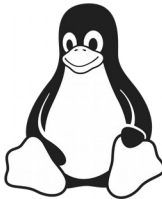


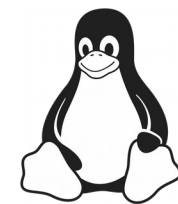
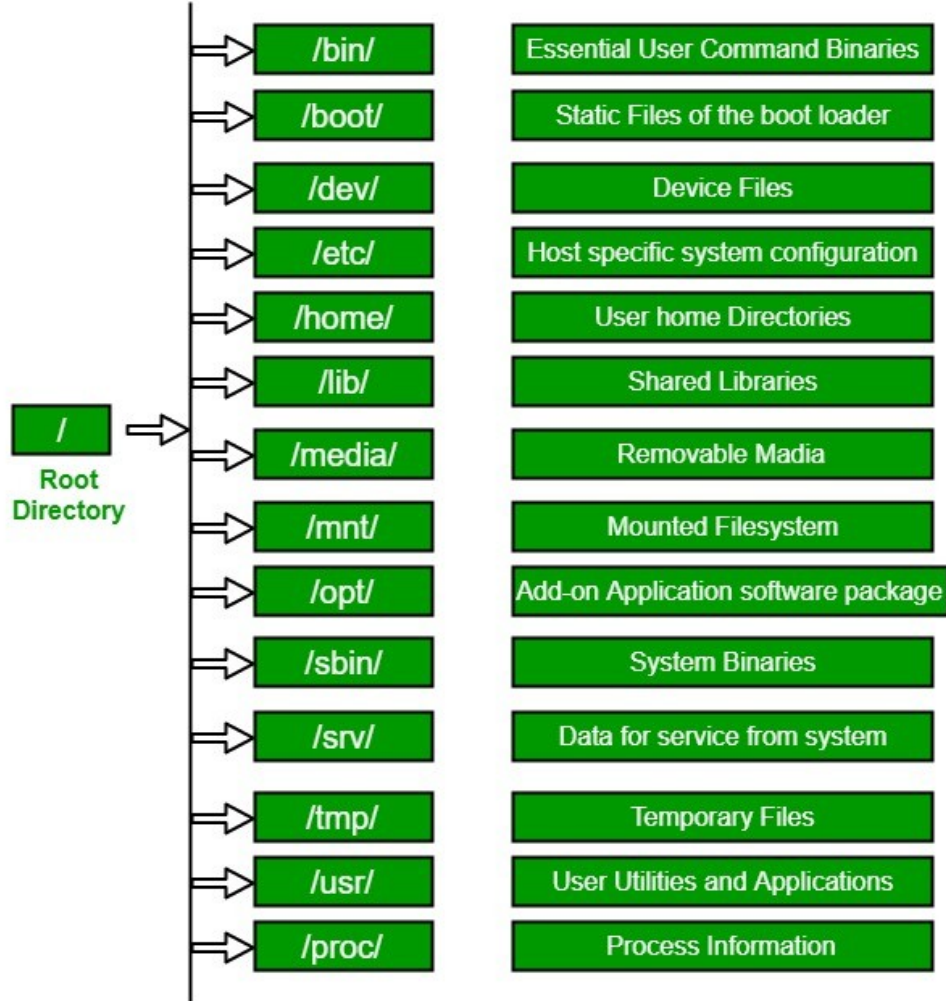


