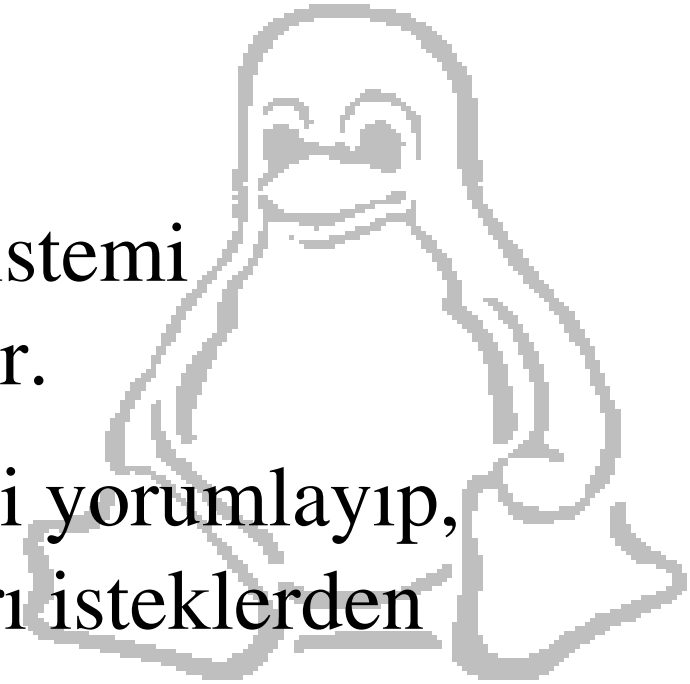


Linux'ta Kabuk ve Kabuk Programlama

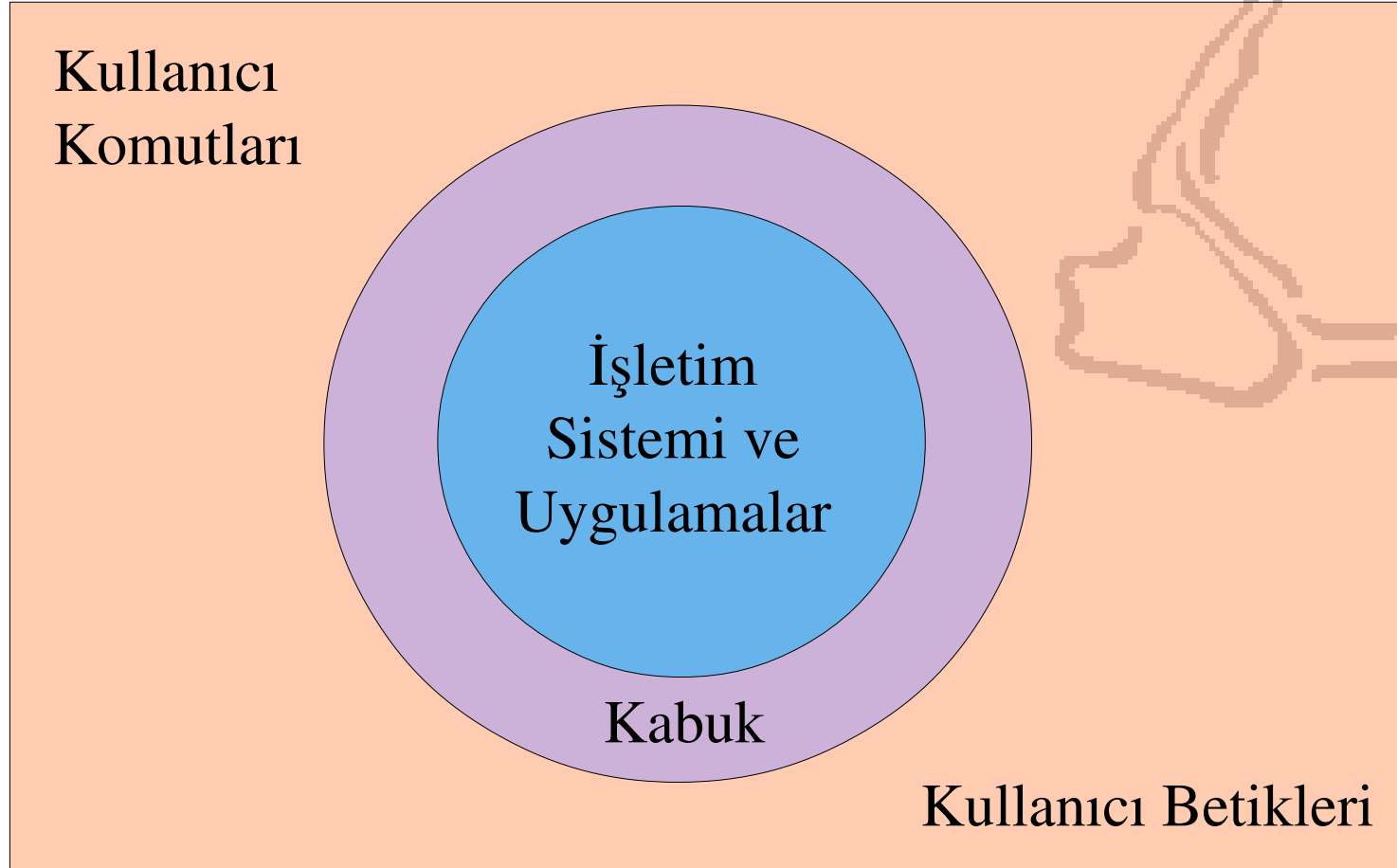


LKD Kabuk Nedir?

- Kabuk, kullanıcı ile bilgisayar sistemi arasındaki bir yazılım katmanıdır.
- Kabuk, kullanıcının hareketlerini yorumlayıp, işletim sistemini ve uygulamaları isteklerden haberdar eder.
- Kabuk, bir komut yorumlayıcıdır (*command interpreter*); komutları direk olarak işlemeden önce onları yorumlar.



LKD Kabuk Nedir?



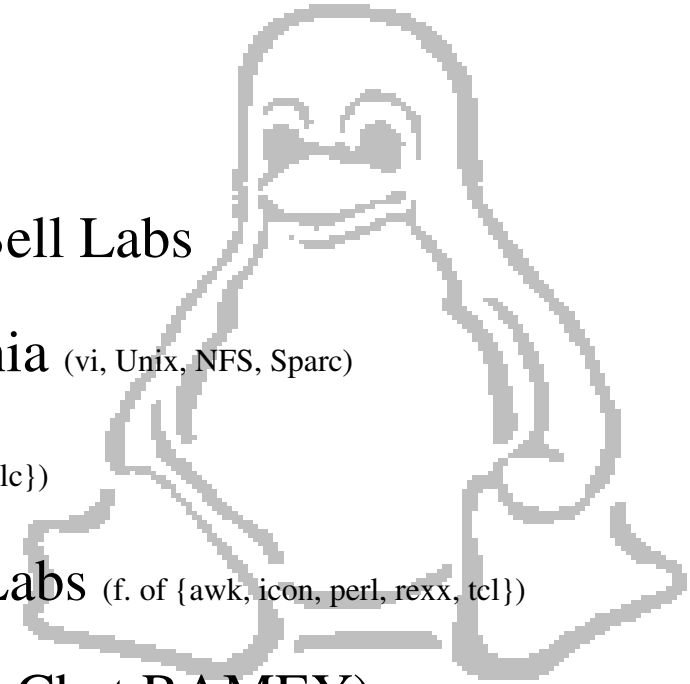
LKD Kabuk ile Neler Yapılır?

- Program çalıştırılabilir,
- Girdi/Çıktı yönlendirmesi yapılabilir,
- Boru (*pipe*) işlemi yapılabilir,
- Görev denetimi yapılabilir.
- Ayrıca kabuk, metakarakter kullanımına ve,
- Programlama dili sayesinde betik yazımına da (*shell scripting*) olanak sağlar.



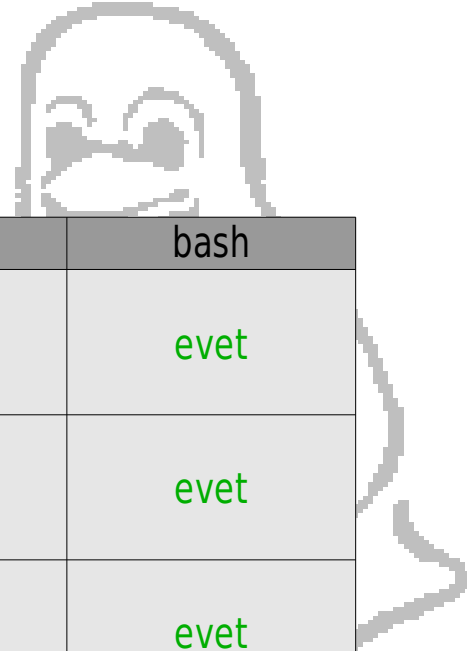
LKD Çok Kullanılan Kabuklar

- **sh** (Bourne Shell), Steven BOURNE, AT&T Bell Labs
- **csh** (C Shell), Bill JOY, University of California (vi, Unix, NFS, Sparc)
- **tcsh** (TC Shell), Christos ZOULAS, (csh + {cle, his, clc})
- **ksh** (Korn Shell), David KORN, AT&T Bell Labs (f. of {awk, icon, perl, rexx, tcl})
- **bash** (Bourne Again Shell) GNU (Brian FOX, Chet RAMEY)
 - korn ve c kabuklarının kullanışlı özelliklerini almıştır.
 - sh ile tamamen uyumludur.
 - IEEE POSIX P1003.2/ISO 9945.2 Shell and Tools standartlarına uygundur.
 - sh kabuğu için yazılmış -neredeyse- tüm betikler, değişiklik gerektirmeden çalıştırılabilir.



Linux'ta Kabuk ve Kabuk Programlama

LKD Çok Kullanılan Kabuklar



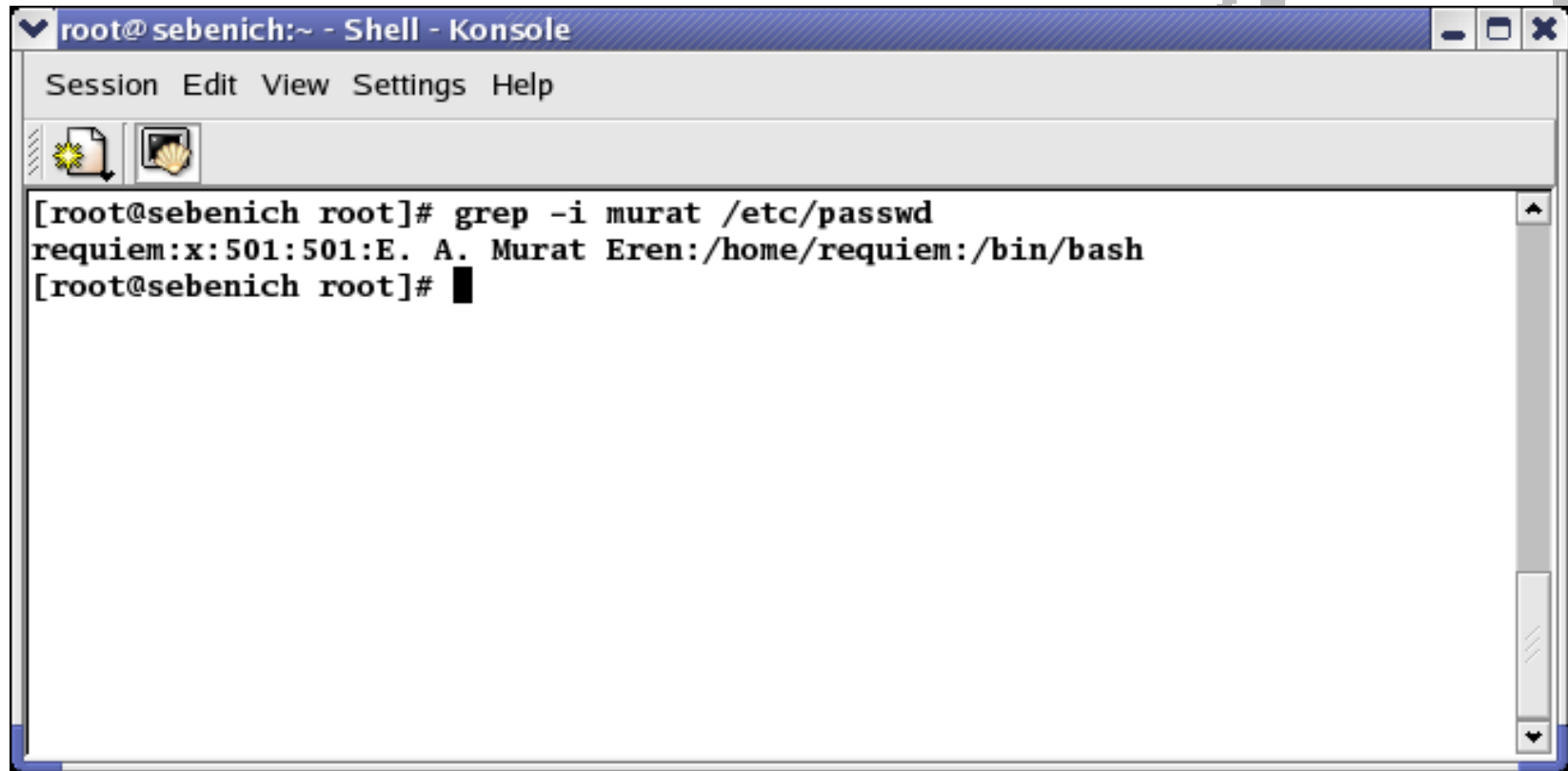
	sh	c	tc	korn	bash
komut geçmişi	hayır	evet	evet	evet	evet
komut değişkenleri	hayır	evet	evet	evet	evet
kabuk betikleri	evet	evet	evet	evet	evet
dosya ismi tamamlama	hayır	evet*	evet	evet*	evet
komut satırı değişikliği	hayır	hayır	evet	evet*	evet
görev kontrolü	hayır	evet	evet	evet	evet

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuğun Fonksiyonları > Program Çalıştırma

[user@host dizin]# program_adi <argümanlar>

A screenshot of a Linux terminal window titled "root@sebenich:~ - Shell - Konsole". The window has a menu bar with "Session", "Edit", "View", "Settings", and "Help". Below the menu bar are two icons: a yellow star and a shell icon. The terminal content shows a root user at the "sebenich" host. The command "grep -i murat /etc/passwd" is entered and executed, resulting in the output "requiem:x:501:501:E. A. Murat Eren:/home/requiem:/bin/bash". The prompt returns to the root user.

