

Linux Plus for AWS and DevOps



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- ▶ What We Learn
- ▶ Getting Help
- ▶ Text Editors
- ▶ File Management

What is Linux?

- Free
- Open-Source
- OS



Acik kaynakli bir isletim sistemi.
Ucretsiz

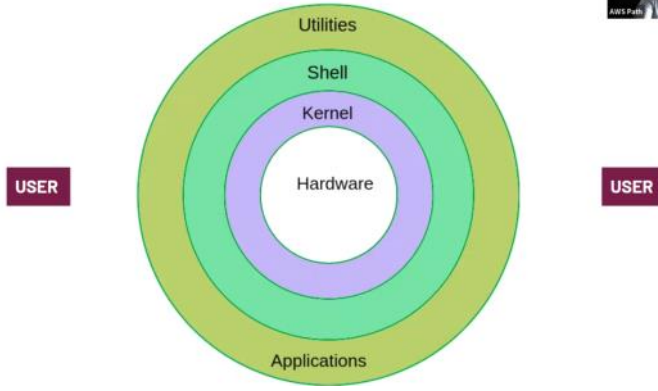
Acik kaynakli yani gelistircileri, yazilimcilar destek saglayabiliyorlar.

iki temel distro var ve linuxun isletim sistemi de bu iki distro uzerinde. Bunlar debian ve centos. Tum open source olup kaynaklar ucretsiz olmak zorunda degil.

Tum ilsemilerin kod uzerinden yapiliyo olmasi diger sistemlerden linuxu ayiran bir ozellik. Bu bir yandan da zor olan kismi.

Bizim icin devopsu olarak onemli olan konu arka taraftaki siyah ekranda olan kodlari anlayabilmek, yazabilmek ve karsilastigimiz kodda ne yapmak istedigini degerlendirebilmek .

Components of Linux



Biz user olarak bir shell kullanıyor olacağız.
Git bash bizim shell aracımız. Buraya komutları giriyoruz. O da kernel aracılığıyla hardware kodları uygulamış oluyor.
Grafikal yüzde yaptıklarımız, arka tarafta shellde girdiğimiz komutları çağırıp hardware ile bunu iletişim halinde tutuyor.
Biz cloudcu-devops olarak bu grafik arayüzden cikip kod aracılığıyla anayüzde çalışıyor olacağız.

What is Linux Distributions



Distro dediğimiz şey linuxun türleri manasında kullanıyoruz.
Linuxte altyapı sahipliği yapan bir çekirdek var, bir kernel var. Bunun üzerinde farklı yazılım setleri var. Mesela ubuntu, debian vs aynı kernel üzerine inşa edilmiş.
Bu distroların paket yöneticileri değişebilir.
Görsel tasarım öğeleri farklıdır.
Biz en çok ubuntu, debian, fedora ve centos üzerinden ilerlemiş olacağız.
Ubuntu debian tabanından türemiş.
Fedora ise amazon 23 üzerinden türemiş, geliştirilmiş.



