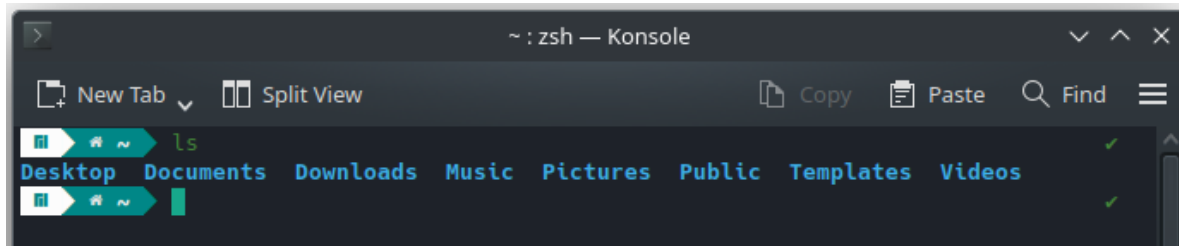


Linux Command list Assessment.

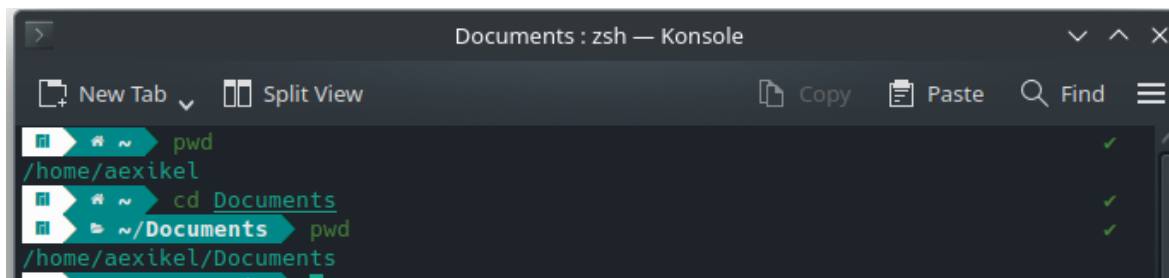
File and Directory Operations:-

- 1) ls: it is a Linux shell command that is used to obtain a list of all filenames in the current directory.



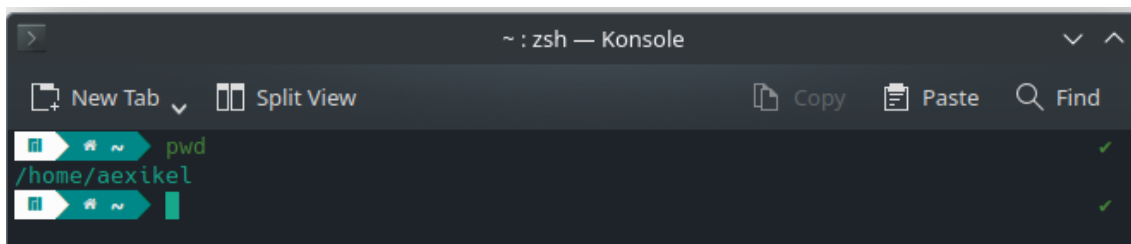
```
> ~ : zsh — Konsole
New Tab Split View Copy Paste Find
~ % ls
Desktop Documents Downloads Music Pictures Public Templates Videos
```

- 2) cd: this is used to change the current directory to another directory.



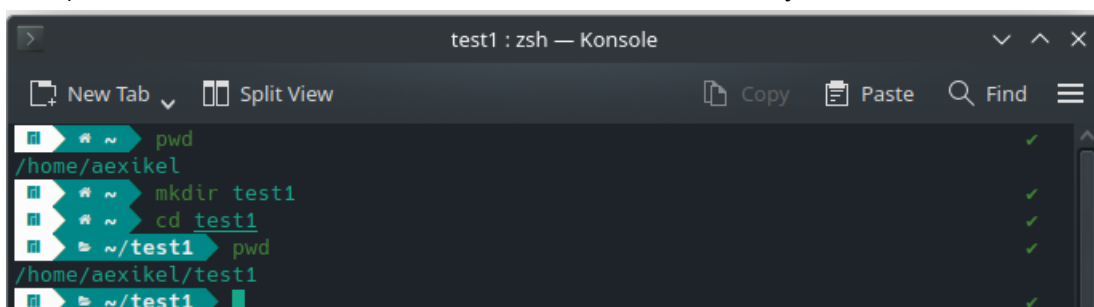
```
> Documents : zsh — Konsole
New Tab Split View Copy Paste Find
~ % pwd
/home/aexikel
~ % cd Documents
~/Documents % pwd
/home/aexikel/Documents
```

- 3) pwd: this displays the Logical or Symbolic path of the working directory.