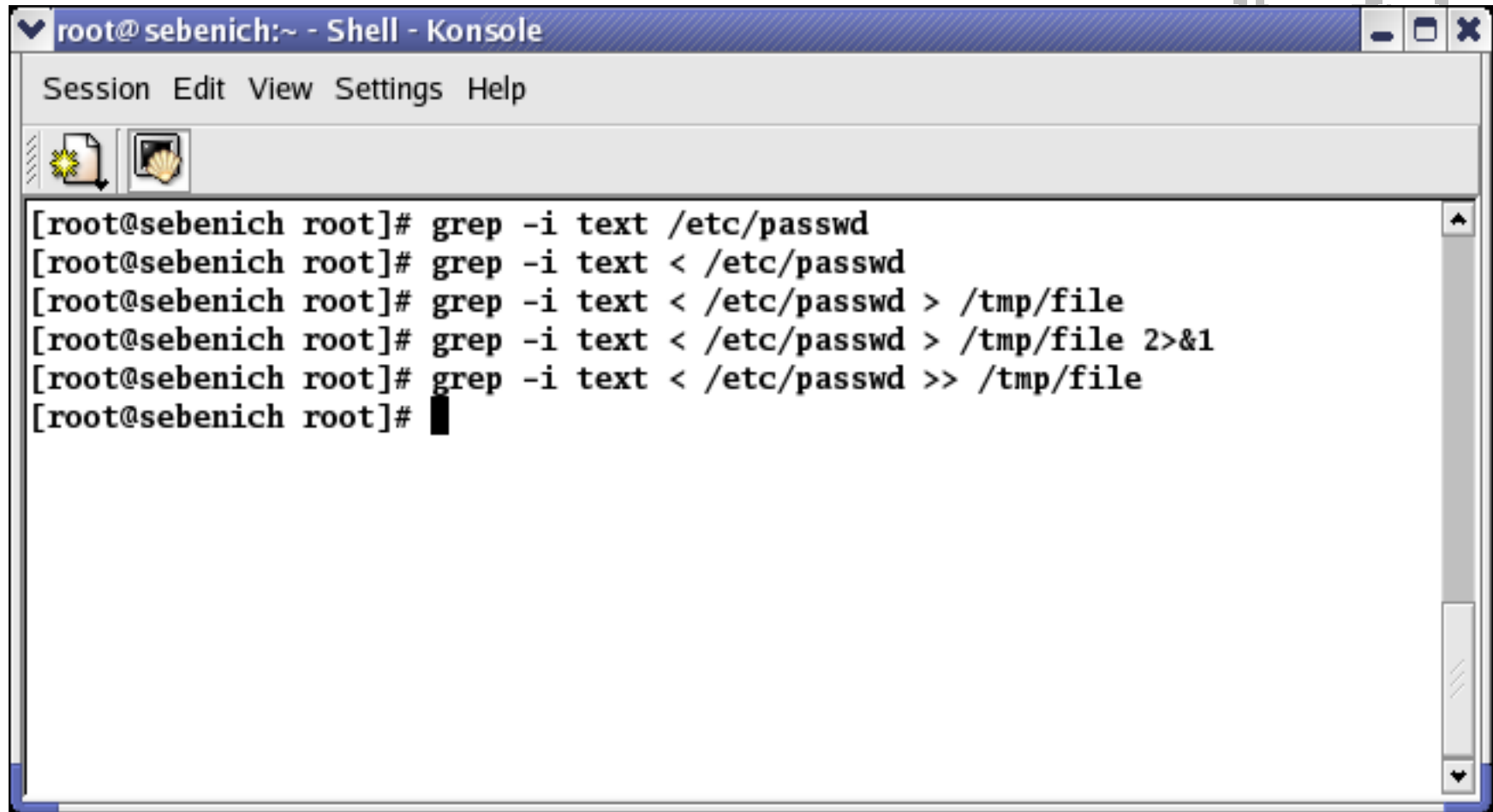
```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

[root@sebenich root]# grep -i murat /etc/passwd
requiem:x:501:501:E. A. Murat Eren:/home/requiem:/bin/bash
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > Girdi/Çıktı Yönlendirme



The screenshot shows a terminal window titled "root@sebenich:~ - Shell - Konsole". The window has a menu bar with "Session", "Edit", "View", "Settings", and "Help". Below the menu bar are two icons: a yellow star and a shell icon. The terminal content shows a series of commands being entered at the prompt "[root@sebenich root]#". The commands demonstrate various shell redirection techniques using the "grep" command. The first command is "grep -i text /etc/passwd". The second is "grep -i text < /etc/passwd". The third is "grep -i text < /etc/passwd > /tmp/file". The fourth is "grep -i text < /etc/passwd > /tmp/file 2>&1". The fifth is "grep -i text < /etc/passwd >> /tmp/file". The prompt is followed by a cursor.

```
[root@sebenich root]# grep -i text /etc/passwd
[root@sebenich root]# grep -i text < /etc/passwd
[root@sebenich root]# grep -i text < /etc/passwd > /tmp/file
[root@sebenich root]# grep -i text < /etc/passwd > /tmp/file 2>&1
[root@sebenich root]# grep -i text < /etc/passwd >> /tmp/file
[root@sebenich root]#
```


Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > Boru (*pipe*) İşlemi

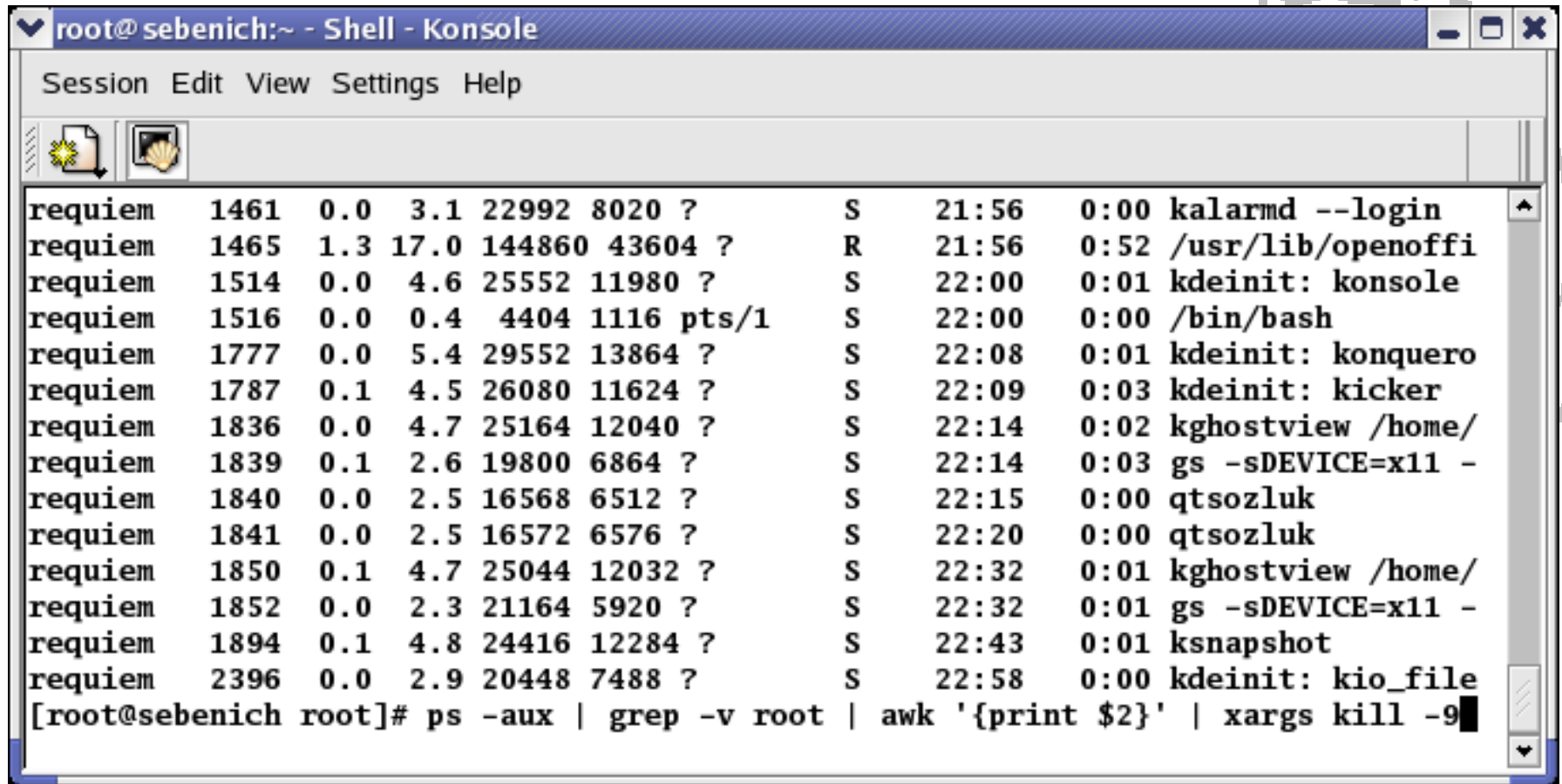


```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help
[icon] [icon]
[root@sebenich root]# wc -l /etc/passwd
  44 /etc/passwd
[root@sebenich root]# who
requiem  tty1          Mar 24 21:51
requiem  pts/0         Mar 24 21:56
requiem  pts/1         Mar 24 22:00
[root@sebenich root]# who | wc -l
    3
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > Boru (*pipe*) İşlemi



The screenshot shows a terminal window titled "root@sebenich:~ - Shell - Konsole". The window contains a list of running processes and a command to kill them. The processes are listed in a table-like format with columns for PID, PPID, CPU, MEM, VSZ, RSS, TTY, STAT, TIME, and COMMAND. The command at the bottom is: [root@sebenich root]# ps -aux | grep -v root | awk '{print \$2}' | xargs kill -9

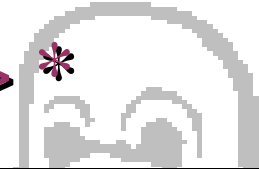
PID	PPID	CPU	MEM	VSZ	RSS	TTY	STAT	TIME	COMMAND
requiem	1461	0.0	3.1	22992	8020	?	S	21:56	0:00 kalarmd --login
requiem	1465	1.3	17.0	144860	43604	?	R	21:56	0:52 /usr/lib/openoffi
requiem	1514	0.0	4.6	25552	11980	?	S	22:00	0:01 kdeinit: konsole
requiem	1516	0.0	0.4	4404	1116	pts/1	S	22:00	0:00 /bin/bash
requiem	1777	0.0	5.4	29552	13864	?	S	22:08	0:01 kdeinit: konquero
requiem	1787	0.1	4.5	26080	11624	?	S	22:09	0:03 kdeinit: kicker
requiem	1836	0.0	4.7	25164	12040	?	S	22:14	0:02 kghostview /home/
requiem	1839	0.1	2.6	19800	6864	?	S	22:14	0:03 gs -sDEVICE=x11 -
requiem	1840	0.0	2.5	16568	6512	?	S	22:15	0:00 qtsozluk
requiem	1841	0.0	2.5	16572	6576	?	S	22:20	0:00 qtsozluk
requiem	1850	0.1	4.7	25044	12032	?	S	22:32	0:01 kghostview /home/
requiem	1852	0.0	2.3	21164	5920	?	S	22:32	0:01 gs -sDEVICE=x11 -
requiem	1894	0.1	4.8	24416	12284	?	S	22:43	0:01 ksnapshot
requiem	2396	0.0	2.9	20448	7488	?	S	22:58	0:00 kdeinit: kio_file

```
[root@sebenich root]# ps -aux | grep -v root | awk '{print $2}' | xargs kill -9
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > Metakarakterler > *



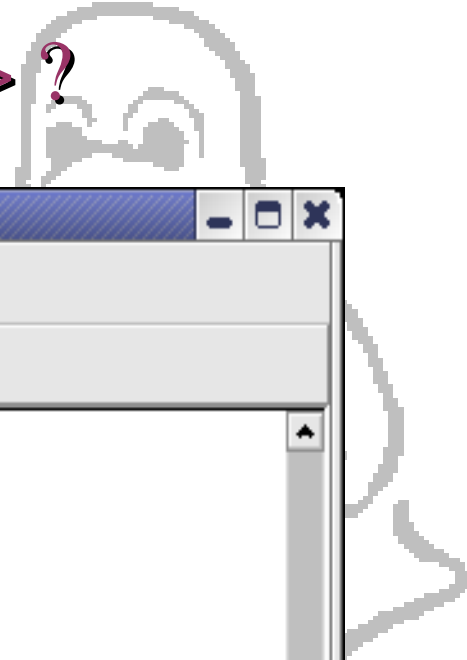
```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

[root@sebenich root]# ls /etc/*.conf
/etc/aep.conf          /etc/lftp.conf         /etc/resolv.conf
/etc/aeplog.conf       /etc/libuser.conf      /etc/rndc.conf
/etc/cdrecord.conf     /etc/logrotate.conf    /etc/scrollkeeper.conf
/etc/esd.conf          /etc/lpd.conf          /etc/sensors.conf
/etc/fam.conf          /etc/ltrace.conf       /etc/sysctl.conf
/etc/gpm-root.conf     /etc/modules.conf      /etc/syslog.conf
/etc/grub.conf         /etc/mtools.conf       /etc/updatedb.conf
/etc/host.conf         /etc/nscd.conf         /etc/updfstab.conf
/etc/htdig.conf        /etc/nsswitch.conf     /etc/vsftpd.conf
/etc/initlog.conf      /etc/ntp.conf          /etc/warnquota.conf
/etc/krb5.conf         /etc/pam_smb.conf      /etc/webalizer.conf
/etc/krb.conf          /etc/pbm2ppa.conf      /etc/wvdial.conf
/etc/ldap.conf         /etc/pnm2ppa.conf      /etc/xinetd.conf
/etc/ld.so.conf        /etc/pwdb.conf         /etc/yp.conf
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > Metakarakterler > ?