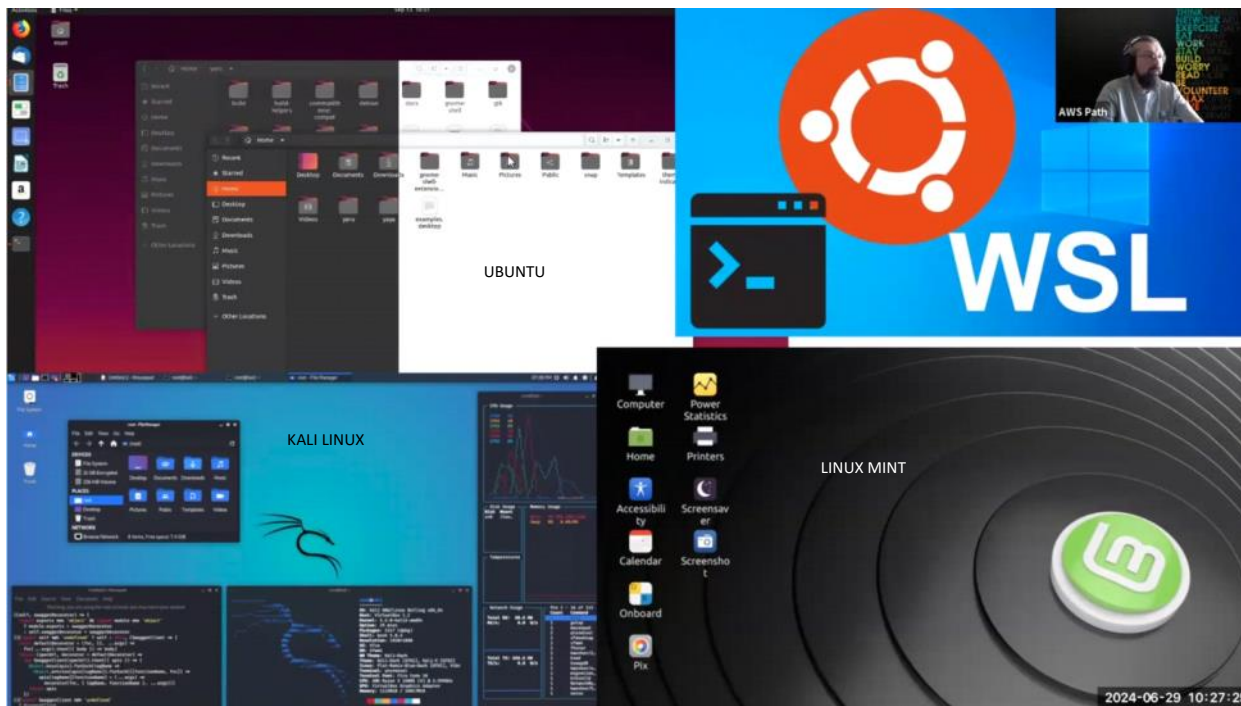
Popular Linux Distributions



Markette popüler olan distrolar bunlar.
Redhat, suse, ubuntu ve debian en popülerleri. Çokça karşımıza çıkacak.
Suse almanlar tarafından geliştirilmiş. Business için daha çok kullanılır.
Redhat güvenlik tarafında sıkça kullanılıyor.

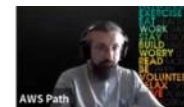


Using Linux on Different Platforms



▶ Linux Alternatives

Linux distros on Virtual Machines



MacOS / Windows

<https://www.virtualbox.org/wiki/Downloads>

ORACLE®
VM
VirtualBox




VMware Player

<https://www.vmware.com/products/workstation-player/workstation-player-evaluation.html>

Linux Alternatives

Linux distros on Virtual Machines



<https://ubuntu.com/download/desktop>



<https://www.debian.org/download>

CLARUSWAY®
WAY TO REINVENT YOURSELF

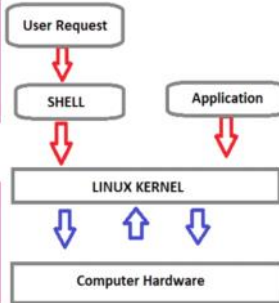


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What is SHELL?

Shell is a program that receives the user's commands and gives them to the operating system to process and displays the output.

Bash (Bourne Again SHell) is an enhanced version of Steve Bourne's first Unix shell application, and serves as the shell program on most Linux systems.



Burada iki kavram onemli:

CLI: command line interface acilimi. Komutlari siyah ekran uzerinden girecegimiz kisim. Shell bir program. Kullanici komutlarini alan ve isletim sistemlerine onlari process eden program. Kernel araciligiyla hardwarea ulasir. Ayni islem applicationlar uzerinden de yapilabiliyor.

BASH bourne again shell demek acilimi.

What is SHELL?

The standard Linux shell is both a command-line interpreter and a programming language.

The command prompt for Linux generally shows the current user, the current host, and the appropriate directory.

At the end of the prompt list, the \$(dollar sign) signifies the current user being unprivileged, and the device is ready to receive feedback.

The input is sent for parsing and execution to the interpreter.