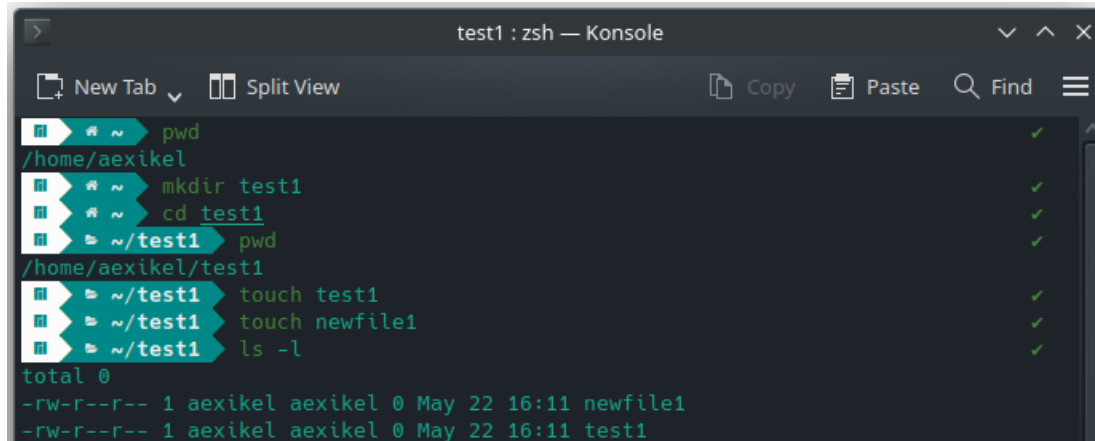
```
> ~ : zsh — Konsole
New Tab Split View Copy Paste Find
~ % pwd
/home/aexikel
```

- 4) mkdir: this command is used to create a new directory.



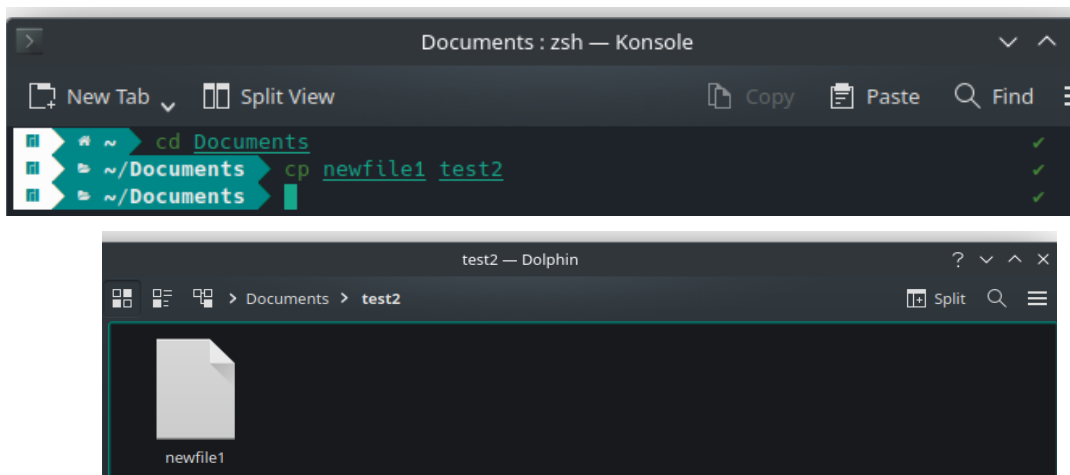
```
> test1 : zsh — Konsole
New Tab Split View Copy Paste Find
~ % pwd
/home/aexikel
~ % mkdir test1
~ % cd test1
~/test1 % pwd
/home/aexikel/test1
~/test1 %
```

- 5) touch: this command is used to create an empty file and change and modify timestamps of a file.