GNU/Linux 101



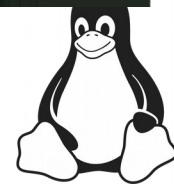
File Hierarchy







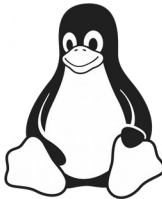
```
File Edit View Search Terminal Help
AUCC - LINUX101:/$ ls -la
total 2097264
drwxr-xr-x 24 root root 4096 Eki 12 14:24 .
drwxr-xr-x 24 root root 4096 Eki 12 14:24 ..
drwxr-xr-x 2 root root 4096 Eki 5 20:51 bin
drwxr-xr-x 4 root root 4096 Eki 12 14:25 boot
drwxrwxr-x 2 root root 4096 Ağu 28 13:26 cdrom
drwxr-xr-x 20 root root 4580 Eki 13 2019 dev
drwxr-xr-x 124 root root 12288 Eki 12 14:26 etc
drwxr-xr-x 3 root root 4096 Ağu 28 13:29 home
lrwxrwxrwx 1 root root 33 Eki 5 20:51 initrd.img -> boot/initrd.img-4.15.0-65-generic
lrwxrwxrwx 1 root root 33 Eki 12 14:24 initrd.img.old -> boot/initrd.img-4.15.0-58-generic
drwxr-xr-x 21 root root 4096 Ağu 28 13:41 lib
drwxr-xr-x 2 root root 4096 Tem 25 2018 lib64
drwx----- 2 root root 16384 Ağu 28 13:24 lost+found
drwxr-xr-x 3 root root 4096 Ağu 28 14:29 media
drwxr-xr-x 2 root root 4096 Tem 25 2018 mnt
drwxr-xr-x 3 root root 4096 Eyl 19 23:29 opt
dr-xr-xr-x 286 root root 0 Eki 13 2019 proc
drwx----- 10 root root 4096 Eyl 19 23:13 root
drwxr-xr-x 28 root root 800 Eki 13 20:11 run
drwxr-xr-x 2 root root 12288 Eki 8 20:58/sbin
drwxr-xr-x 13 root root 4096 Eyl 15 16:21 snap
drwxr-xr-x 2 root root 4096 Tem 25 2018 srv
-rw----- 1 root root 2147483648 Ağu 28 13:24 swapfile
dr-xr-xr-x 13 root root 0 Eki 13 2019 sys
drwxrwxrwt 18 root root 4096 Eki 13 20:15 tmp
drwxr-xr-x 10 root root 4096 Tem 25 2018 usr
drwxr-xr-x 14 root root 4096 Tem 25 2018 var
lrwxrwxrwx 1 root root 30 Eki 5 20:51 vmlinuz -> boot/vmlinuz-4.15.0-65-generic
lrwxrwxrwx 1 root root 30 Eki 12 14:24 vmlinuz.old -> boot/vmlinuz-4.15.0-58-generic
```





/ Kök Dizini (Root)

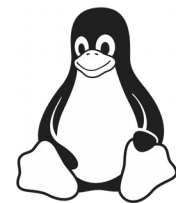
- En üst dizin





/home Home dizini

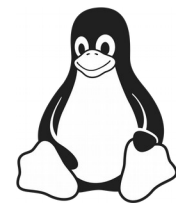
- Kullanıcılar bulunur.
- Örn *home/berkay*
- *~* kullanıcının home dizinini ifade eder.
- Örn **\$cd ~/Desktop**





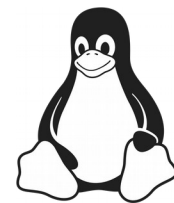
/media Media dizini

- Çıkarılabilir aygıtlar burada bulunur.
- (HDD USB gibi)



/var Variable Dizini

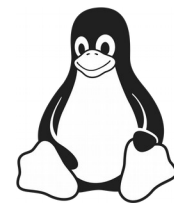
- Veritabanı dosyaları gibi birçok değişken tutulur.
- System kernel logları ve birçok log burada tutulur.