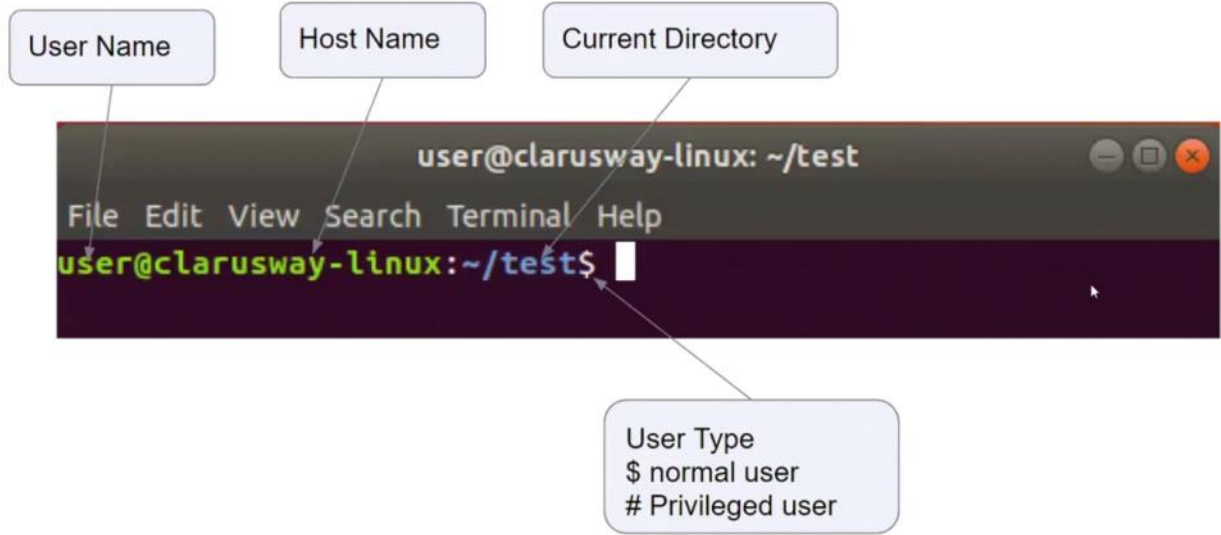


Shell biz komut satiri yorumlayicisi saglar. Sudo yum, mkdir, rmdir vs gibi.

Bir de programlama dili saglar.

Bash scriptte programlar yazacagiz. Orada programlama dilini okullaniyor olacagiz ayni pythondaki if, else vs dili igibi burada da bir dil kullaniyor olacagiz. 7 session sonrasindaki gidecegimiz yol aslinda bir bash script yazabilme kabiliyetine sahip olma noktasidir. Is ilanlarinda da bu sikca yer alir.

Linux promptunda bir user adi goruyoruz, host adi ve bulundu dugun directory adi goruyoruz. \$ isareti varsa kullanicinin ayrıcalikli bir user olmadigini anliyoruz. Biz ayrıcalikli kullananlardan da bahsedecemiz.



► Basic Shell Commands

COMMAND	DESCRIPTION
pwd	show current path
ls	lists directory contents
cd	change (current) directory
mkdir	create a new directory
rmdir	delete an empty directory
touch	create a file
rm	delete a file

Pwd mevcut pathi gösterir
 Ls mevcut icinde bulunduğumuz dizinin icini gösterir
 Cd directoryler arasi gecis
 Mkdir yeni bizi olusturma
 Rmdir bos diziyi silmek icin
 Touch yeni bir file olusturur
 Rm file silmek icin

COMMAND	DESCRIPTION
cp	copy a file to another location
mv	move a file to another location
cat	show file contents
echo	print message to screen
clear	clear the terminal screen

Cp baska br lokasyona file kopyalamak icin kullanilir
 Mv dosyayi baska bi yere tasimak icin ve rename yapmak icin
 Cat file icinde yazani okumak icin
 Echo yazmak icin file icine
 Clear terminali temizlemek icin



write down a command-line to see the help text that matches each argument
try `showthedocs` for explaining other languages

```
grep -o
exam df-h
• {} sed-i
• for
• file echo-e
• true
• cut passwd-e
• tar tar-xvzf
• tar
• find . -type f -print0
• ssh -i keyfile -f -W -L 1234:www.google.com:80 host
• git log --graph --abbrev-commit --pretty=oneline origin..mybranch
```

Kodlar ve ne ise yaradıklarıyla ilgili bilgi bulabileceğimiz bir site.
Ayrıntılı bilgi bulabiliriz

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Getting Help

Table of Contents

- Man Pages
- Info Pages
- `whatis` command
- `apropos` command
- `--help` option

► Man Pages

A man page (short for manual page) is a form of **software documentation** usually found on a **Unix or Unix-like** operating system.

If we **install a package** to do some task, the **man page** for that package will typically be **installed** at the same time. This gives us the ability to take a look at that documentation and make sure that we're using it in a manner consistent with its design.

The man page for a particular command is invoked by **man command**.

Software dokuman formatına bir sayfa getirir.

Komutlarla alakalı tüm bilgileri bize sunar.