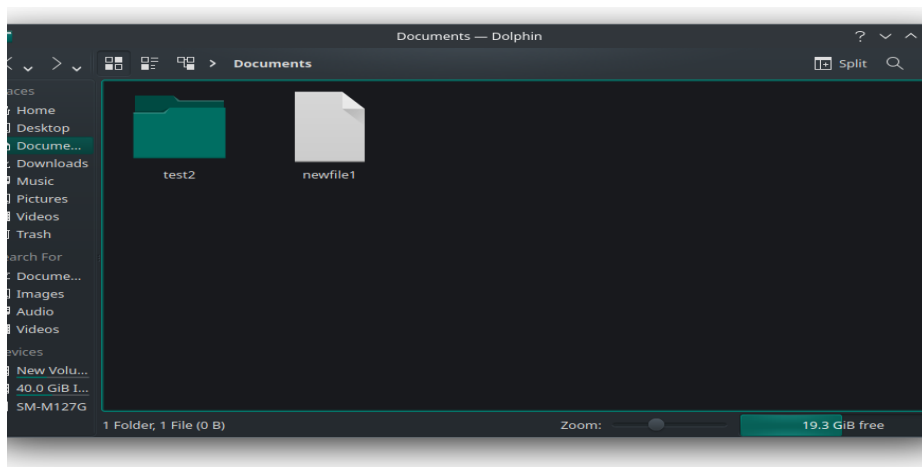


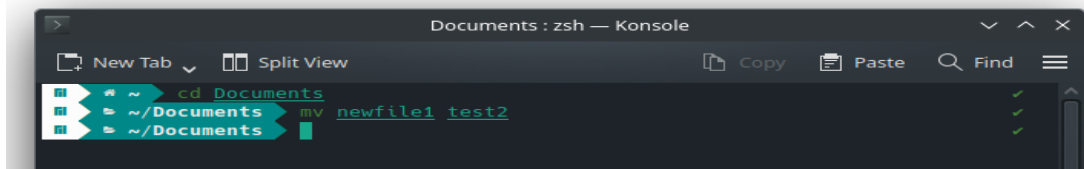
```
test1 : zsh — Konsole
New Tab Split View Copy Paste Find
~$ pwd
/home/aexikel
~$ mkdir test1
~$ cd test1
~/test1$ pwd
/home/aexikel/test1
~/test1$ touch test1
~/test1$ touch newfile1
~/test1$ ls -l
total 0
-rw-r--r-- 1 aexikel aexikel 0 May 22 16:11 newfile1
-rw-r--r-- 1 aexikel aexikel 0 May 22 16:11 test1
```

- 6) cp: this command is used to copy files and directories.



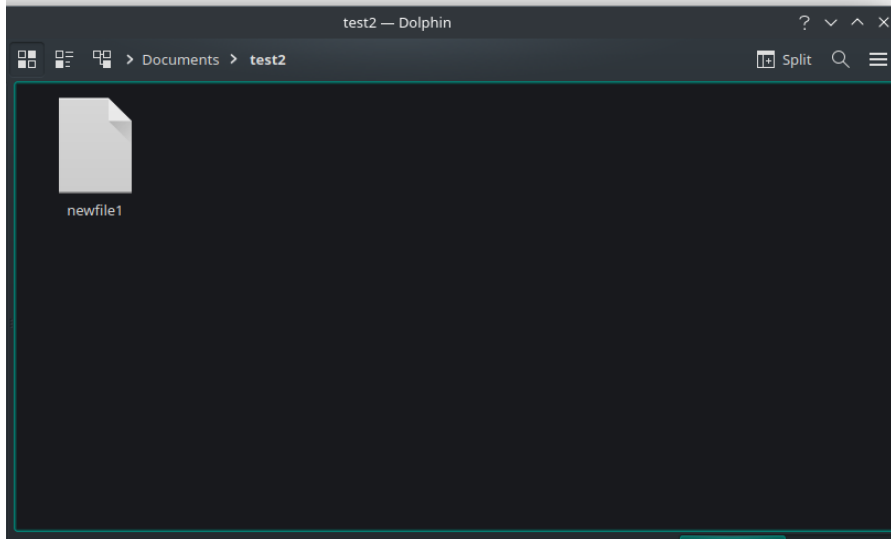
- 7) mv: this command is used to move files.



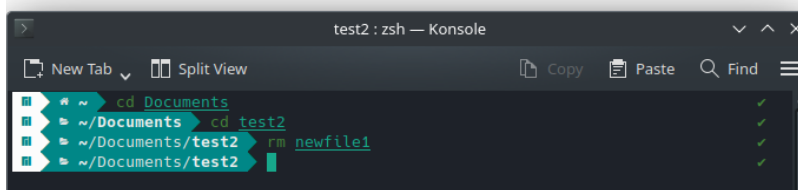
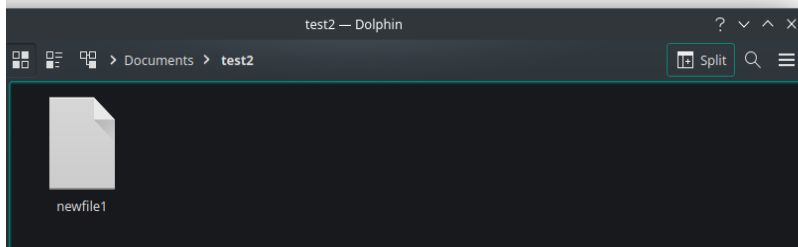