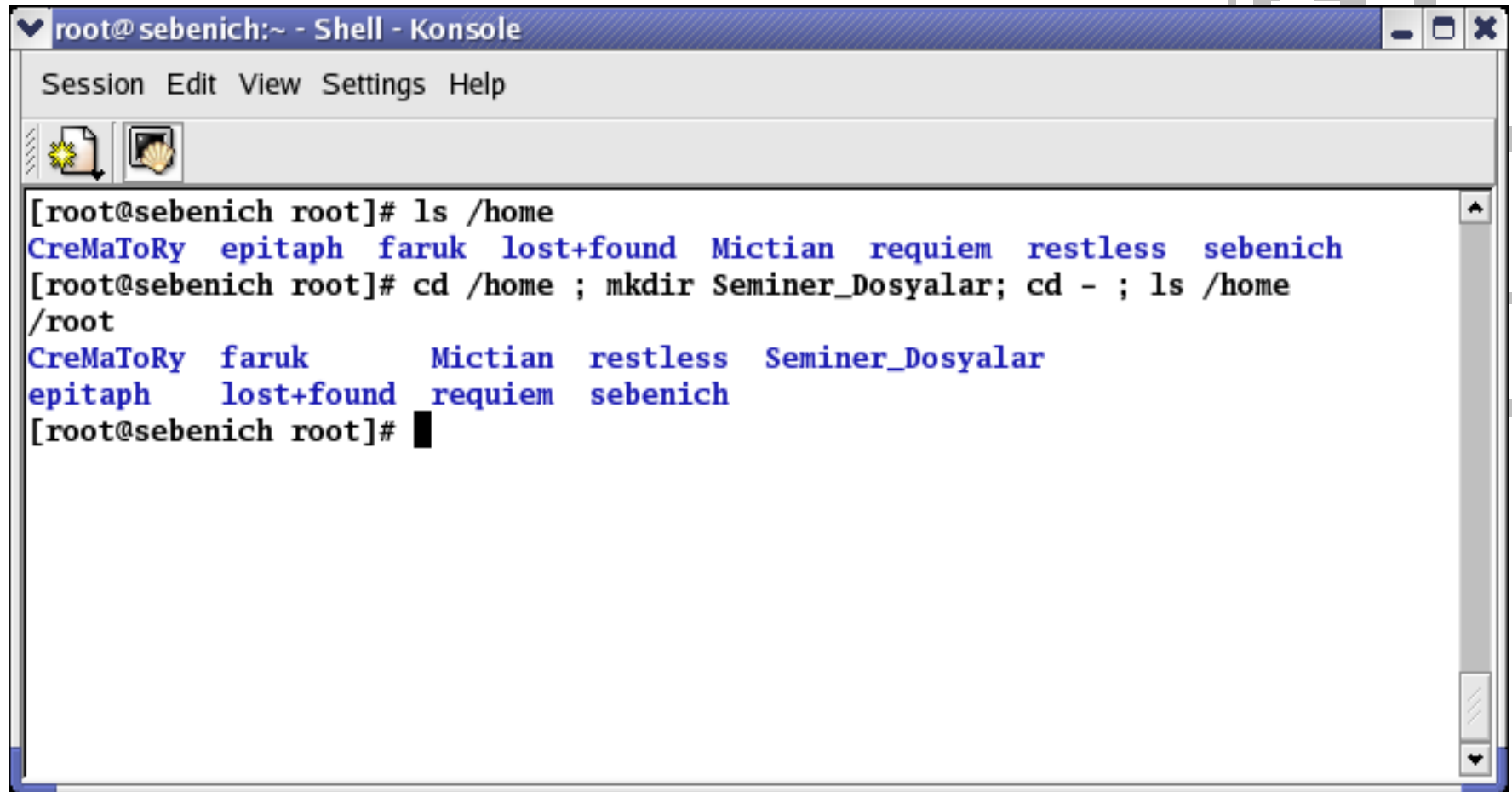


```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help
[icon] [icon]
[root@sebenich root]# ls /etc/p???ppa.conf
/etc/pbm2ppa.conf  /etc/pnm2ppa.conf
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > Metakarakterler > ;



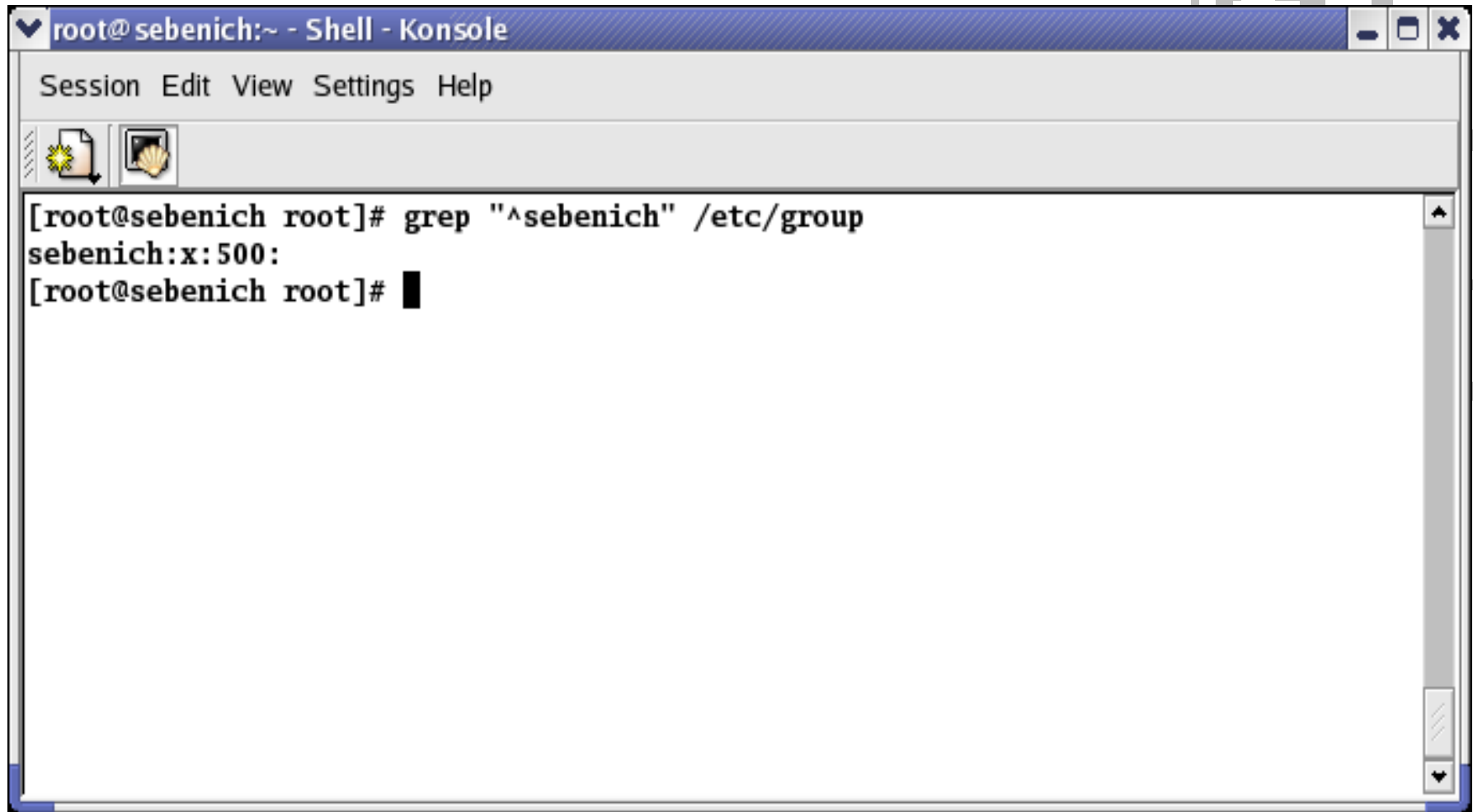
The screenshot shows a terminal window titled "root@sebenich:~ - Shell - Konsole". The window has a menu bar with "Session", "Edit", "View", "Settings", and "Help". Below the menu bar are two icons: a yellow star and a shell icon. The terminal content shows the following commands and output:

```
[root@sebenich root]# ls /home
CreMaToRy  epitaph  faruk  lost+found  Mictian  requiem  restless  sebenich
[root@sebenich root]# cd /home ; mkdir Seminer_Dosyalar; cd - ; ls /home
/root
CreMaToRy  faruk      Mictian  restless  Seminer_Dosyalar
epitaph    lost+found  requiem  sebenich
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > Metakarakterler > ^



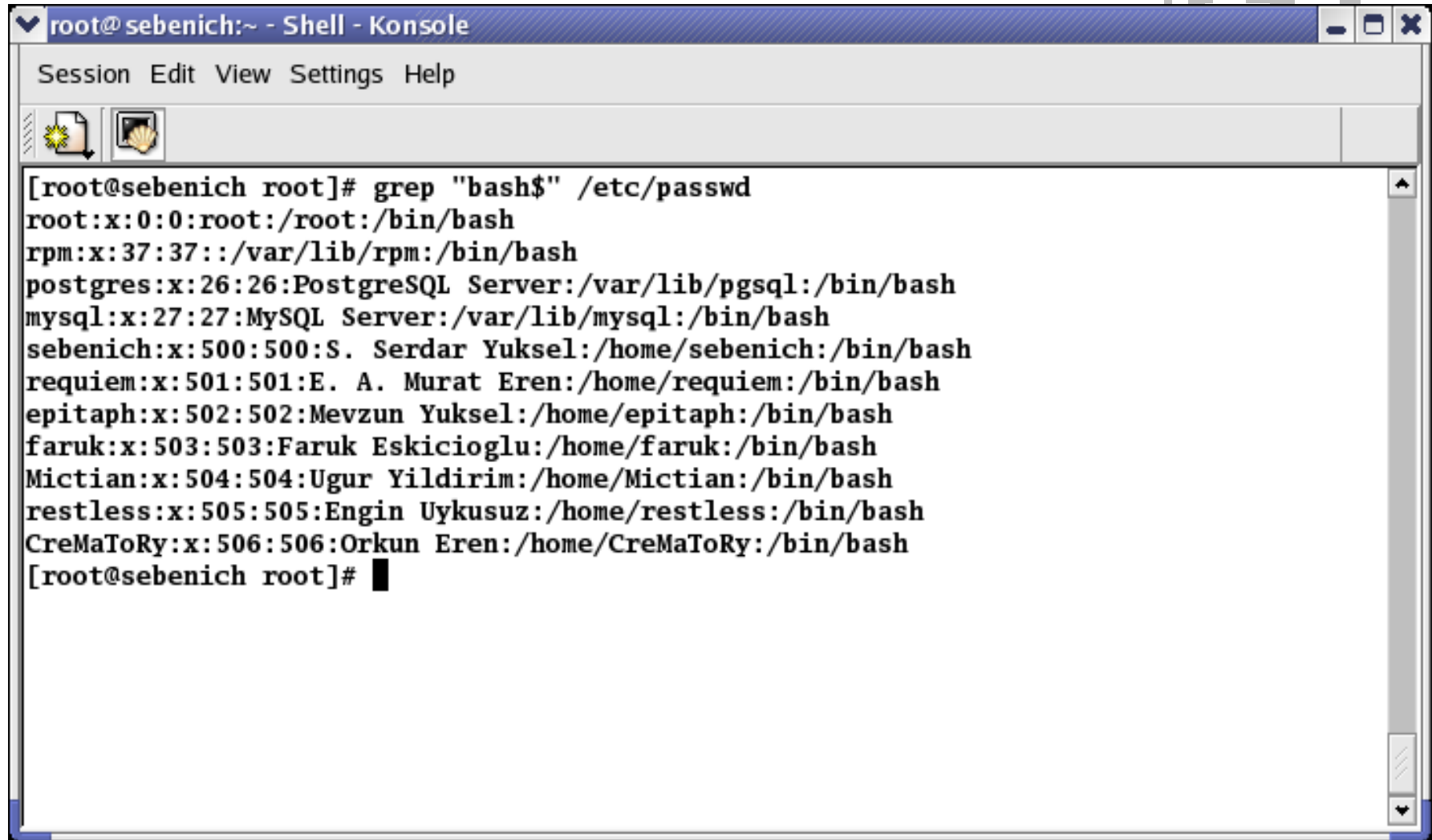
The screenshot shows a terminal window titled "root@sebenich:~ - Shell - Konsole". The window has a menu bar with "Session", "Edit", "View", "Settings", and "Help". Below the menu bar are two icons: a document with a star and a hand cursor. The terminal content shows the command `grep "^sebenich" /etc/group` being executed, followed by the output `sebenich:x:500:`. The prompt `[root@sebenich root]#` is visible at the end of the line.

```
[root@sebenich root]# grep "^sebenich" /etc/group
sebenich:x:500:
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > Metakarakterler > \$



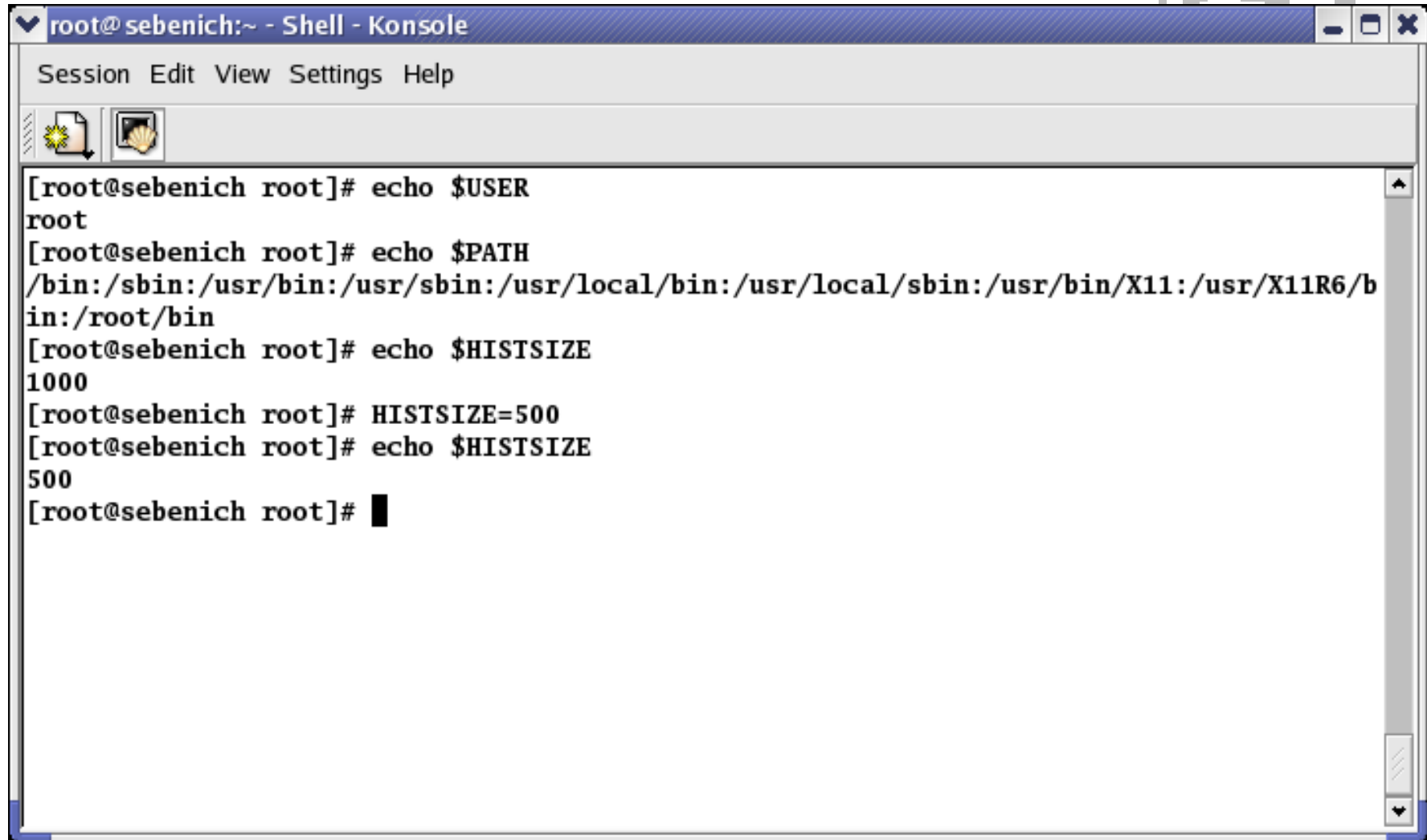
The screenshot shows a terminal window titled 'root@sebenich:~ - Shell - Konsole'. The window has a menu bar with 'Session', 'Edit', 'View', 'Settings', and 'Help'. Below the menu bar are two icons: a yellow star and a yellow shell. The terminal content shows the command '[root@sebenich root]# grep "bash\$" /etc/passwd' and its output, which lists system and user accounts with their respective shells. The output is as follows:

```
[root@sebenich root]# grep "bash$" /etc/passwd
root:x:0:0:root:/root:/bin/bash
rpm:x:37:37::/var/lib/rpm:/bin/bash
postgres:x:26:26:PostgreSQL Server:/var/lib/pgsql:/bin/bash
mysql:x:27:27:MySQL Server:/var/lib/mysql:/bin/bash
sebenich:x:500:500:S. Serdar Yuksel:/home/sebenich:/bin/bash
requiem:x:501:501:E. A. Murat Eren:/home/requiem:/bin/bash
epitaph:x:502:502:Mevzun Yuksel:/home/epitaph:/bin/bash
faruk:x:503:503:Faruk Eskicioglu:/home/faruk:/bin/bash
Mictian:x:504:504:Ugur Yildirim:/home/Mictian:/bin/bash
restless:x:505:505:Engin Uykusuz:/home/restless:/bin/bash
CreMaToRy:x:506:506:Orkun Eren:/home/CreMaToRy:/bin/bash
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > Metakarakterler > \$

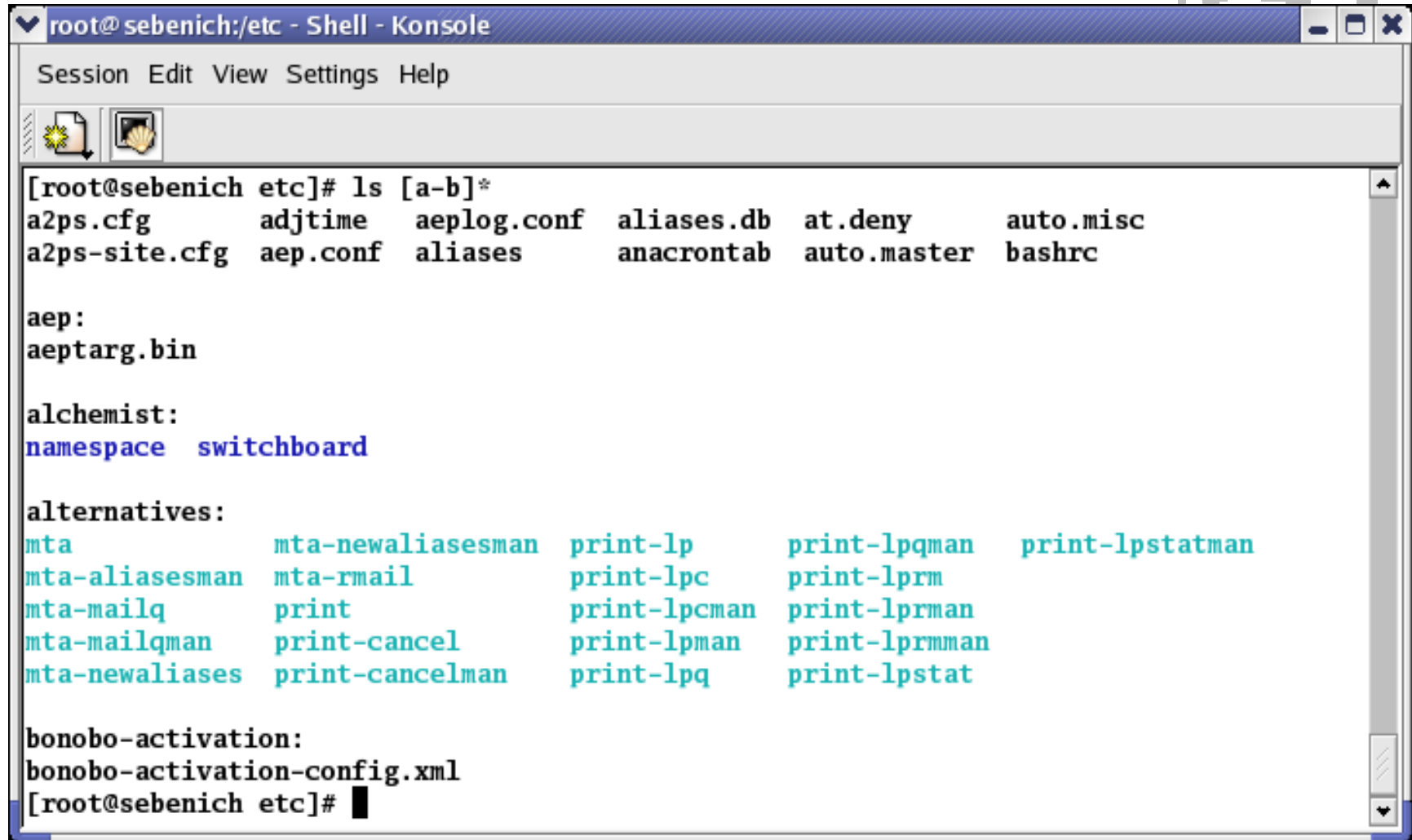
A screenshot of a Linux terminal window titled "root@sebenich:~ - Shell - Konsole". The window has a menu bar with "Session", "Edit", "View", "Settings", and "Help". Below the menu bar are two icons: a yellow star and a hand. The terminal content shows the following commands and output:

```
[root@sebenich root]# echo $USER
root
[root@sebenich root]# echo $PATH
/bin:/sbin:/usr/bin:/usr/sbin:/usr/local/bin:/usr/local/sbin:/usr/bin/X11:/usr/X11R6/bin:/root/bin
[root@sebenich root]# echo $HISTSIZE
1000
[root@sebenich root]# HISTSIZE=500
[root@sebenich root]# echo $HISTSIZE
500
[root@sebenich root]#
```


Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > Metakarakterler > []



```
root@sebenich:/etc - Shell - Konsole
Session Edit View Settings Help

[root@sebenich etc]# ls [a-b]*
a2ps.cfg      adjtime      aeplog.conf  aliases.db   at.deny      auto.misc
a2ps-site.cfg aep.conf     aliases      anacrontab   auto.master  bashrc

aep:
aeptarg.bin

alchemist:
namespace switchboard

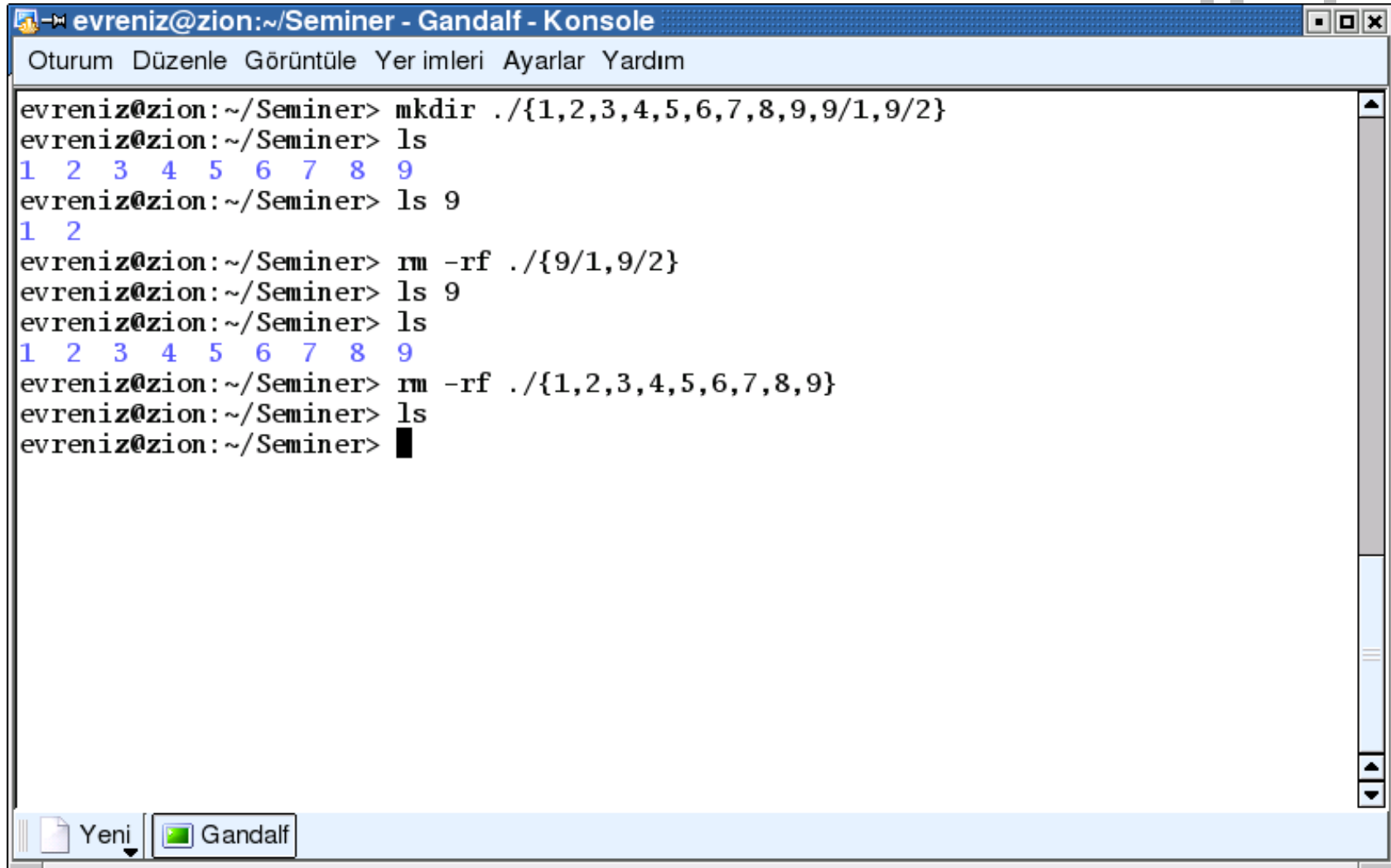
alternatives:
mta            mta-newaliasesman  print-lp      print-lpqman  print-lpstatman
mta-aliasesman mta-rmail          print-lpc     print-lprm
mta-mailq      print              print-lpcman  print-lprman
mta-mailqman   print-cancel       print-lpman   print-lprmman
mta-newaliases print-cancelman    print-lpq     print-lpstat

bonobo-activation:
bonobo-activation-config.xml
[root@sebenich etc]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > Metakarakterler > {, }