Kullanımı man <command> şeklinde ya da ls man diyip man sayfasına gidebiliriz tüm kodlar için

\$ man ls

```
ls(1)                  user command                  ls(1)
NAME
  ls - list directory contents
SYNOPSIS
  ls [OPTION]... [FILE]...
DESCRIPTION
  List information about the files (the current directory by default). Sort entries alphabetically if none of
  -r, --reverse nor --sort is specified.
  Mandatory arguments to long options are mandatory for short options too.
  -a, --all
    Do not ignore entries starting with .
  -A, --almost-all
    Do not list implied . and ..
  --author
    with -l, print the author of each file
  -b, --escape
    print &-style escapes for non-graphic characters
  --block-size=SIZE
    scale sizes by SIZE before printing them; e.g., '--block-size=M' prints sizes in units of 1,048,576
    bytes, see SIZE format below
  -C, --ignore-backups
    do not list implied entries ending with ~
  -t, --sort=TYPE
    sort by, and show, time (time of last modification of file status information) with:
    -s, show time and sort by name; otherwise: sort by time, newest first
  -d, --list-directory
    list entries by columns
  --color=WHEN
    control the output; WHEN can be 'always' (default if omitted), 'auto', or 'never'; more info below
  -d, --directory
    list directories recursively and their contents
```

► Info Pages

Info pages are **additional documentation** with more robust capability in **detail**. Info pages normally provide more detailed information about a command than its respective man page.

The info page for a particular command is invoked by **info command**.

Manin çok daha ayrıntı dokümantasyon haline getirilmiş versiyonu. Aklımıza gelebilecek her bilgi mevcut.

Kullanımı ise info <command> şeklinde

► Info Pages

\$ info echo

CLARUSWAY

```
echo (builtin)          info: viewing text
NAME
  echo - print a line of text
SYNOPSIS
  echo [OPTION]... [STRING]...
DESCRIPTION
  This is shell builtin and built-in 'echo' function, using an
  interpreter rather than a program. It is a builtin so it can be used
  in scripts without the overhead of a separate program. It is also
  faster than the standard echo command.
  The program escapes the following backslash characters:
  \a       - produce a bell
  \b       - backspace
  \c       - produce no further output
  \e       - escape
  \f       - form feed
  \n       - newline
  \r       - carriage return
```

► whatis command

whatis

display one-line manual page names.

```
clarusway@DESKTOP-UN6T2ES:~$ whatis ls
ls (1)                  - list directory contents
clarusway@DESKTOP-UN6T2ES:~$ whatis pwd
pwd (1)                 - print name of current/working directory
clarusway@DESKTOP-UN6T2ES:~$ whatis mv
mv (1)                  - move (rename) files
clarusway@DESKTOP-UN6T2ES:~$
```

Cok basic seviyede komutların görevlerini öğrenmek için whatis <command> kullanıyoruz

▶ apropos command



Kodu hatırlıyoruz ama eksik hatırlıyoruz mesela. O zaman apropos kullanıyoruz

apropos search the manual page **names** and **descriptions**.

```
clarusway@DESKTOP-UN6T2ES:~$ apropos pwd
pwd (1)          - print name of current/working directory
pwdx (1)         - report current working directory of a process
unix_chkpwd (8)  - Helper binary that verifies the password of the current user
clarusway@DESKTOP-UN6T2ES:~$
```

▶ --help Option



Help man page kadar tüm kodları vermez daha çok kullanılan kodları ve görevlerini çıkarır.

--help gives a **short explanation** about how to use the command and a **list of available options**.

```
clarusway@DESKTOP-UN6T2ES:~$ ls --help
Usage: ls [OPTION]... [FILE]...
List information about the FILES (the current directory by default).
Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.
-a, --all                do not ignore entries starting with .
-A, --almost-all        do not list implied . and ..
--author                 with -l, print the author of each file
-b, --escape             print C-style escapes for nongraphic characters
--block-size=SIZE        scale sizes by SIZE before printing them; e.g.,
                          '--block-size=M' prints sizes in units of
                          1,048,576 bytes; see SIZE format below
-B, --ignore-backups     do not list implied entries ending with ~
-c                       with -lt: sort by, and show, ctime (time of last
                          modification of file status information);
```

3

Text Editors

▶ Vi/Vim Editor



Linuxte siyah ortamda eklenmesi gereken dosyalar için mecbur text editorlerini kullanmak durumundayız.

Vi Vimin biraz daha geliştirilmiş hali.

Birçok linux distrosunda bu vi/vim mevcut

Daha az sistem kaynağı kullanıyor". Bu sebepten daha çok tavsiye ediliyor.

Aynı zamanda birçok programlama dilini ve dosya formatını destekliyor.

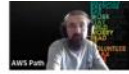
Linux dünyasında oldukça kullanılan bir editor.

- Vi is a text editor **originally created for the Unix** operating system.
- Vim (Vi IMproved) as its name suggests, is a **clone of Vi** and offers more features than Vi.

The reasons why we should use Vi/Vim editor.

- Vim is available on most linux distro's.
- Vim Uses Less Amount of System Resources.
- Vim Supports All Programming Languages and File Formats
- Vim is Very Popular in the Linux World

► Vi/Vim Editor



- Vim is a powerful text editor used in CLI (command line interface).
- Vim is an editor to create or edit a text file.