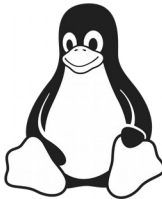
/root Root(Admin) Dizini

- Yöneticinin home dizinidir.
- Yetki gerektirir



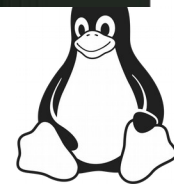


Permissions(İzinler)





```
File Edit View Search Terminal Help
AUCC - LINUX101:/$ ls -la
total 2097264
drwxr-xr-x 24 root root 4096 Eki 12 14:24 .
drwxr-xr-x 24 root root 4096 Eki 12 14:24 ..
drwxr-xr-x 2 root root 4096 Eki 5 20:51 bin
drwxr-xr-x 4 root root 4096 Eki 12 14:25 boot
drwxrwxr-x 2 root root 4096 Ağu 28 13:26 cdrom
drwxr-xr-x 20 root root 4580 Eki 13 2019 dev
drwxr-xr-x 124 root root 12288 Eki 12 14:26 etc
drwxr-xr-x 3 root root 4096 Ağu 28 13:29 home
lrwxrwxrwx 1 root root 33 Eki 5 20:51 initrd.img -> boot/initrd.img-4.15.0-65-generic
lrwxrwxrwx 1 root root 33 Eki 12 14:24 initrd.img.old -> boot/initrd.img-4.15.0-58-generic
drwxr-xr-x 21 root root 4096 Ağu 28 13:41 lib
drwxr-xr-x 2 root root 4096 Tem 25 2018 lib64
drwx----- 2 root root 16384 Ağu 28 13:24 lost+found
drwxr-xr-x 3 root root 4096 Ağu 28 14:29 media
drwxr-xr-x 2 root root 4096 Tem 25 2018 mnt
drwxr-xr-x 3 root root 4096 Eyl 19 23:29 opt
dr-xr-xr-x 286 root root 0 Eki 13 2019 proc
drwx----- 10 root root 4096 Eyl 19 23:13 root
drwxr-xr-x 28 root root 800 Eki 13 20:11 run
drwxr-xr-x 2 root root 12288 Eki 8 20:58/sbin
drwxr-xr-x 13 root root 4096 Eyl 15 16:21 snap
drwxr-xr-x 2 root root 4096 Tem 25 2018 srv
-rw----- 1 root root 2147483648 Ağu 28 13:24 swapfile
dr-xr-xr-x 13 root root 0 Eki 13 2019 sys
drwxrwxrwt 18 root root 4096 Eki 13 20:15 tmp
drwxr-xr-x 10 root root 4096 Tem 25 2018 usr
drwxr-xr-x 14 root root 4096 Tem 25 2018 var
lrwxrwxrwx 1 root root 30 Eki 5 20:51 vmlinuz -> boot/vmlinuz-4.15.0-65-generic
lrwxrwxrwx 1 root root 30 Eki 12 14:24 vmlinuz.old -> boot/vmlinuz-4.15.0-58-generic
```

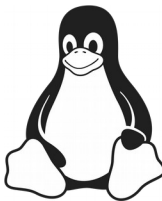


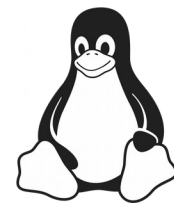
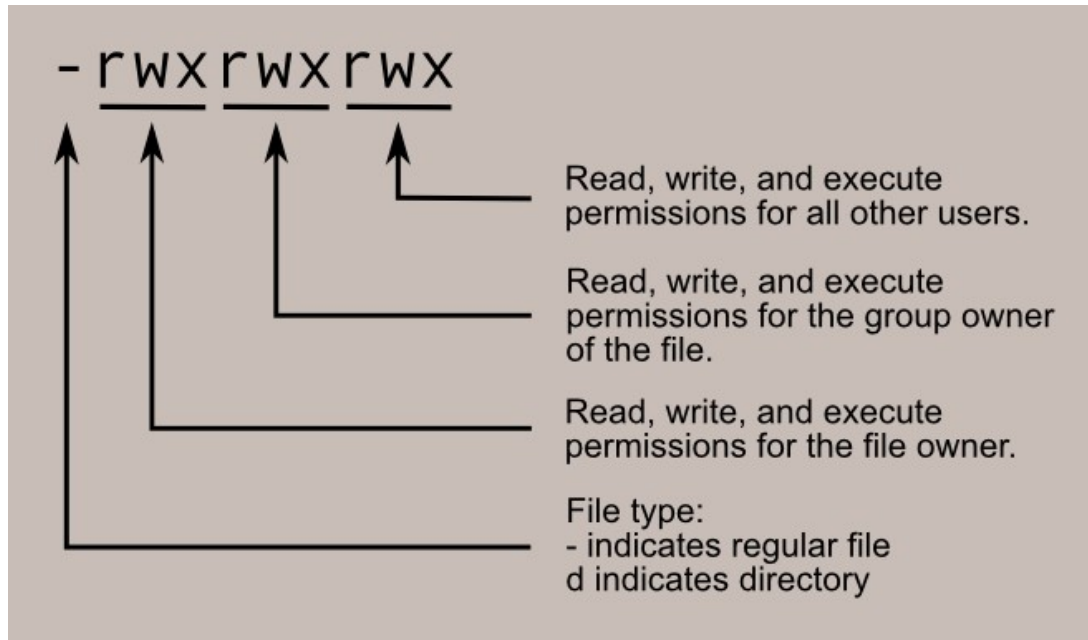


1. İzinler
2. O dosya ya da dizine bağlı bağlantı sayısı
3. Dosya sahibi
4. Dosya sahibinin bulunduğu grup
5. Boyutu (bytes)
6. Değiştirilme tarihi
7. Dosya ismi

```
-rw-r--r-- 2 saydin users 309908 May 28 13:12 dene.xpm  
drwx----- 3 saydin users 4096 May 27 2002 Desktop
```

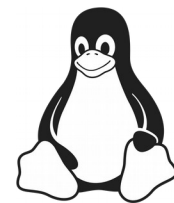
1 2 3 4 5 6 7





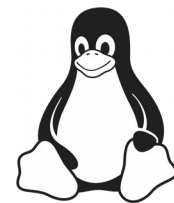
İzin kodları ?