```
evreniz@zion:~/Seminer - Gandalf - Konsole
Oturum  Düzenle  Görüntüle  Yer imleri  Ayarlar  Yardım

evreniz@zion:~/Seminer> mkdir ./{1,2,3,4,5,6,7,8,9,9/1,9/2}
evreniz@zion:~/Seminer> ls
1 2 3 4 5 6 7 8 9
evreniz@zion:~/Seminer> ls 9
1 2
evreniz@zion:~/Seminer> rm -rf ./{9/1,9/2}
evreniz@zion:~/Seminer> ls 9
evreniz@zion:~/Seminer> ls
1 2 3 4 5 6 7 8 9
evreniz@zion:~/Seminer> rm -rf ./{1,2,3,4,5,6,7,8,9}
evreniz@zion:~/Seminer> ls
evreniz@zion:~/Seminer>
```

Linux'ta Kabuk ve Kabuk Programlama

LKD Kabuk Fonksiyonları > Metakarakterler > ' , " ve \



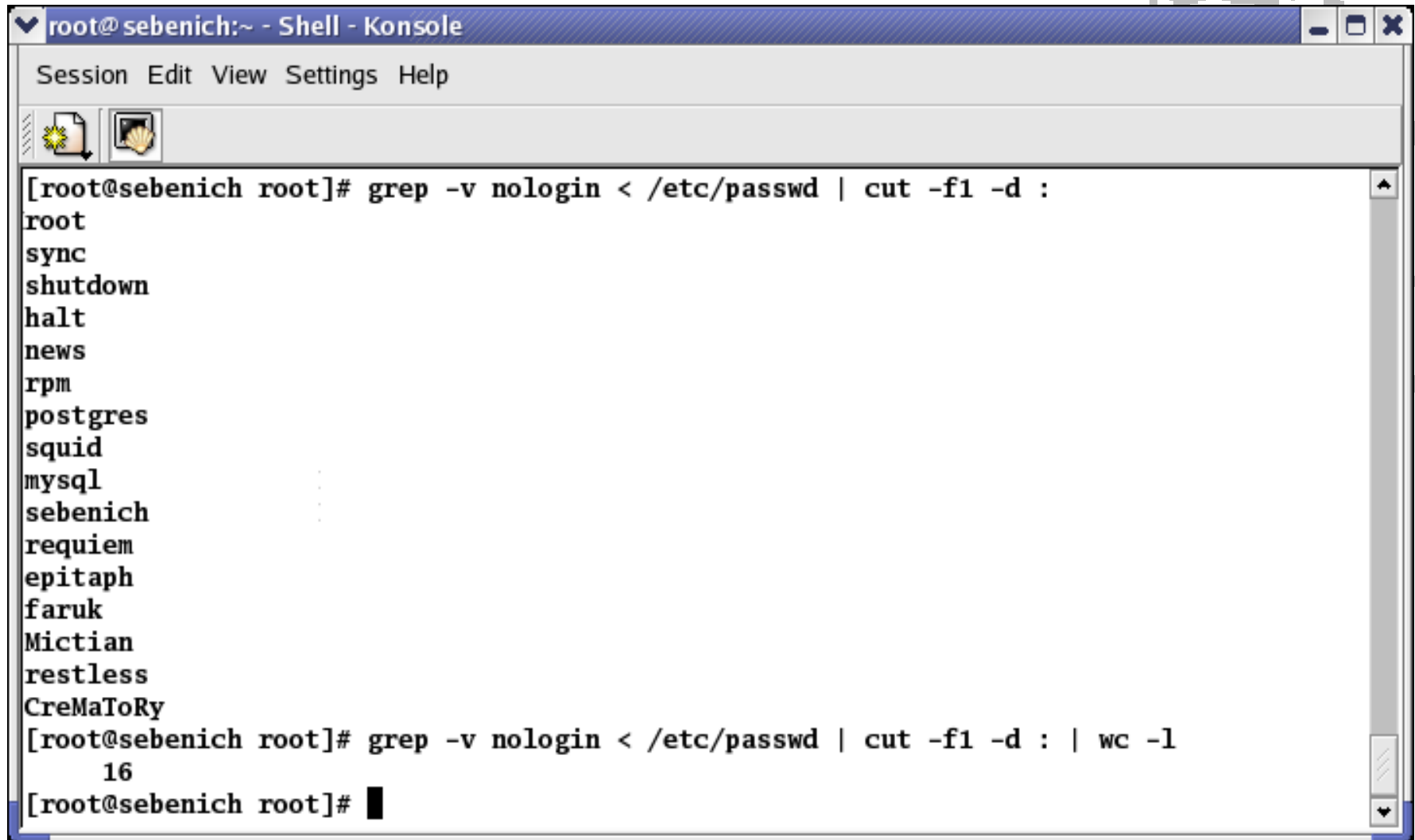
```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

[root@sebenich root]# echo 'Sistemde \"$USER\'\" kullanicisi olarak islem yapiyorum'
Sistemde \"$USER\'\" kullanicisi olarak islem yapiyorum
[root@sebenich root]# echo "Sistemde \"$USER\'\" kullanicisi olarak islem yapiyorum"
Sistemde "root" kullanicisi olarak islem yapiyorum
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > İleri Düzey Komutlar



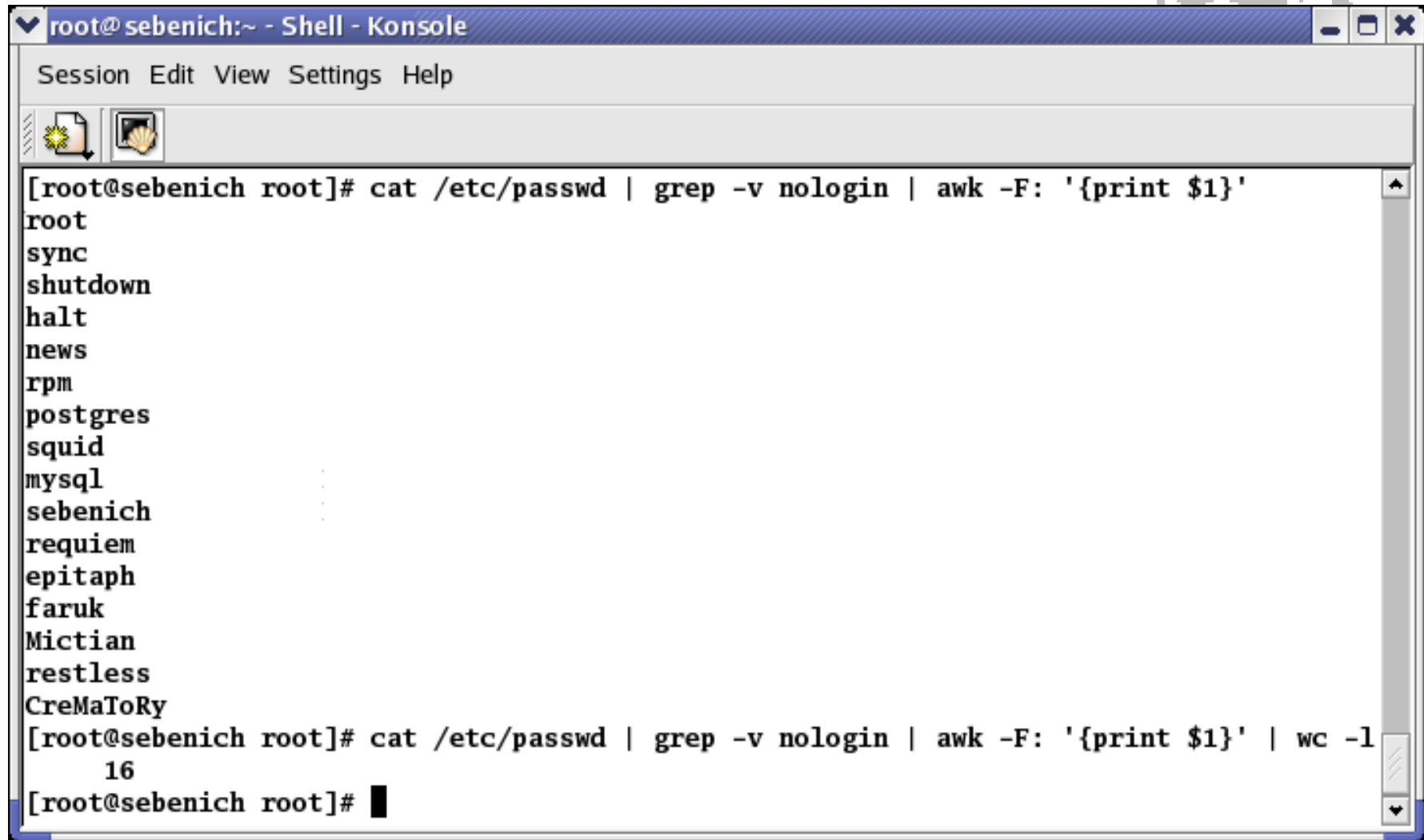
```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

[root@sebenich root]# grep -v nologin < /etc/passwd | cut -f1 -d :
root
sync
shutdown
halt
news
rpm
postgres
squid
mysql
sebenich
requiem
epitaph
faruk
Mictian
restless
CreMaToRy
[root@sebenich root]# grep -v nologin < /etc/passwd | cut -f1 -d : | wc -l
16
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Kabuk Fonksiyonları > İleri Düzey Komutlar



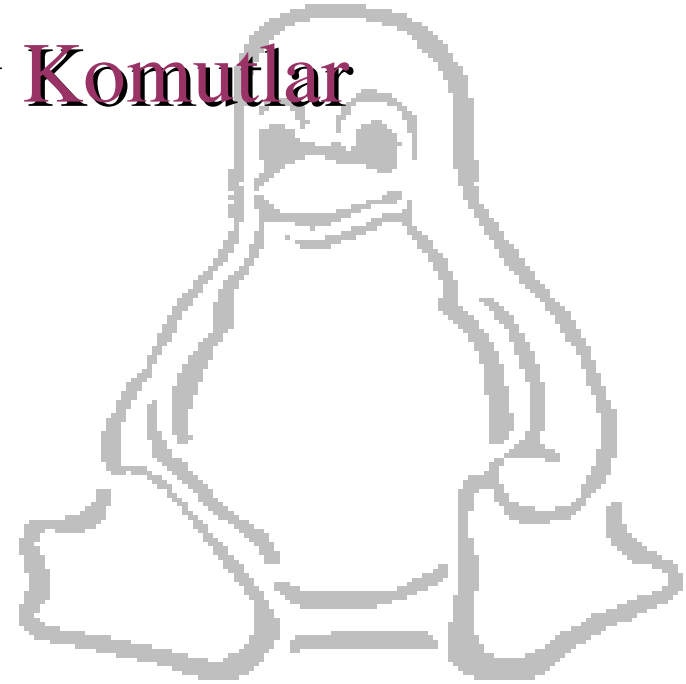
The screenshot shows a terminal window titled "root@sebenich:~ - Shell - Konsole". The window has a menu bar with "Session", "Edit", "View", "Settings", and "Help". Below the menu bar are two icons: a yellow star and a shell icon. The terminal content shows a command being executed: `cat /etc/passwd | grep -v nologin | awk -F: '{print $1}'`. The output lists usernames: root, sync, shutdown, halt, news, rpm, postgres, squid, mysql, sebenich, requiem, epitaph, faruk, Mictian, restless, and CreMaToRy. A second command is then executed: `cat /etc/passwd | grep -v nologin | awk -F: '{print $1}' | wc -l`, which outputs the number 16. The prompt `[root@sebenich root]#` is visible at the bottom.

```
[root@sebenich root]# cat /etc/passwd | grep -v nologin | awk -F: '{print $1}'
root
sync
shutdown
halt
news
rpm
postgres
squid
mysql
sebenich
requiem
epitaph
faruk
Mictian
restless
CreMaToRy
[root@sebenich root]# cat /etc/passwd | grep -v nologin | awk -F: '{print $1}' | wc -l
16
[root@sebenich root]#
```

LKD

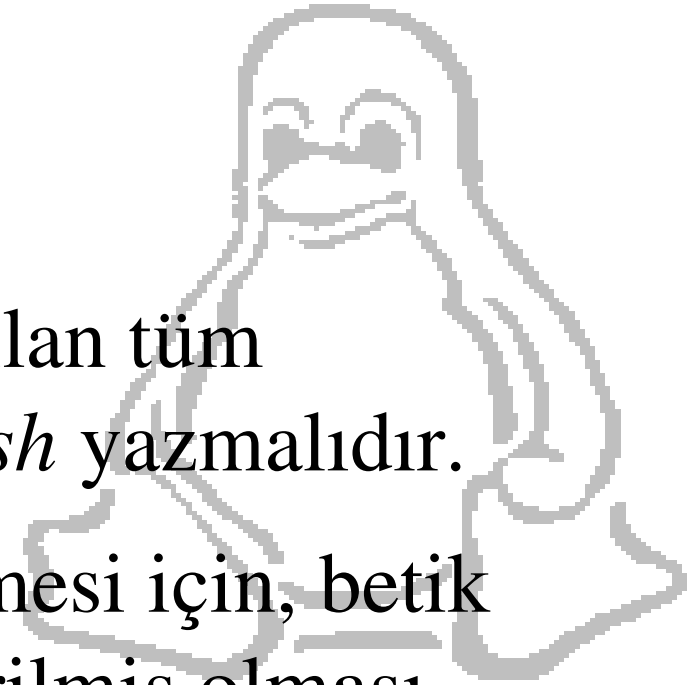
Kabuk Fonksiyonları > İleri Düzey Komutlar

- tr
- grep
- sort
- uniq
- sed
- ...



LKD Kabuk Programlama Dili

- Kabuk programlama dili ile yazılan tüm betiklerin ilk satırında *#!/bin/bash* yazmalıdır.
- Kabuk betiklerinin çalıştırılabilmesi için, betik dosyasının çalıştırma izninin verilmiş olması gerekmektedir, *chmod +x betik.sh* komutu ile dosyanın çalıştırma izni açılabilir.



LKD

Kabuk Programlama ile Neler Yapılmaz?

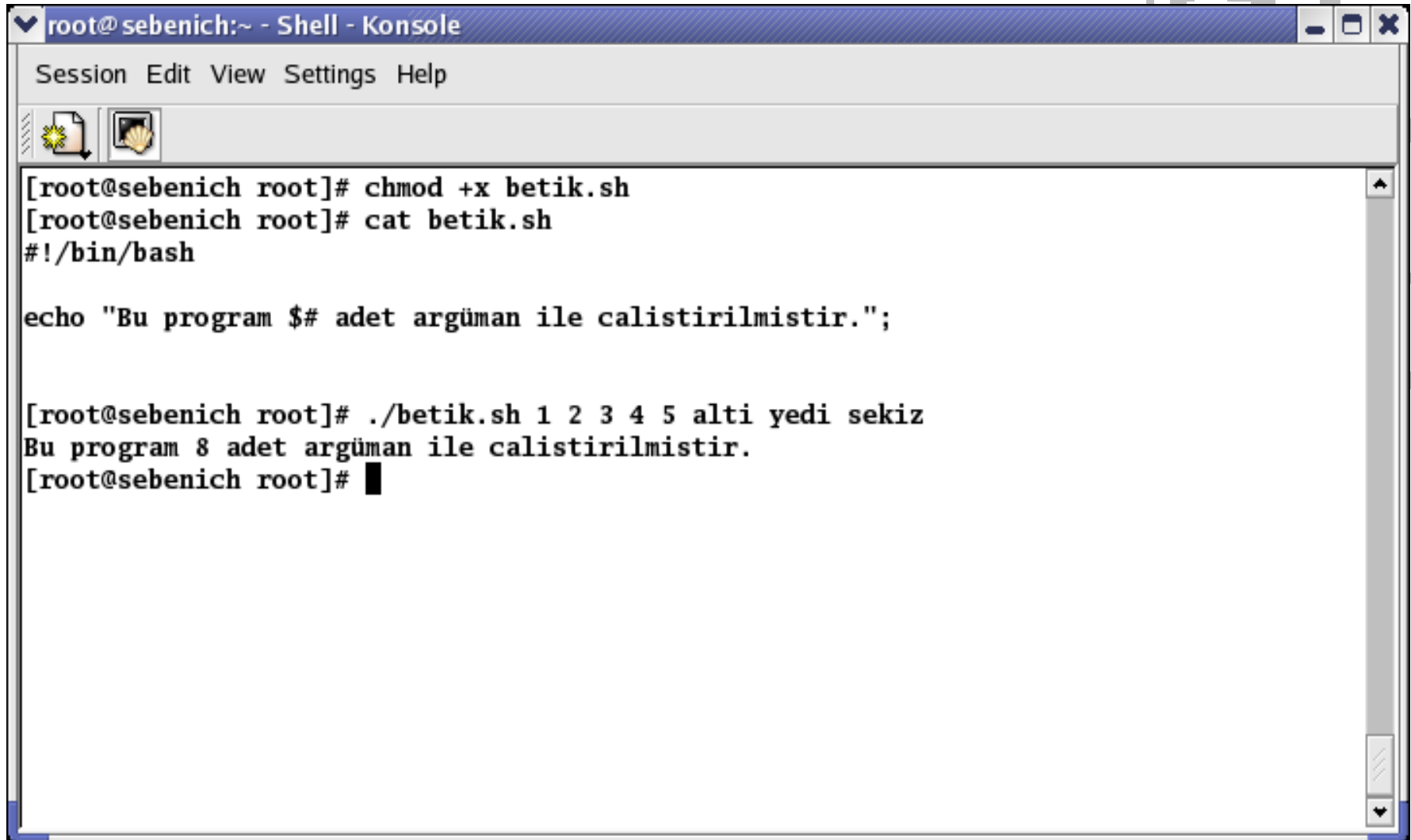
- GUI ya da grafik manüplasyonu gerektiren uygulamalarda,
- Cross-Platform uygulamalarında,
- Kompleks uygulamalarda (örneğin veri türünün kontrol edilmesi gereken, kritik fonksiyonlara sahip uygulamalarda),
- Port ya da I/O soketlerini kullanan uygulamalarda,
- Dinamik bellek yönetimi gerektiren geniş uygulamalarda ,
- Karmaşık veri yapılarına ihtiyaç duyacak (Bağlı Liste, Ağaç Yapısı vs.) uygulamalarda,
- Donanıma direk erişim için kullanılacak uygulamalarda,
- Görev Kritik uygulamalarında,
- Güvenliğin çok mühim olduğu noktalarda ya da hızın ön planda olduğu uygulamalarda,
- Kapalı kod gerektiren uygulamalarda (Kabuk betikleri açık kodlu olmak zorundadır) kabuk programlama kullanılamaz, kullanılmamalıdır.



Linux'ta Kabuk ve Kabuk Programlama

LKD

Programlama > Kabuk Değişkenleri > \$#

A screenshot of a terminal window titled "root@sebenich:~ - Shell - Konsole". The window has a menu bar with "Session", "Edit", "View", "Settings", and "Help". Below the menu bar are two icons: a document with a star and a hand cursor. The terminal content shows a user in the root directory at the machine "sebenich" performing several commands. First, they use "chmod +x betik.sh" to make a script executable. Then, they use "cat betik.sh" to view the script's content. The script starts with a shebang "#!/bin/bash" and contains an "echo" command that prints "Bu program \$# adet argüman ile calistirilmistir."; where \$# represents the number of arguments. Finally, they run the script with the command "./betik.sh 1 2 3 4 5 alti yedi sekiz", which results in the output "Bu program 8 adet argüman ile calistirilmistir." followed by a prompt character. The terminal has a scrollbar on the right side.