Command Mode

- When you start Vim, you are **placed in Command mode**. In this mode, you can move across the screen, delete text and copy text.

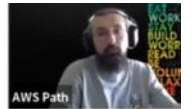
Insert Mode

- You cannot write text in command mode. To write text into a file, there is a dedicated insert mode. When you want to write something on a file, you must enter the insert mode.

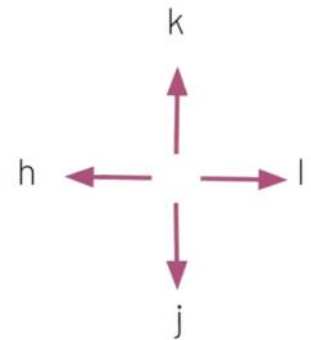


CLI daki(siyah ekrandaki) en guclu yazi editoru
Vim ile yeni bir dosya olusturabiliriz ya da var olan dosyayi editleyebiliriz.
Vim actigimizda Command Mode ile birlikte geliyor. Bu modda teksti silmek, asagi yuari hareket etmek, kopyalamak vs mumkun.
Fakat yeni bir text yazmak isterseek o zaman Insert Modea gecis yapmamiz gerek
Insert moda gecmeden command modda birsey yazamiyoruz.
Insert moddan cikmak icin command moda gecip :wq ile cikis yapiyoruz.

► Vi/Vim Editor



Vim Command	Description
i	Enter insert mode
Esc	Enter command mode
x or Del	Delete a character
X	Delete character is backspace mode
u	Undo changes
Ctrl + r	Redo changes
yy	Copy a line
dd	Delete a line
p	Paste the content of the buffer
o	insert a blank line under the current cursor position.
:%s/foo/bar/g	Search and replace all occurrences
Esc + :w	Save changes
Esc + :wq or Esc + ZZ	Save and quit Vim



► Nano Editor

GNU nano is a small and friendly text editor.
Besides basic text editing, nano offers features like:

- undo/redo
- syntax coloring
- interactive search-and-replace
- auto-indentation
- line numbers
- word completion

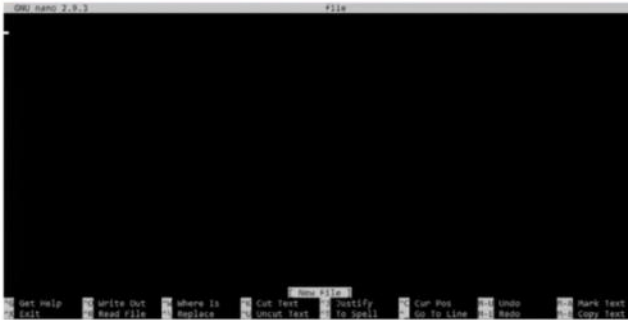


Vime nazaran daha karmasik olmayan bir editor.
Text ekranı acildiginda direkt yazilacak ekranı veriyor.

► Nano Editor

- Unlike vi, nano is a **modeless editor**, which means that you can start typing and editing the text immediately after opening the file.
- To open an existing file or to create a new file, type nano followed by the file name.

```
$ nano filename
```



Nano Command	Meaning
Ctrl G	Get Help
Ctrl X	Exit
Ctrl O	Write Out
Ctrl R	Read File
Ctrl W	Where Is
Ctrl \	Replace
Ctrl K	Cut Text
Ctrl U	Uncut Text
Ctrl J	Justify
Ctrl T	To Spell
Ctrl C	Cur Pos
Alt U	Undo
Alt E	Redo

4-1 ► Files

► Files



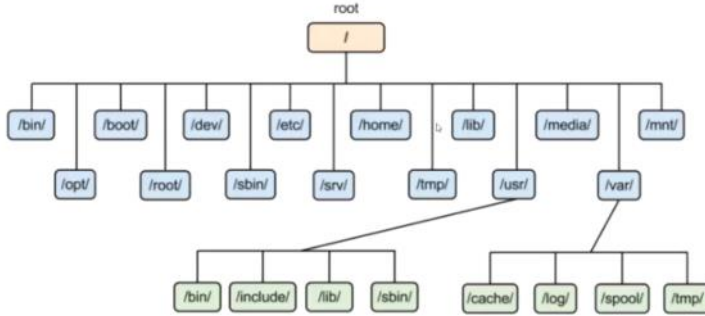
- On a Linux system, everything is a file.
- A Linux system makes no difference between a file and a directory, since a directory is just a file containing names of other files.
- The tree of the file system starts at the trunk or slash, indicated by a forward slash (/). This directory, containing all underlying directories and files, is also called the root directory or "the root" of the file system.

