verzeichnisses an bzw. ändert
               diesen.
CHCP           Zeigt die aktive Codepagenummer an bzw. legt sie fest.
CHDIR          Zeigt den Namen des aktuellen Verzeichnisses an bzw. ändert
               es.
CHKDSK         Überprüft einen Datenträger und zeigt einen Statusbericht an.
CHKNTFS        Zeigt die Überprüfung des Datenträgers beim Start an bzw.
```

- Similar to Unix man command
- Lists commands

Example:

```
help dir
```

Dos commands

- ver: version number
- vol: volume label
- date: display/set current system date
- time: display/set current system time
- cls: clear screen
- dir: list of directories and files
  - Switch: /R /P /W /B /L /A
- Path: defines a list of directories for external commands
  Add directory to Path:

```
PATH=%PATH%:c:\test
```

- rd: delete empty directory
- md: make a new directory
- type: see the contents of an existing file
- del/erase: delete a file
- ren: change the file name
- tree: display directory structure
- prompt=$$: changes prompt symbol
- echo hi > hi.txt: Creates file hi.txt with content hi
- echo hi >> hi.txt: Appends hi to file hi.txt
- copy con hi.txt: Entered Text will be saved to file hi.txt until interrupted by CTRL+Z
- move: moves file(s)
- fc: file compare
- doskey: remember command history
- mem: display total available memory
- atrrib: see attributes of a file
- notepad: start dos editor
- more: see page by page
- sort: arrange data in an order
- find: display lines that has the string

PATH, Redirection

```
> PATH
> PATH=%PATH%;c:\tmp REM adds c:\temp
> echo %PATH%
> echo aa > aa.txt
> echo aaa >> aa.txt
> type aa.txt 2> err.txt
```

```
> type aa.txt err.txt > a3.txt
> copy aa.txt + err.txt a4.txt
```

Batch files

- File that has a collection of dos command and control commands
- extension is either .bat or .cmd Example:

```
dir %*
^z
```

ls is usable in the dos afterwards

```
C:\>ls

C:\>dir
 Volume in Laufwerk C: hat keine Bezeichnung.
 Volumeseriennummer: 8EA7-1D70

 Verzeichnis von C:\

16.03.2021  13:29    <DIR>          Daum Games
15.05.2021  00:28    <DIR>          Intel
01.06.2021  16:04             6 ls.cmd
18.05.2021  13:42    <DIR>          Microsoft VS Code
07.12.2019  18:14    <DIR>          PerfLogs
20.05.2021  14:31    <DIR>          Program Files
13.04.2021  11:52    <DIR>          Program Files (x86)
03.08.2020  18:36    <DIR>          Python38
24.03.2021  16:46    <DIR>          Riot Games
20.08.2020  16:01    <DIR>          Users
06.02.2021  06:26    <DIR>          VMs
20.05.2021  14:53         1.884.665 wifidata123.txt
15.05.2021  00:27    <DIR>          Windows
               2 Datei(en),      1.884.671 Bytes
              11 Verzeichnis(se), 203.016.183.808 Bytes frei
```

Repeat loop

```
@echo off
FOR /L %%i IN (1,1,3) DO(
    FOR /L %%j IN (1 1 3) DO(
        echo i = %%i, j=%%j
    )
)
```

Comparison Unix/doc commands

Operation	DOS/Windows Command (case insensitive)	Unix/linux Command (case sensitive)
Help about a command	<Commnad> /? Or help <command>	man <command>
Set date	date	date
Set time	Time	date
Copy files	Copy <src> <dst>	cp <src> <dst>
Move files/directory	Move <src> <dst>	mv <src> <dst>
Make Directory	md <dir>	mkdir <dir>
Change Directory	Cd <dir>	cd <dir>
Remove Directory	rd <dir> deltree <dir>	rmdir <dir> rm –rf <dir>
See a file on screen	Type <filename>	cat <filename>
See a file page by page	More <filename>	more <filename>
Know about login as	Whoami	whoami, id
Change file modes	Attrib	chmod
Compare two files	Comp <f1> <f2>	diff <f1> <f2>
Delete a file	Del <file>	rm <file>
See the directory content	Dir	ls
Rename a file	Ren <src> <dst>	mv <src> <dst>

Network commands

```
> ipconfig // shows network adapter configuration
> ping 10.10.54.75 // sends ICMP packet to IP Adress and display if there is a
response
> telnet 10.10.54.75 // establishes telnet connection with destination
> ftp 10.10.54.75 > establishes ftp connection with destination
- cd public_html
- pwd
- asc
- put my.html
- bi
- mput *.jpg
- dir
- get aa.gif
- !dir
- quit
```