```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

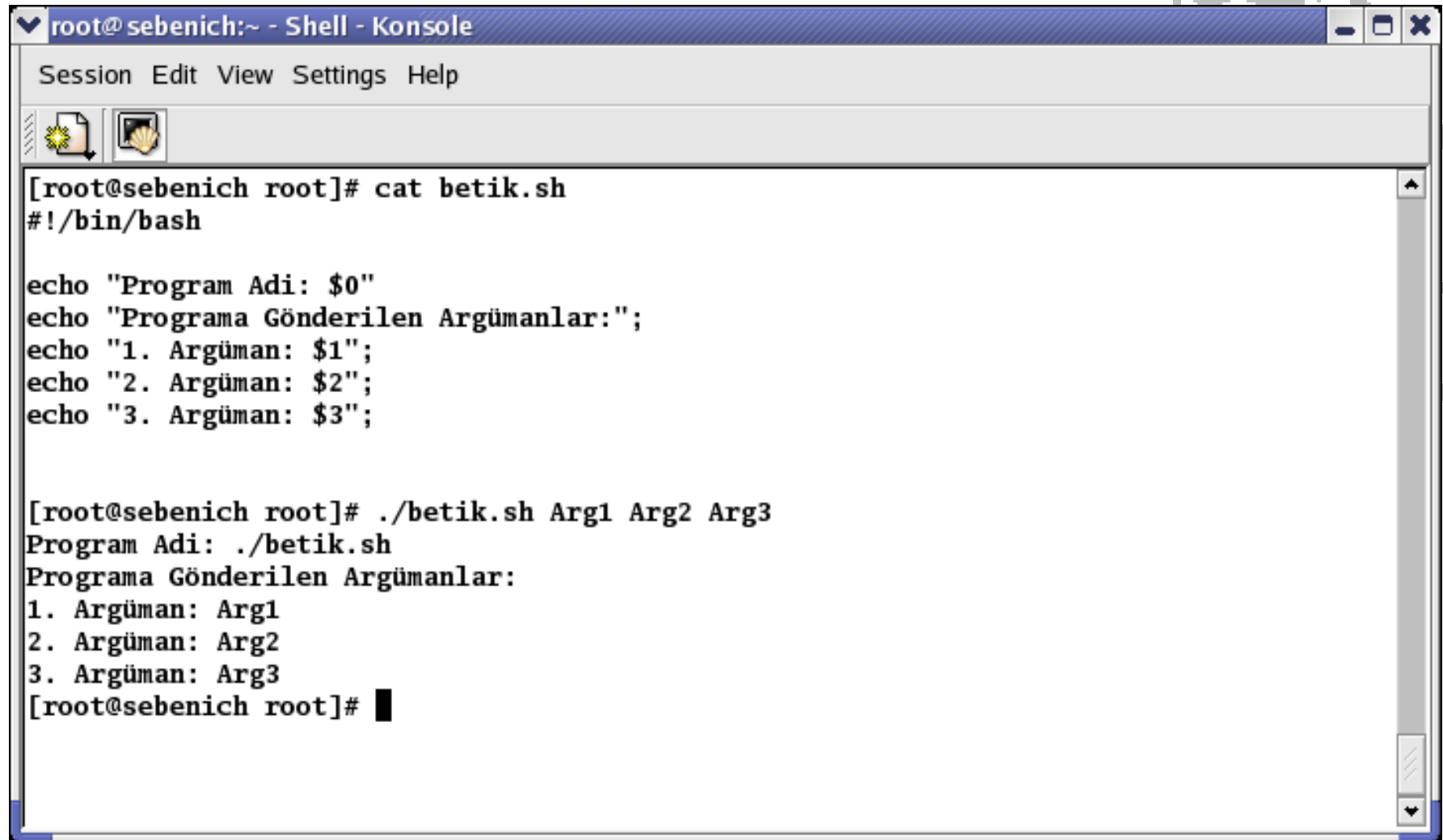
[root@sebenich root]# chmod +x betik.sh
[root@sebenich root]# cat betik.sh
#!/bin/bash

echo "Bu program $# adet argüman ile calistirilmistir.";

[root@sebenich root]# ./betik.sh 1 2 3 4 5 alti yedi sekiz
Bu program 8 adet argüman ile calistirilmistir.
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD Programlama > Kabuk Değişkenleri > \$0, \$1, \$2 ...



```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

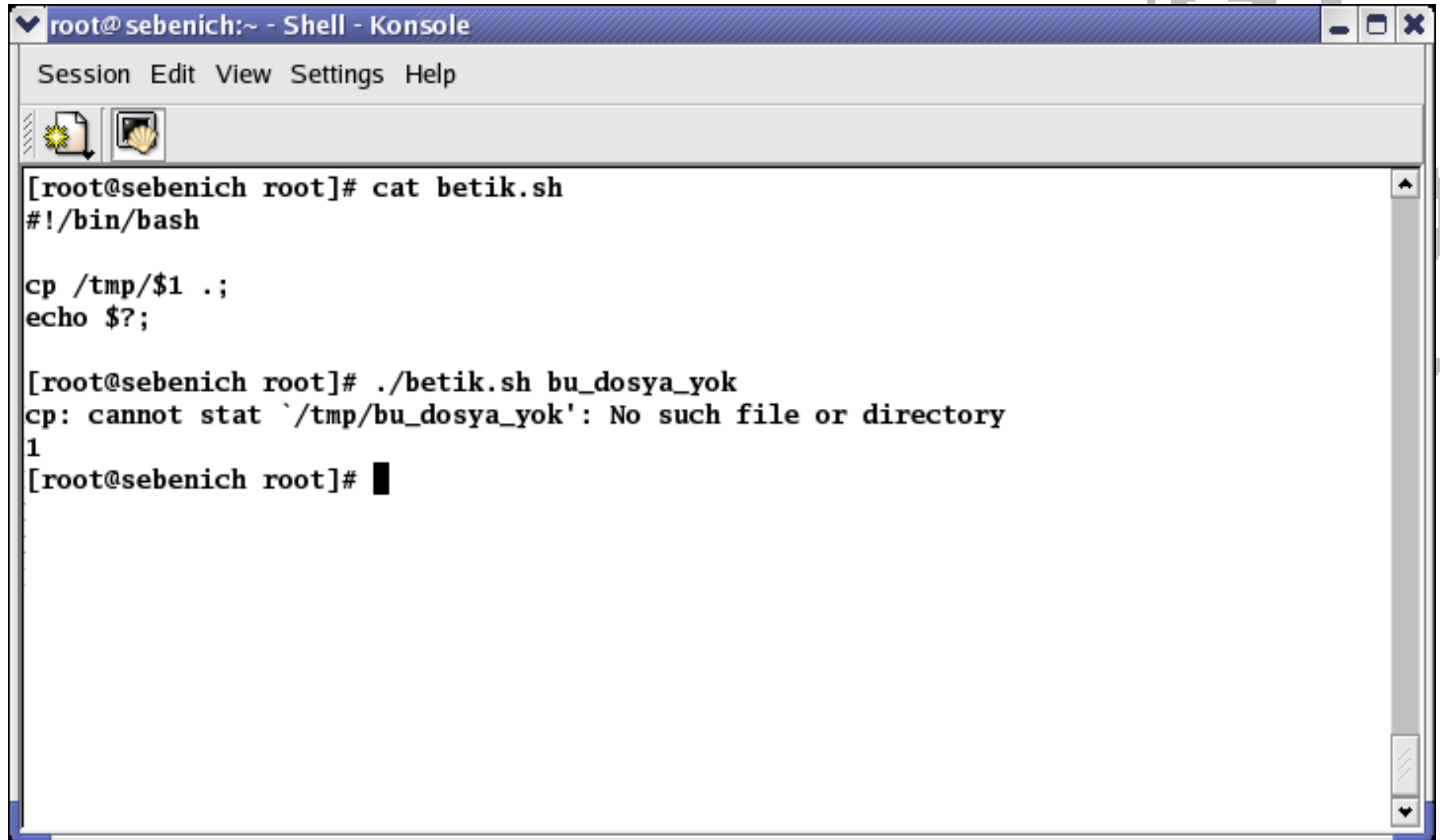
[root@sebenich root]# cat betik.sh
#!/bin/bash

echo "Program Adi: $0"
echo "Programa Gönderilen Argümanlar:";
echo "1. Argüman: $1";
echo "2. Argüman: $2";
echo "3. Argüman: $3";

[root@sebenich root]# ./betik.sh Arg1 Arg2 Arg3
Program Adi: ./betik.sh
Programa Gönderilen Argümanlar:
1. Argüman: Arg1
2. Argüman: Arg2
3. Argüman: Arg3
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD Programlama > Kabuk Değişkenleri > \$?



```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

[root@sebenich root]# cat betik.sh
#!/bin/bash

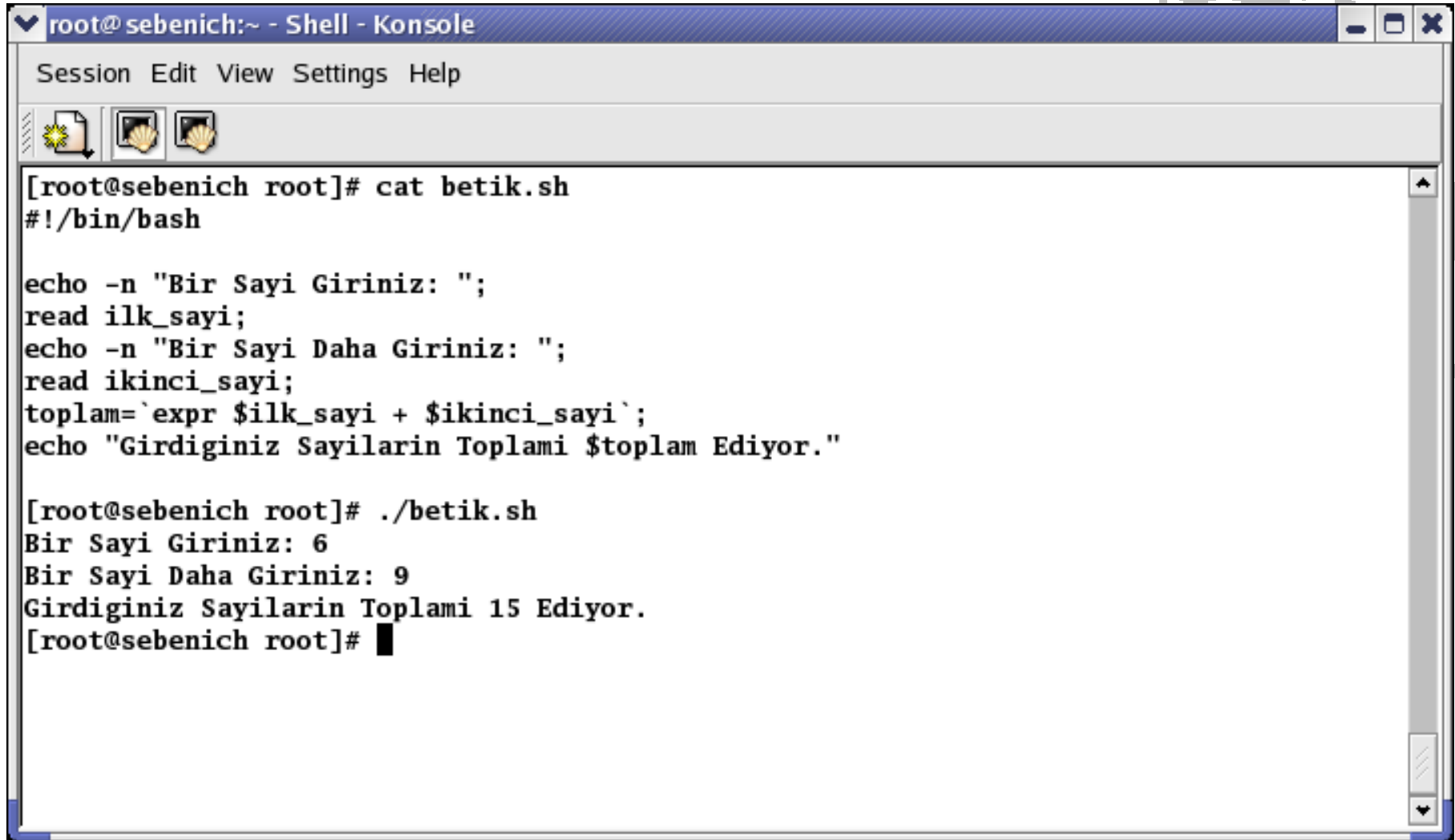
cp /tmp/$1 .;
echo $?;