- Her bir boşluk için izin varsa **1** yoksa **0** yazılır.
- Örn `rw-rwxrwx` = `110 111 111` = `677`
- `r—r-x-w-` = ?
- Herkese izin vermek için ?
- Kimseye izin verilmeyen bir dosya ?



İzin kodları ?

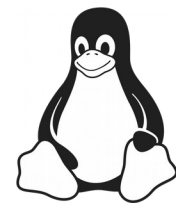
- Herkese izin vermek için → 777
- Kimseye izin verilmeyen bir dosya →
Mümkündür, 000





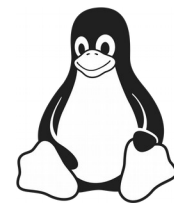
Peki izin nasıl verilir ?

- `$chmod <izin kodu> dosya ismi`
- Örnek `$chmod 777 patates`



Kısa bir deneme-tekrar

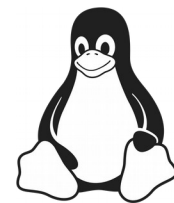
- \$cd /
- / içindeyken ~ kullanarak Desktop içine **sebzeler** klasörü oluşturun ve içine de **domates.txt** oluşturun.(**cd** kullanmadan)
- **ls** ile oluşup oluşmadığını kontrol edin.
- **domates.txt** deki tüm yetkileri kaldırın. Hepsi “-----” olsun.
- **cd** ile o klasöre gidip **domatesi** silelim.(Dikkat!)



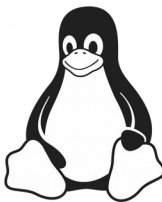


Kısa bir deneme-cevap

- `$cd /`
- Sırayla:
- `mkdir ~/Desktop/sebzeler`
- `touch ~/Desktop/sebzeler domates.txt`
- `ls ~/Desktop/sebzeler`
- `chmod 000 ~/Desktop/sebzeler`
- `cd ~/Desktop/sebzeler`
- `sudo rm domates.txt`

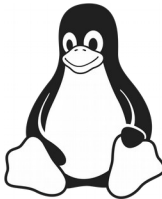


```
rm somefile  
somefile: Permission denied  
sudo rm somefile
```



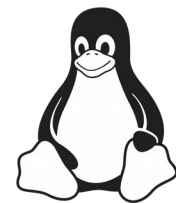


Terminalde Eğlenceli İşler



Çoklu Dosya Oluşturma

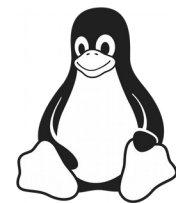
- touch dosyaadı{1,2,3}
- mkdir klasöradı{1,2,3}
- touch dosyaadı{1..5}
- rm,ls,mv
- * ve ?





Find Komutu

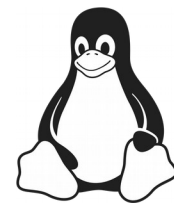
- Dosya aramak için kullanılır
- \$man find





Find Komutu

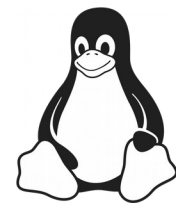
- -name,iname,type, !
- Örnek \$find /home -name aucc.txt





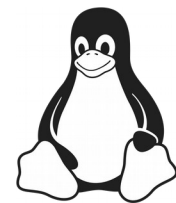
AND parametresi &&

- Yazılan iki işlemi de sırayla yapar
- Örn \$ls / && echo -e “\n” && ls ~/Desktop



;

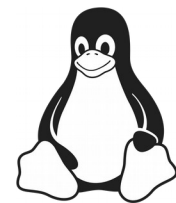
- Yazılan iki işlemi de yapar ama exit code beklemez.
- Örn `ls /root ; echo -e “\n” ; ls ~/Desktop`
- `ls /root && echo -e “\n” && ls ~/Desktop`