A terminal window titled "Documents : zsh — Konsole" showing a sequence of commands. The first command is `cd Documents`, which changes the current directory to `~/Documents`. The second command is `mv newfile1 test2`, which moves the file `newfile1` to a directory named `test2`. Both commands are followed by green checkmarks, indicating successful execution.

```
Documents : zsh — Konsole
New Tab Split View Copy Paste Find
~ Documents
~ /Documents mv newfile1 test2 ✓
~ /Documents ✓
```

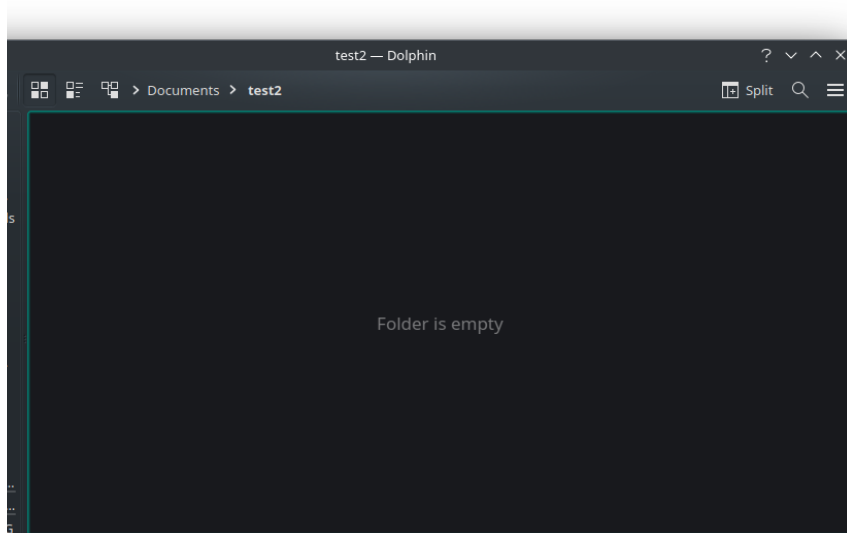


8) `rm`: this command is used to remove files and directories.

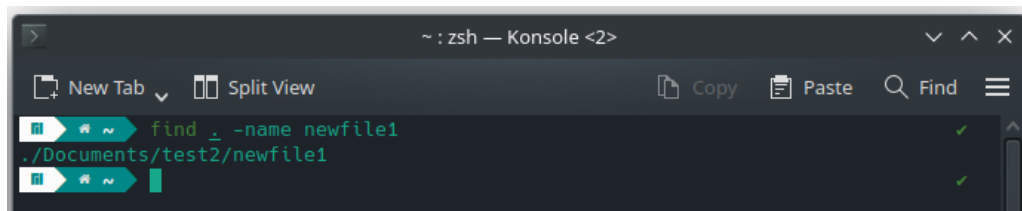


A terminal window titled "test2 : zsh — Konsole" showing a sequence of commands. The first command is `cd Documents`, which changes the current directory to `~/Documents`. The second command is `cd test2`, which changes the current directory to `~/Documents/test2`. The third command is `rm newfile1`, which removes the file `newfile1`. All three commands are followed by green checkmarks, indicating successful execution.

```
test2 : zsh — Konsole
New Tab Split View Copy Paste Find
~ Documents
~ /Documents cd test2 ✓
~ /Documents/test2 rm newfile1 ✓
~ /Documents/test2 ✓
```