Linux sistemi üzerinde hersey bir dosya.
Linux sisteminde dosyayla dizini ayiran bir fark yok aslında.
Dosya da directoryde aynı sey aslında ama biz dizinin icine giriyoruz.
/ ile roota gidiyoruz.

► ROOT Directory (/)



İlerleyen derslerde yeni volumelar ekleyeceğiz. Şuan default olarak kullanıyoruz. Ec2 nin içinde 2-3 tane EBS olacak. EBSlerde /mnt/ nin içinde olacaklar. Hangi kullanıcılara sahip olduğumu görmek için /etc/ ye bakiyor olacağız. Birden fazla kullanıcı ekleyeceğiz. İlerde yine/bin/ klasörüne girip orada bazı ayarlamalar yapacağız. Ayrıntıları kendimiz search edebilirsek çok istifade edebiliriz.



► ROOT Directory (/)



/bin	Essential command binaries
/boot	Static files of the boot loader
/dev	Device files
/etc	Host-specific system configuration
/home	Users' home directories
/lib	Essential shared libraries and kernel modules
/media	Mount point for removable media
/mnt	Mount point for mounting a filesystem temporarily
/opt	Add-on application software packages
/sbin	Essential system binaries
/srv	Data for services provided by this system
/tmp	Temporary files
/usr	Secondary hierarchy
/var	Variable data

► Files



Masaüstündeki dosyalar link file olarak geliyor.

Symbol	Meaning
-	Regular file
d	Directory
l	Link
c	Character Device File
s	Socket File
p	Named Pipe
b	Block Device

-rw-----	Regular File
drwxr-xr-x	Directory File
lrwxrwxrwx	Link File
crw-rw-r--	Character Device File
brw-rw-r--	Block Special File
srw-rw-rw-	Socket File
prw-rw-rw-	Named Pipe File

▶ Viewing file properties



Dosyaların renklerinden ne manaya geldiklerini anlayabiliriz.

ls

On most Linux versions ls is aliased to color-ls by default. This feature allows to see the file type without using any options to ls.

Color	Meaning
Blue	directories
Red	compressed archives
White	text files
Pink	images
Cyan	links
Yellow	Devices
Green	Executables
flashing red	broken links

```
clarusway@DESKTOP-UN6T2ES:~$ ls
archive.tar  images.jpg  root.tar
clarusway.txt  linux.txt  root.txt
clarusway@DESKTOP-UN6T2ES:~$
```

4-3

Working with File Contents

head

output the first ten lines of a file.

Bir dosyanın ilk 10 satirini gormek istiyorsak head komutunu kullaniyoruz.

```
clarusway@DESKTOP-UN6T2ES:~$ head /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
clarusway@DESKTOP-UN6T2ES:~$
```

head -n

output the first n lines of a file.

Head -n (herhangi bir sayı) girdigimizde o kadar satiri gosterir

```
clarusway@DESKTOP-UN6T2ES:~$ head -5 /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
clarusway@DESKTOP-UN6T2ES:~$
```


tail

output the last ten lines of a file.

Tail son 10 satiri gosterir.

```
clarusway@DESKTOP-UN6T2ES:~$ tail /etc/passwd
dnsmasq:x:107:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
landscape:x:108:112::/var/lib/landscape:/usr/sbin/nologin
sshd:x:109:65534::/run/ssh:/usr/sbin/nologin
pollinate:x:110:1::/var/cache/pollinate:/bin/false
clarusway:x:1000:1000:::/home/clarusway:/bin/bash
john:x:1002:1002:john,room,work,home,other:/home/john:/bin/bash
oliver:x:1003:1003:oliver,room_1,work_1,home_1:/home/oliver:/bin/bash
walter:x:1004:1004:aws solution architect:/home/walter:/bin/sh
aaron:x:1001:1001:aaron,,,:/home/aaron:/bin/bash
james:x:1005:1009:james,,,:/home/james:/bin/bash
clarusway@DESKTOP-UN6T2ES:~$
```

tail -n

output the last n lines of a file.