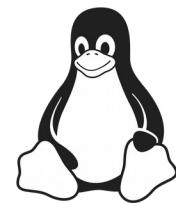
|| Veya Operatörü

- Yazılan iki işlemi de yapar ama exit code bekler.
- Örn `ls ~/Desktop || ls /root`
- `Ls root || ls ~/Desktop`



< , > , >> Operatörleri

- Dosyalardan okuyup input olarak almak ya da çıkan outputu dosyaya yazmak için kullanılır
- Örn `man ls > deneme.txt`
- `$echo "en alttayım" >> deneme.txt`

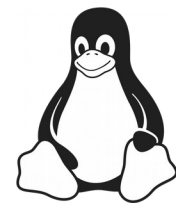




| Pipe

- Bir komutun outputunu diğerine input olarak vermeyi sağlar

Örn \$cat salatalık | less





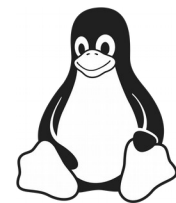
Daha Fazla Komut



grep

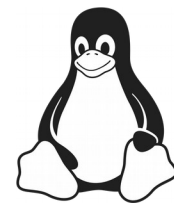
- Aramak için kullanılan bir komut.
- `grep <aranacak kelime> <dosya ismi>`
- Örn `$grep "is" file.txt`

→ `$man grep`



grep

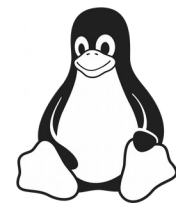
Option	Function
-v	Shows all the lines that do not match the searched string
-c	Displays only the count of matching lines
-n	Shows the matching line and its number
-i	Match both (upper and lower) case
-l	Shows just the name of the file with the string



cut

- Sonucu kesmeyi sağlar
- `cut <parametre> <dosya ismi>`
- Örnek `$cut -c 1,2,3 file.txt`

→ `$man cut`

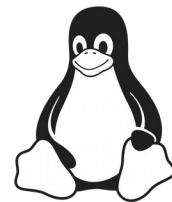




cut

- -b(bytes) , -c(chars) , -d(delimiter), -f(specify)

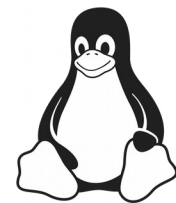
→ \$man cut



sort

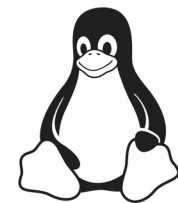
- Sıralamak için kullanılır
- `sort <dosya ismi>`
- Örnek `$sort file.txt`

→ `$man sort`



sort

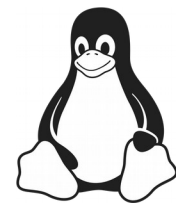
Option	Function
-r	Reverses sorting
-n	Sorts numerically
-f	Case insensitive sorting





head

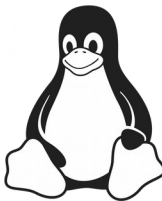
- Belirlenen kadar ilk n satırı yazdırır
- Default 10 satır
- Örnek `$head -n 5 file.txt`



tail

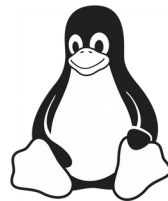


- Belirlenen kadar son n satırı yazdırır
- Default 10 satır
- Örnek `$tail -n 5 file.txt`



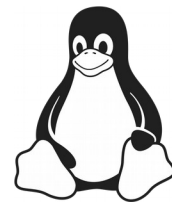
Filtrelemek

- Komutları pipelayarak spesifik bir şeyleri arayabiliriz.
- Mesela içinde a harfi geçen tüm kelimeleri alfabetik sırayla yazdırmak gibi.



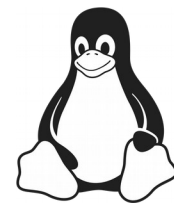
Sticker Ödüllü Yarışma

- IsimListesi dosyası içinde
- “e” ve “a” harfleri bulunmayan halinin ters sıralanmış halindeki ilk isim(sadece isim-soy isim değil)?



Sticker Ödüllü Yarışma

- “e” ve “a” harfleri bulunmayan halinin ters sıralanmış halindeki ilk isim(sadece isim-soy isim değil)?
- `$grep -v -i "e" isimListesi.txt | grep -iv "a" | sort -r | head -n 1 | cut -d " " -f1`
- Kelime “Young”





EOF