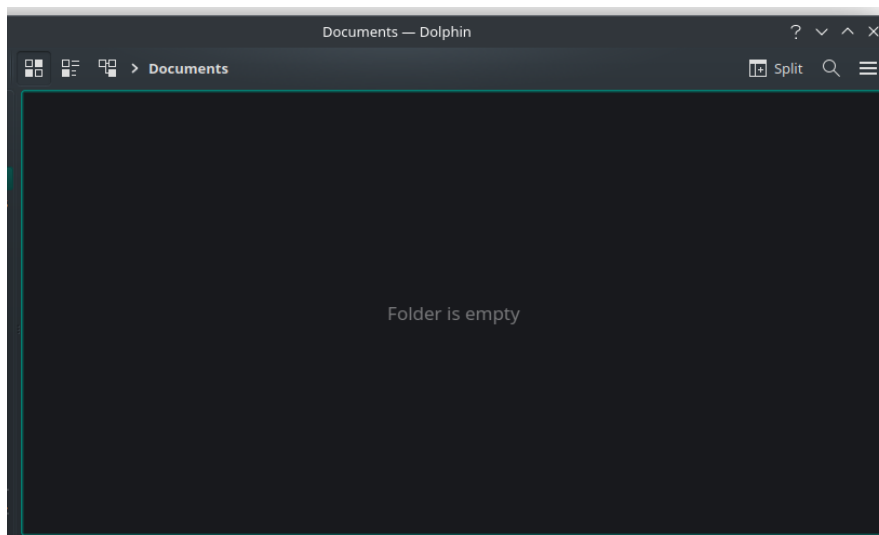


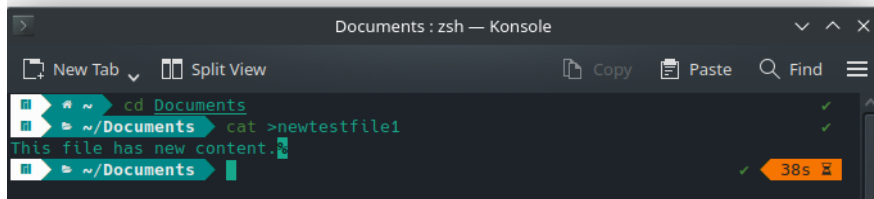
- 9) find: this command is used to search for files or directories.



File Viewing and Editing:

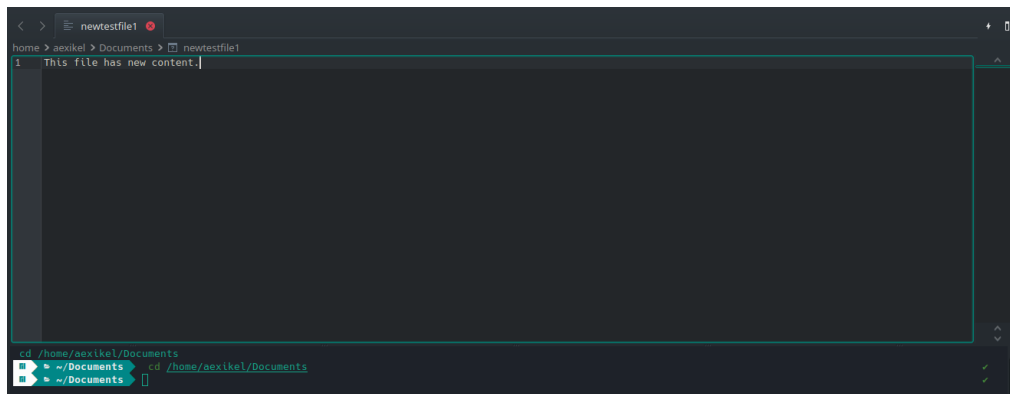
- 1) cat: this command is used to concatenate and display files.





A terminal window titled "Documents : zsh — Konsole". The command bar shows "cd Documents" and "cat >newtestfile1". The output shows "this file has new content." and a status bar indicating "38s".

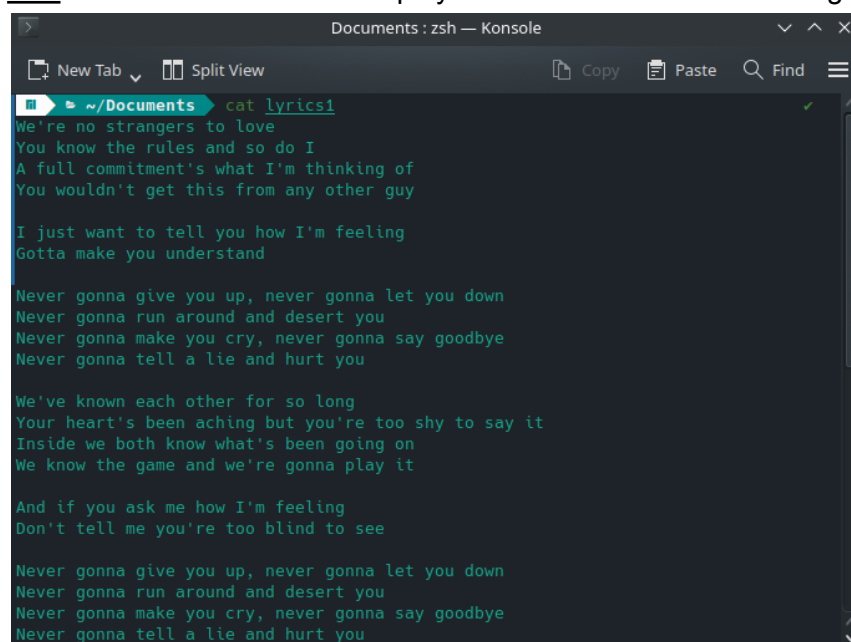
```
Documents : zsh — Konsole
New Tab Split View Copy Paste Find
~ cd Documents
~/Documents cat >newtestfile1
this file has new content.
~/Documents
```



A terminal window titled "newtestfile1". The command bar shows "cat newtestfile1". The output shows "This file has new content." and a status bar indicating "38s".