[root@sebenich root]# ./betik.sh bu_dosya_yok
cp: cannot stat `/tmp/bu_dosya_yok': No such file or directory
1
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Programlama > Kullanıcı Tanımlı Değişkenler



```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

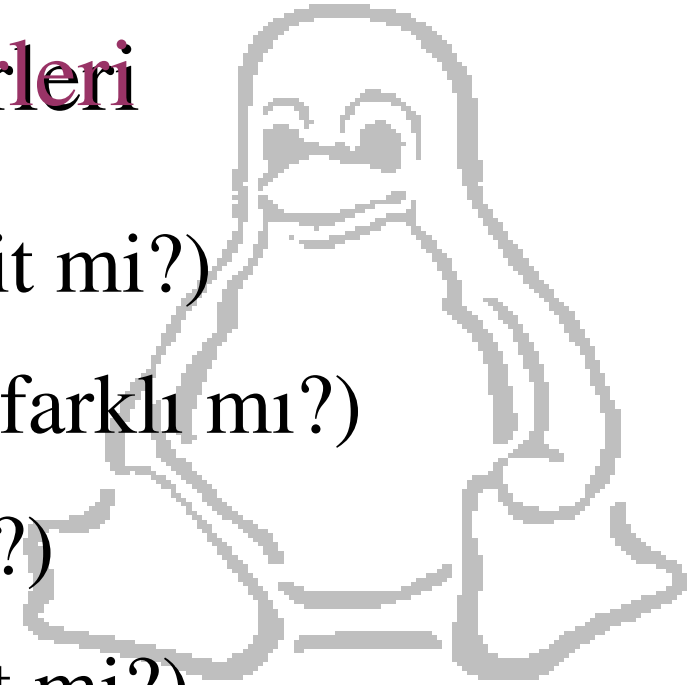
[root@sebenich root]# cat betik.sh
#!/bin/bash

echo -n "Bir Sayi Giriniz: ";
read ilk_sayi;
echo -n "Bir Sayi Daha Giriniz: ";
read ikinci_sayi;
toplam=`expr $ilk_sayi + $ikinci_sayi`;
echo "Girdiginiz Sayilarin Toplami $toplam Ediyor."

[root@sebenich root]# ./betik.sh
Bir Sayi Giriniz: 6
Bir Sayi Daha Giriniz: 9
Girdiginiz Sayilarin Toplami 15 Ediyor.
[root@sebenich root]#
```

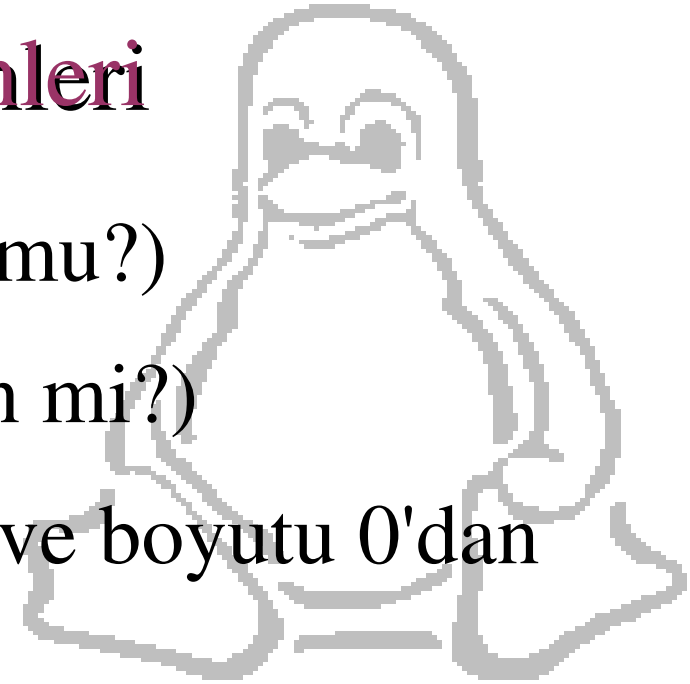
Programlama > Kıyas Operatörleri

- S1 -eq S2 (S1 ve S2 birbirine eşit mi?)
- S1 -ne S2 (S1 ve S2 birbirinden farklı mı?)
- S1 -qt S2 (S1, S2'den büyük mü?)
- S1 -qe S2 (S1, S2'den büyük eşit mi?)
- S1 -le S2 (S1, S2'den küçük mü?)
- S1 -lt S2 (S1, S2'den küçük eşit mi?)
- ...



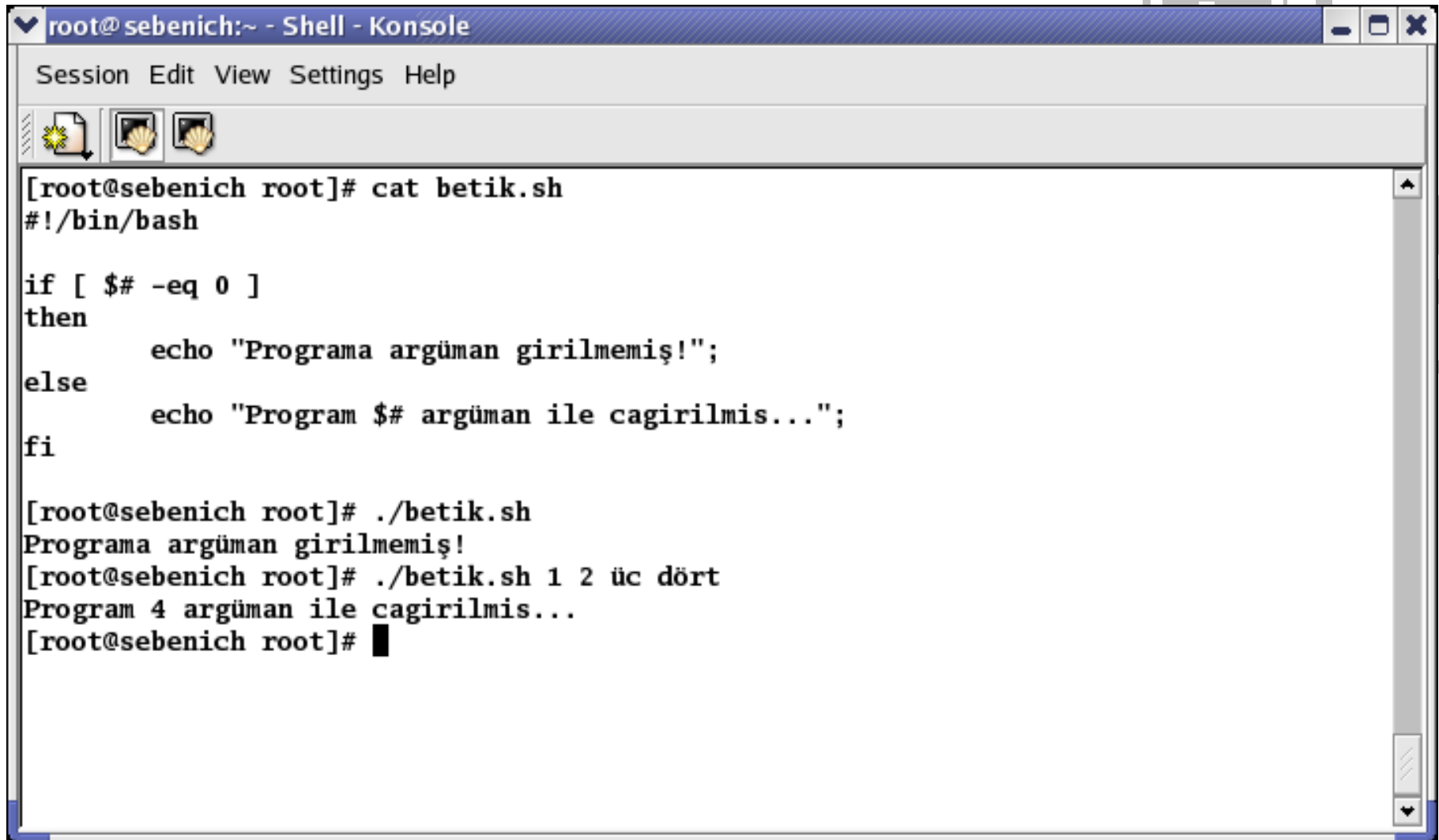
LKD Programlama > Dosya İşletmenleri

- -f dosya (*dosya* dosyası mevcut mu?)
- -d dosya (*dosya* dosyası bir dizin mi?)
- -s dosya (*dosya* dosyası mevcut ve boyutu 0'dan farklı mı?)
- -L dosya (*dosya* sembolik link mi?)
- -S dosya (*dosya* soket mi?)
- ...



Linux'ta Kabuk ve Kabuk Programlama

LKD Programlama > Kontrol Yapıları > if-then-else-fi



```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

[root@sebenich root]# cat betik.sh
#!/bin/bash

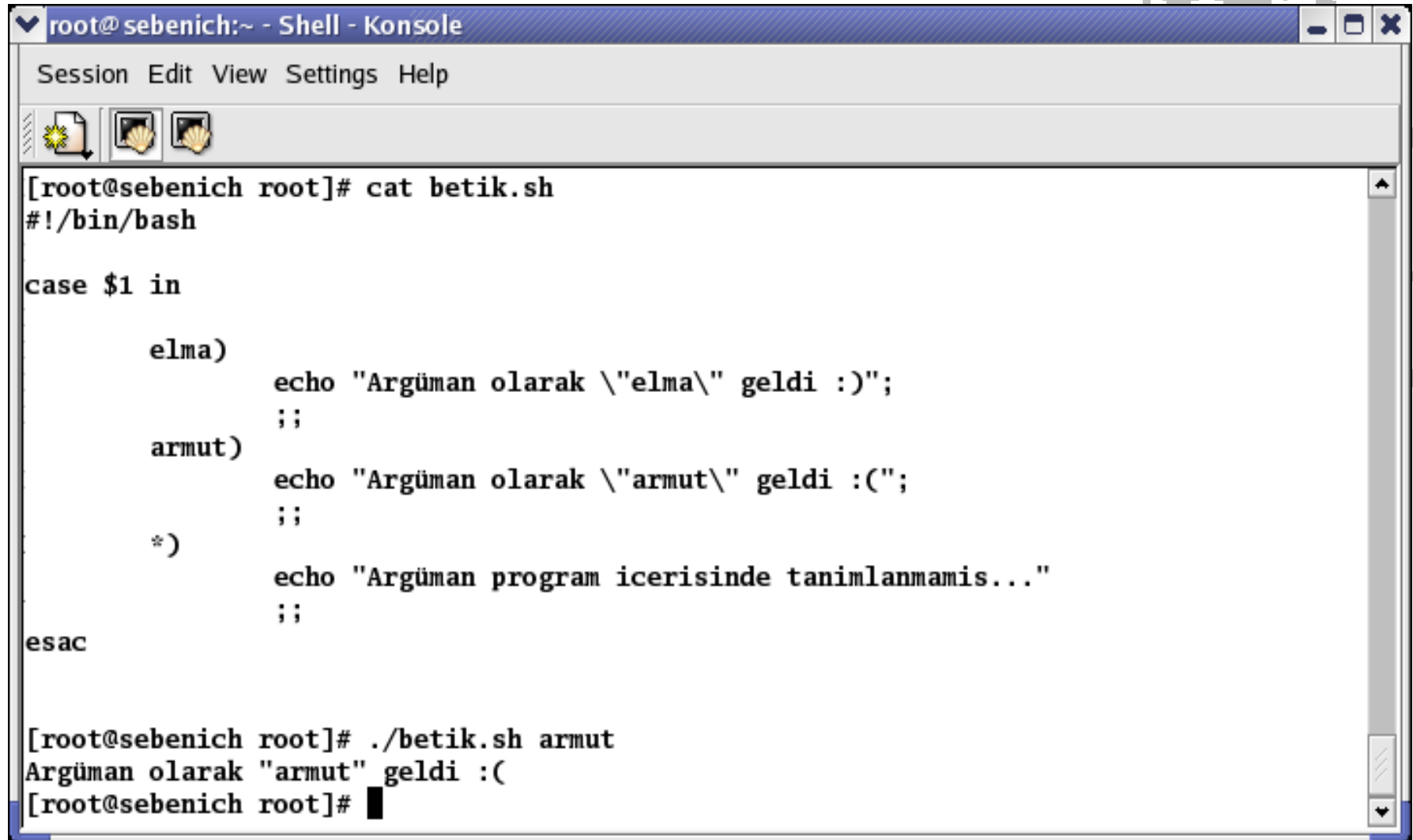
if [ $# -eq 0 ]
then
    echo "Programa argüman girilmemiş!";
else
    echo "Program $# argüman ile cagirilmis...";
fi

[root@sebenich root]# ./betik.sh
Programa argüman girilmemiş!
[root@sebenich root]# ./betik.sh 1 2 üç dört
Program 4 argüman ile cagirilmis...
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Programlama > Kontrol Yapıları > case-esac