Tail -n (herhangi bir sayi) yazdigimiz zaman ise yazilan sayi kadar son satiri gosterir.

```
clarusway@DESKTOP-UN6T2ES:~$ tail -5 /etc/passwd
john:x:1002:1002:john,room,work,home,other:/home/john:/bin/bash
oliver:x:1003:1003:oliver,room_1,work_1,home_1:/home/oliver:/bin/bash
walter:x:1004:1004:aws solution architect:/home/walter:/bin/sh
aaron:x:1001:1001:aaron,,,:/home/aaron:/bin/bash
james:x:1005:1009:james,,,:/home/james:/bin/bash
clarusway@DESKTOP-UN6T2ES:~$
```

cat

Display a file on the screen.

catle filein icindeki texti ekrana getirip okuyabiliyoruz.

```
clarusway@DESKTOP-UN6T2ES:~$ cat quotes.txt
1. Cherish your visions and your dreams as they are the children of your soul, the blueprints of your ultimate achievements.
2. Start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible.
3. The difficult we do immediately. The impossible takes a little longer.
4. We are what we repeatedly do. Excellence, then, is not an act, but a habit.
clarusway@DESKTOP-UN6T2ES:~$
```

cat

One of the basic uses of cat is to concatenate files into a bigger (or complete) file.

Bircok dosyayi ayni anda ekranda gosterebilir.

```
clarusway@DESKTOP-UN6T2ES:~$ echo this is file1 > file1
clarusway@DESKTOP-UN6T2ES:~$ echo this is file2 > file2
clarusway@DESKTOP-UN6T2ES:~$ echo this is file3 > file3
clarusway@DESKTOP-UN6T2ES:~$ cat file1
this is file1
clarusway@DESKTOP-UN6T2ES:~$ cat file2
this is file2
clarusway@DESKTOP-UN6T2ES:~$ cat file3
this is file3
clarusway@DESKTOP-UN6T2ES:~$ cat file1 file2 file3
this is file1
this is file2
this is file3
clarusway@DESKTOP-UN6T2ES:~$ cat file1 file2 file3 > all
clarusway@DESKTOP-UN6T2ES:~$ cat all
this is file1
this is file2
this is file3
clarusway@DESKTOP-UN6T2ES:~$
```


cat

You can use cat to create **flat text files**.

Cat komutuyla bir dosyanın içine yazdırabiliriz.
Burada cat ile yazırdığı dosyayı kekranda okutmus.

```
clarusway@DESKTOP-UN6T2ES:~$ cat > winter.txt
It is very cold today!
clarusway@DESKTOP-UN6T2ES:~$
```

The **Ctrl d** key combination will send an **EOF (End of File)** to the running process ending the cat command.

more

view (but not modify) the contents of a text file one **screen at a time**.

Ekkranda dosyanın belirli içeriğini görmek için kullanıyoruz.

```
clarusway@DESKTOP-UN6T2ES:~$ more quotes.txt
1. Cherish your visions and your dreams as they are the children of your soul, the blueprints of your ultimate
achievements.
2. Start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible.
3. The difficult we do immediately. The impossible takes a little longer.
4. We are what we repeatedly do. Excellence, then, is not an act, but a habit.
clarusway@DESKTOP-UN6T2ES:~$
```

more -n

This option specifies an integer which is the screen size (**in lines**).

Burada da satır sayısını belirleyip görebiliriz.

```
clarusway@DESKTOP-UN6T2ES:~$ more -2 quotes.txt
1. Cherish your visions and your dreams as they are the children of your soul, the blueprints of your
ultimate achievements.
--More-- (32%)
```

less

Similar to more, less command allows you to view the contents of a file and navigate through file. The **main difference** between more and less is that **less** command is **faster** because it **does not load the entire file at once**.

Less more komutunun tam tersi. Daha hızlı olacak şekilde daha az satır getirmek istediğimizde kullanıyoruz.

```
clarusway@DESKTOP-UN6T2ES:~$ less quotes.txt
1. Cherish your visions and your dreams as they are the children of your soul, the blueprints of your ultimate
achievements.
2. Start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible.
3. The difficult we do immediately. The impossible takes a little longer.
4. We are what we repeatedly do. Excellence, then, is not an act, but a habit.
quotes.txt (END)
```

tac

concatenate and print files in reverse.

```
clarusway@DESKTOP-UN6T2ES:~$ cat count.txt
one
two
three
four
five
clarusway@DESKTOP-UN6T2ES:~$ tac count.txt
five
four
three
two
one
clarusway@DESKTOP-UN6T2ES:~$
```

Cat icerigi normal dizimlerden tac tersten dizimiyor.

Tac dosyanin icerisinde bir oynama yapmaz. Yani yandaki resimde count textini cat ile normal okutup ardından tac ile pokutmus olmasi bir sonrasi cat komutunu etkilemiyor. Count texti hala ayni sekilde one two diye duzgun bir sekilde yazilir.

Tac anlik gosterim yapar RAM uzerinden.

eger tersten bir sekilde texti kaydetmek istiyorsak bunu yeni bir text adi ile atamamiz gerek

4-4

Searching Files

find

search for files in a directory hierarchy.

```
find [starting-point...] [expression]
```

Find directoryler icerisinde dosyalari arayabilmemizi sagliyor.