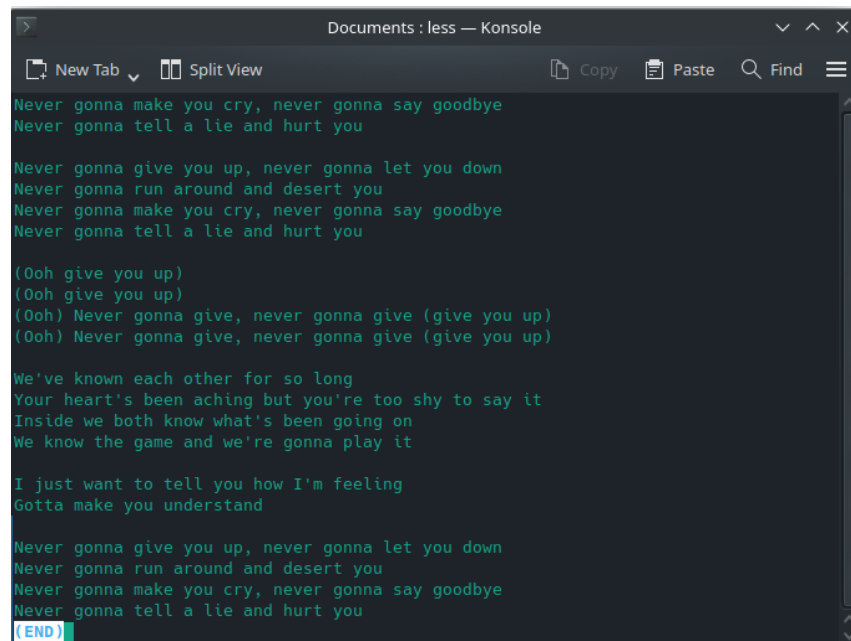
```
newtestfile1
home > aexikel > Documents > newtestfile1
1 This file has new content.
cd /home/aexikel/Documents
~/Documents cd /home/aexikel/Documents
```

1) less: this command lets us display the contents of a file in an organised way.



A terminal window titled "Documents : zsh — Konsole". The command bar shows "cat lyrics1". The output shows the lyrics of "I Wanna Dance with Somebody" by Diana Ross, displayed in a formatted way with line numbers and a status bar indicating "38s".

```
Documents : zsh — Konsole
New Tab Split View Copy Paste Find
~/Documents cat lyrics1
1 We're no strangers to love
2 You know the rules and so do I
3 A full commitment's what I'm thinking of
4 You wouldn't get this from any other guy
5
6 I just want to tell you how I'm feeling
7 Gotta make you understand
8
9 Never gonna give you up, never gonna let you down
10 Never gonna run around and desert you
11 Never gonna make you cry, never gonna say goodbye
12 Never gonna tell a lie and hurt you
13
14 We've known each other for so long
15 Your heart's been aching but you're too shy to say it
16 Inside we both know what's been going on
17 We know the game and we're gonna play it
18
19 And if you ask me how I'm feeling
20 Don't tell me you're too blind to see
21
22 Never gonna give you up, never gonna let you down
23 Never gonna run around and desert you
24 Never gonna make you cry, never gonna say goodbye
25 Never gonna tell a lie and hurt you
```



```
Documents : less — Konsole
New Tab Split View Copy Paste Find
Never gonna make you cry, never gonna say goodbye
Never gonna tell a lie and hurt you

Never gonna give you up, never gonna let you down
Never gonna run around and desert you
Never gonna make you cry, never gonna say goodbye
Never gonna tell a lie and hurt you

(Ooh give you up)
(Ooh give you up)
(Ooh) Never gonna give, never gonna give (give you up)
(Ooh) Never gonna give, never gonna give (give you up)

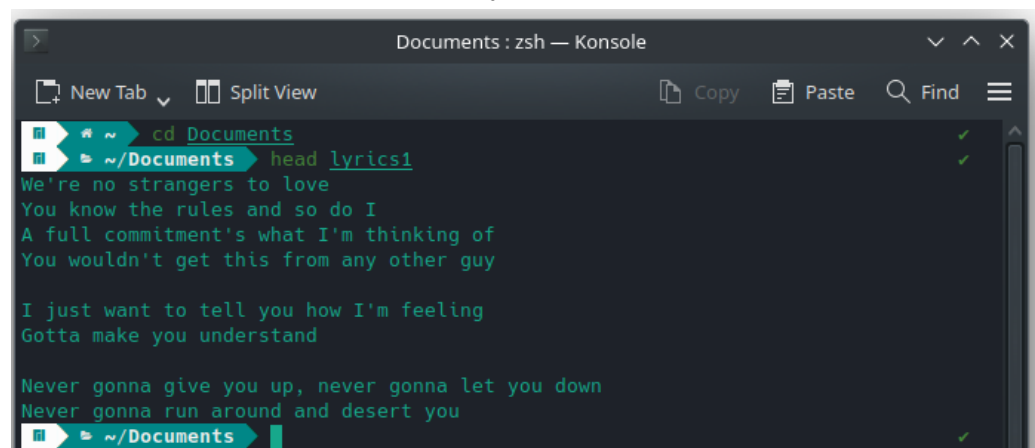
We've known each other for so long
Your heart's been aching but you're too shy to say it
Inside we both know what's been going on
We know the game and we're gonna play it

I just want to tell you how I'm feeling
Gotta make you understand

Never gonna give you up, never gonna let you down
Never gonna run around and desert you
Never gonna make you cry, never gonna say goodbye
Never gonna tell a lie and hurt you
(END)
```