```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

[root@sebenich root]# cat betik.sh
#!/bin/bash

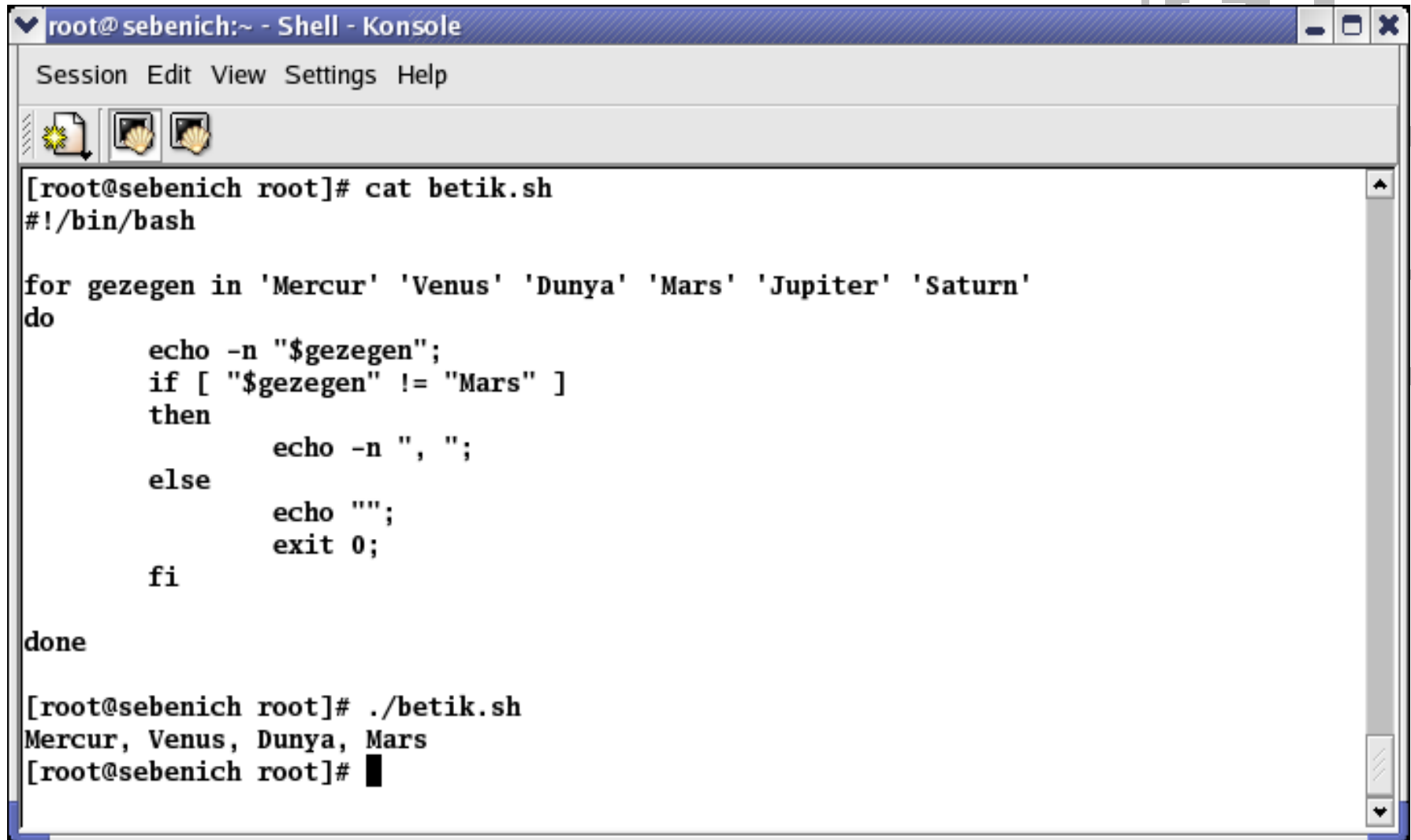
case $1 in
    elma)
        echo "Argüman olarak \"elma\" geldi :)";
        ;;
    armut)
        echo "Argüman olarak \"armut\" geldi :(";
        ;;
    *)
        echo "Argüman program icerisinde tanimlanmamis..."
        ;;
esac

[root@sebenich root]# ./betik.sh armut
Argüman olarak "armut" geldi :(
[root@sebenich root]#
```


Linux'ta Kabuk ve Kabuk Programlama

LKD

Programlama > Kontrol Yapıları > for-do-done



```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

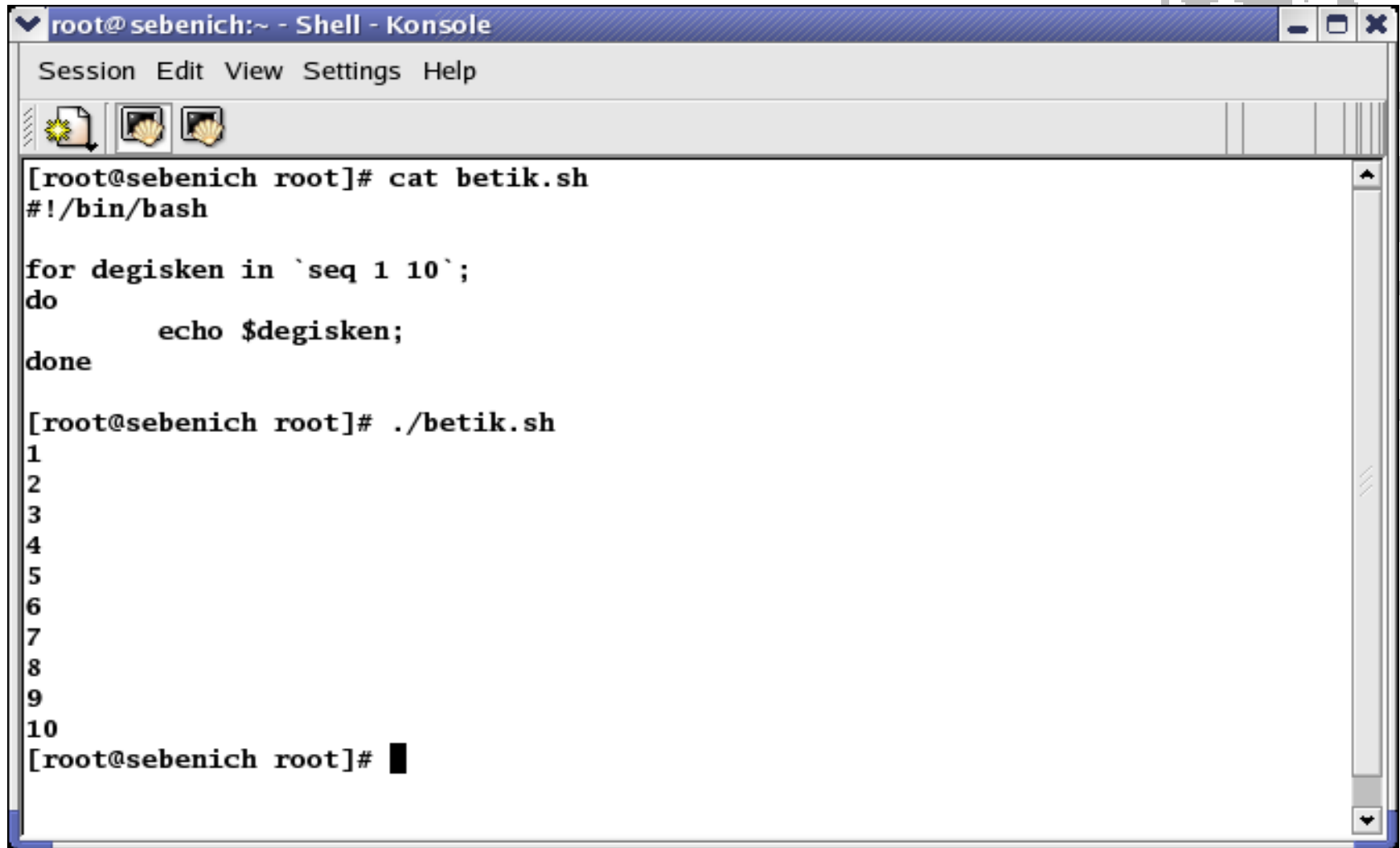
[root@sebenich root]# cat betik.sh
#!/bin/bash

for gezegen in 'Mercur' 'Venus' 'Dunya' 'Mars' 'Jupiter' 'Saturn'
do
    echo -n "$gezegen";
    if [ "$gezegen" != "Mars" ]
    then
        echo -n ", ";
    else
        echo "";
        exit 0;
    fi
done

[root@sebenich root]# ./betik.sh
Mercur, Venus, Dunya, Mars
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD Programlama > Kontrol Yapıları > for-do-done (C Style)



```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

[root@sebenich root]# cat betik.sh
#!/bin/bash

for degisken in `seq 1 10`;
do
    echo $degisken;
done

[root@sebenich root]# ./betik.sh
1
2
3
4
5
6
7
8
9
10
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD

Programlama > Fonksiyon Tanımlama



```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

[root@sebenich root]# cat betik.sh
#!/bin/bash

function programdan_cik
{
    exit 0;
}

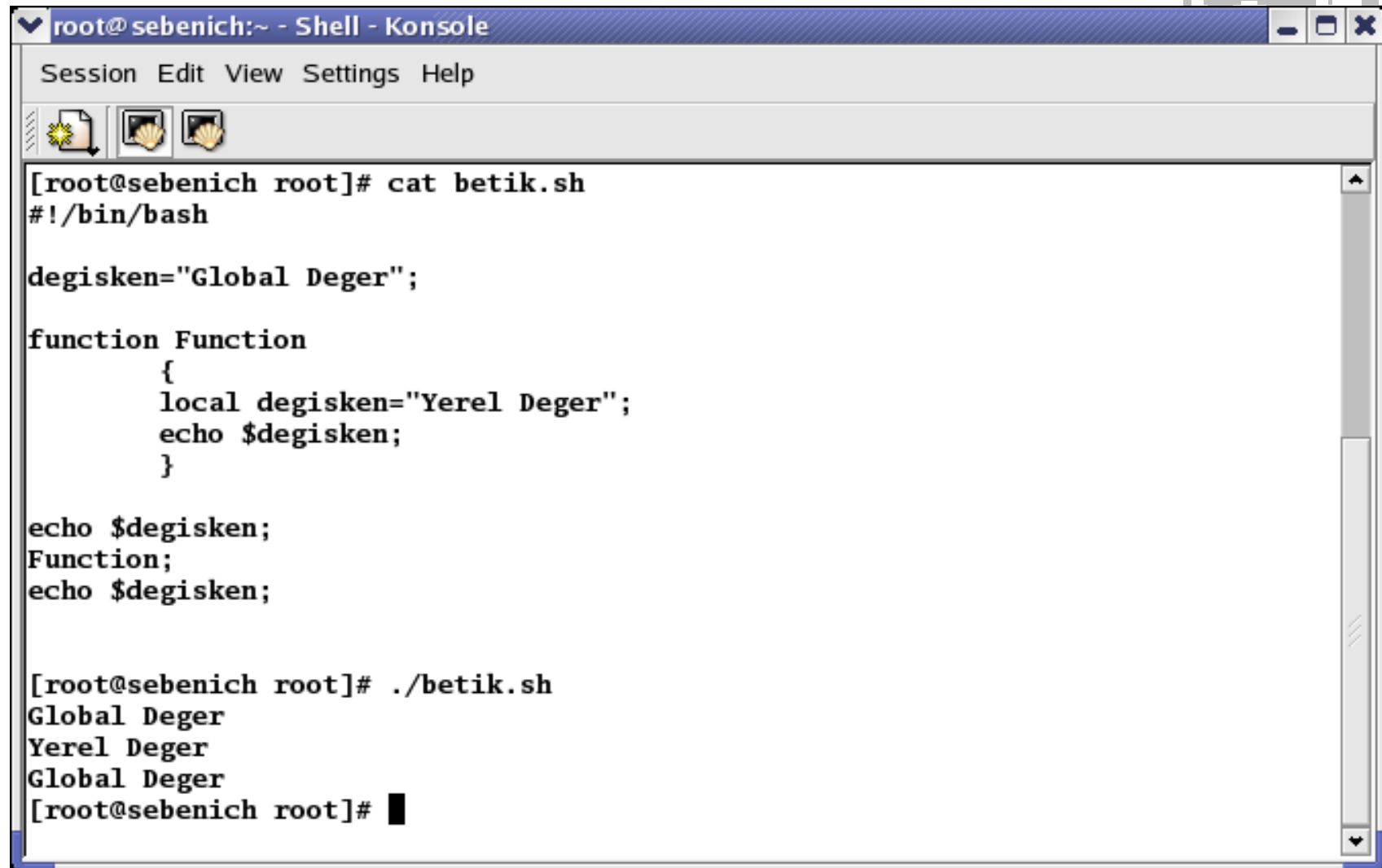
function bir_rica
{
    echo "Savas Istemiyoruz..";
}

bir_rica;
programdan_cik;

[root@sebenich root]# ./betik.sh
Savas Istemiyoruz..
[root@sebenich root]#
```

Linux'ta Kabuk ve Kabuk Programlama

LKD Programlama > Yerel Değişkenler



The screenshot shows a terminal window titled "root@sebenich:~ - Shell - Konsole". The window contains a shell script named "betik.sh" and its execution output. The script defines a global variable "degisken" with the value "Global Deger", a function "Function" that defines a local variable "degisken" with the value "Yerel Deger", and then calls "Function" and echoes the value of "degisken" twice. The execution output shows "Global Deger", "Yerel Deger", and "Global Deger" in sequence.

```
root@sebenich:~ - Shell - Konsole
Session Edit View Settings Help

[root@sebenich root]# cat betik.sh
#!/bin/bash

degisken="Global Deger";

function Function
{
    local degisken="Yerel Deger";
    echo $degisken;
}

echo $degisken;
Function;
echo $degisken;

[root@sebenich root]# ./betik.sh
Global Deger
Yerel Deger
Global Deger
[root@sebenich root]#
```

LKD Programlama > Diğerleri...

- while
- until
- continue
- break
- ...



LKD Programlama > Belgeler

- BASH Programming Intro HOWTO
- Advanced BASH HOWTO
- AWK Programming HOWTO
- Cool Commands mini-HOWTO
- Ve şu anda üniversitemizde hazırlanmakta olan İleri BASH Programlama, AWK Programlama, Sed ve Düzenli İfadeler belgeleri...



Teşekkürler



A. Murat EREN

meren@comu.edu.tr

<http://zion.comu.edu.tr/~evreniz>

<http://seminer.linux.org.tr/>