Find . Dedigimizde nokta bulunduğun dizimi ifade eder.

Find . -name clarusway.txt komutu bize clarusway textini bulunduğum dizimde ara manasinda

find

Find all the files whose name is clarusway.txt in a current working directory.

```
clarusway@DESKTOP-UN6T2ES:~$ find . -name clarusway.txt
./clarusway.txt
clarusway@DESKTOP-UN6T2ES:~$
```

find

Find all the files whose name is clarusway.txt under /home directory.

Burada ise nokta yerine bulunduğum dizimi yazmış /home olarak

```
clarusway@DESKTOP-UN6T2ES:~$ find /home -name clarusway.txt
/home/clarusway/clarusway.txt
clarusway@DESKTOP-UN6T2ES:~$
```

find

Find all the files whose name is clarusway.txt and contains both capital and small letters in /home directory.

-iname büyük küçük harf ayırımı yapmadan aramak için kullanıyoruz

```
clarusway@DESKTOP-UN6T2ES:~$ find /home -iname clarusway.txt
/home/clarusway/Clarusway.txt
/home/clarusway/clarusway.txt
clarusway@DESKTOP-UN6T2ES:~$
```

find

Find all directories whose name is movies in /home directory.

-type d ise tipi directory olan manasinda kullaniyoruz.

```
clarusway@DESKTOP-UN6T2ES:~$ find /home -type d -name movies
/home/clarusway/movies
clarusway@DESKTOP-UN6T2ES:~$
```

find

Find all txt files in a directory.

Type -f ile de file dosyalarini ariyoruz. Fakat uzantisi .txt olsun seklinde tirnakla belirtmis

```
clarusway@DESKTOP-UN6T2ES:~$ find . -type f -name "*.txt"
./Clarusway.txt
./clarusway.txt
./count.txt
./linux.txt
./quotes.txt
./winter.txt
clarusway@DESKTOP-UN6T2ES:~$
```

grep

The grep, which stands for "global regular expression print," is used to search text.

Dosyalar icindeki textlerde arama yapmak icin grep kullaniyoruz.

grep [options] pattern [files]

Options	Description
-c	This prints only the number of lines that match a pattern
-h	Do not display the filenames headers.
-i	Ignores, case for matching
-l	Displays list of a filenames only.
-n	Display the matched lines and their line numbers.
-v	This prints out all the lines that do not matches the pattern

grep

The grep searches the given file for lines containing a match to the given strings or words.

Cat ile once texti goruntuledim.

Daha sonra bu text icindeki start kelimesinin oldugu satiri aldım grep ile

```
clarusway@DESKTOP-UN6T2ES:~$ cat quotes.txt
1. Cherish your visions and your dreams as they are the children of your soul, the blueprints of your ultimate
achievements.
2. Start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible.
3. The difficult we do immediately. The impossible takes a little longer.
4. We are what we repeatedly do. Excellence, then, is not an act, but a habit.
clarusway@DESKTOP-UN6T2ES:~$ grep "Start" quotes.txt
2. Start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible.
clarusway@DESKTOP-UN6T2ES:~$
```

grep -n

Returns the result of lines matching the search string.

-n bize hangi satirda oldugunu dondurur.
-c ise bize kac tane satirda gectigini dondurur.

```
clarusway@DESKTOP-UN6T2ES:~$ grep -n "Start" quotes.txt
2: Start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible.
```

grep -c

Returns the number of lines in which the results matched the search string.

```
clarusway@DESKTOP-UN6T2ES:~$ grep -c "Start" quotes.txt
1
clarusway@DESKTOP-UN6T2ES:~$
```

grep -v

Returns the result of lines not matching the search string.

Grep -v ile startin gecmeidig satirlari aratmis oldu yan resimde

```
clarusway@DESKTOP-UN6T2ES:~$ cat quotes.txt
1. Cherish your visions and your dreams as they are the children of your soul, the blueprints of your ultimate achievements.
2. Start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible.
3. The difficult we do immediately. The impossible takes a little longer.
4. We are what we repeatedly do. Excellence, then, is not an act, but a habit.
clarusway@DESKTOP-UN6T2ES:~$ grep -v "Start" quotes.txt
1. Cherish your visions and your dreams as they are the children of your soul, the blueprints of your ultimate achievements.
3. The difficult we do immediately. The impossible takes a little longer.
4. We are what we repeatedly do. Excellence, then, is not an act, but a habit.
clarusway@DESKTOP-UN6T2ES:~$
```