- Down arrow key for goto down.
- Up arrow key for goto up.
- Move page by page(downwards) then types Space key.
- Move page by page(upwards) then type the b key.
- End of the file then presses Shift+G.
- Top of the file then presses g.

2) head: this command is used to display the first part of a file.

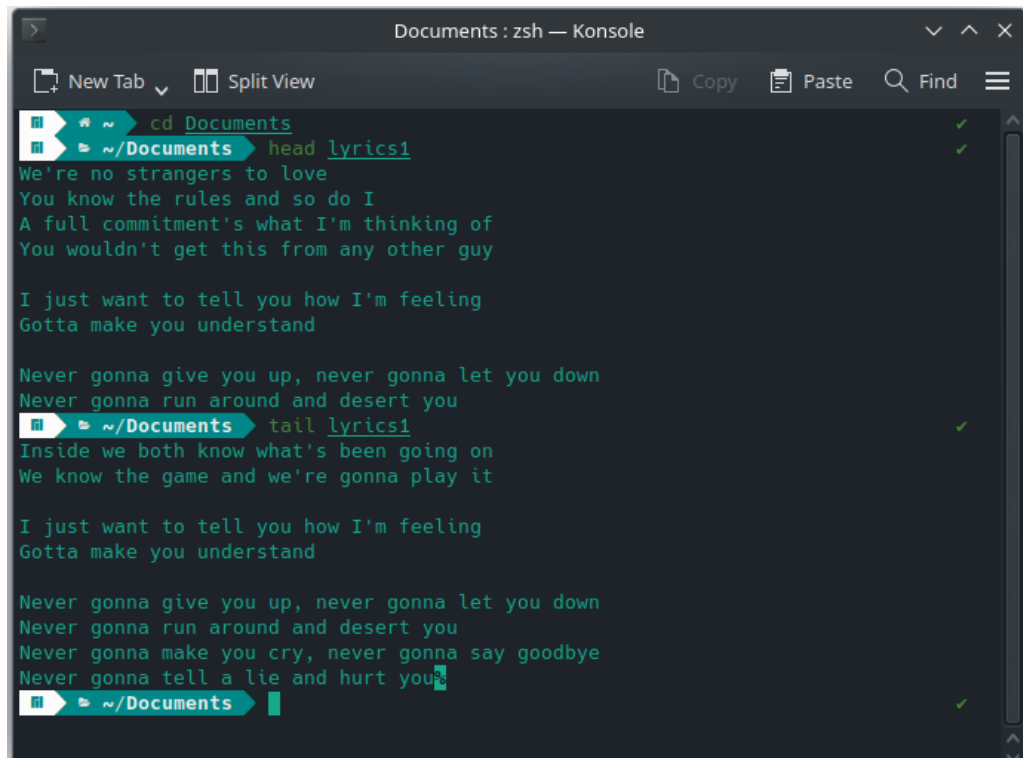


```
Documents : zsh — Konsole
New Tab Split View Copy Paste Find
~ cd Documents
~/Documents head lyrics1
We're no strangers to love
You know the rules and so do I
A full commitment's what I'm thinking of
You wouldn't get this from any other guy

I just want to tell you how I'm feeling
Gotta make you understand

Never gonna give you up, never gonna let you down
Never gonna run around and desert you
~/Documents
```

3) tail: this command is used to display the end part of a file.



A terminal window titled "Documents : zsh — Konsole" showing a series of commands and their outputs. The user navigates to the "Documents" directory and uses "head" and "tail" to view parts of a file named "lyrics1". The file contains lyrics from the song "I Wanna Dance with Somebody".

```
>
New Tab Split View Copy Paste Find
~ cd Documents
~/Documents head lyrics1
We're no strangers to love
You know the rules and so do I
A full commitment's what I'm thinking of
You wouldn't get this from any other guy

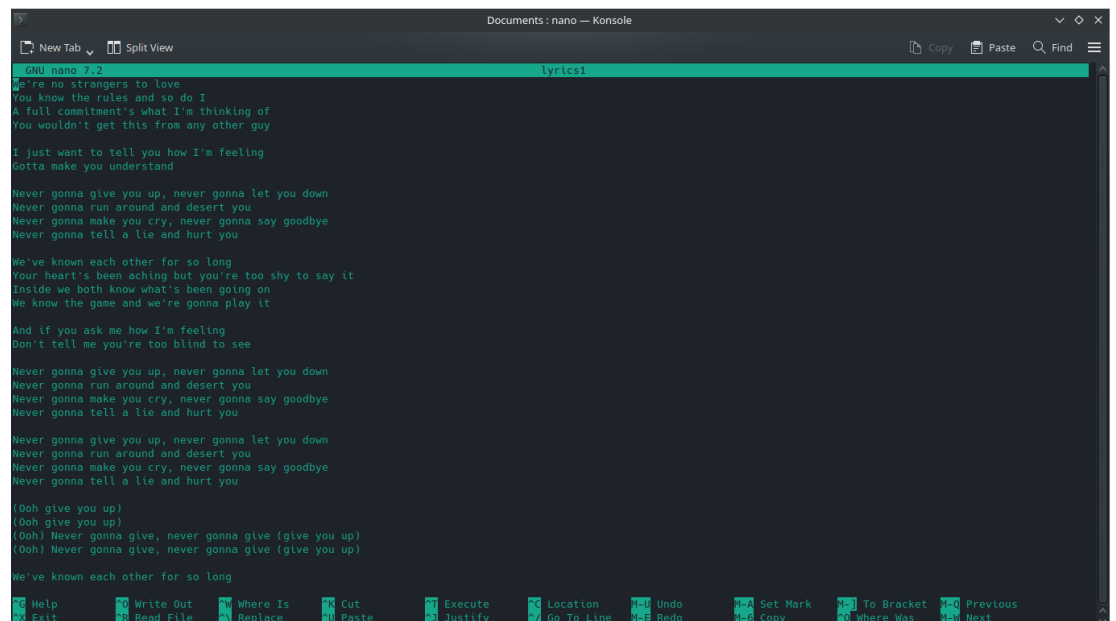
I just want to tell you how I'm feeling
Gotta make you understand

Never gonna give you up, never gonna let you down
Never gonna run around and desert you
~/Documents tail lyrics1
Inside we both know what's been going on
We know the game and we're gonna play it

I just want to tell you how I'm feeling
Gotta make you understand

Never gonna give you up, never gonna let you down
Never gonna run around and desert you
Never gonna make you cry, never gonna say goodbye
Never gonna tell a lie and hurt you
~/Documents
```

5) nano: this is a simple text editor. It is used to create files.



A terminal window titled "Documents : nano — Konsole" showing the nano text editor editing the file "lyrics1". The editor displays the same lyrics as the previous terminal window. The bottom of the screen shows the nano editor's command palette with various shortcuts.

```
GNU nano 7.2 lyrics1
We're no strangers to love
You know the rules and so do I
A full commitment's what I'm thinking of
You wouldn't get this from any other guy

I just want to tell you how I'm feeling
Gotta make you understand

Never gonna give you up, never gonna let you down
Never gonna run around and desert you
Never gonna make you cry, never gonna say goodbye
Never gonna tell a lie and hurt you

We've known each other for so long
Your heart's been aching but you're too shy to say it
Inside we both know what's been going on
We know the game and we're gonna play it

And if you ask me how I'm feeling
Don't tell me you're too blind to see

Never gonna give you up, never gonna let you down
Never gonna run around and desert you
Never gonna make you cry, never gonna say goodbye
Never gonna tell a lie and hurt you

Never gonna give you up, never gonna let you down
Never gonna run around and desert you
Never gonna make you cry, never gonna say goodbye
Never gonna tell a lie and hurt you

(Doh give you up)
(Doh give you up)
(Doh) Never gonna give, never gonna give (give you up)
(Doh) Never gonna give, never gonna give (give you up)

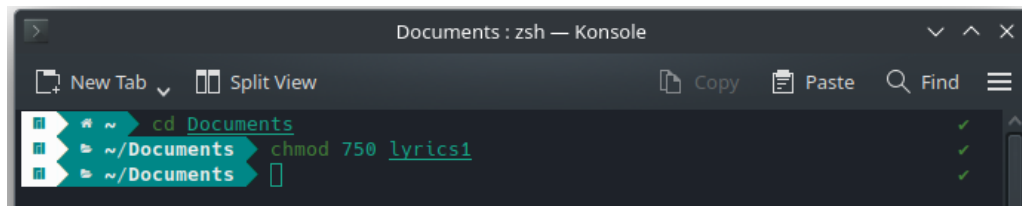
We've known each other for so long

```

Help Write Out Where Is Cut Execute Location Undo Set Mark To Bracket Previous
Exit Read File Replace Paste Justify Go To Line Redo Copy Where Was Next

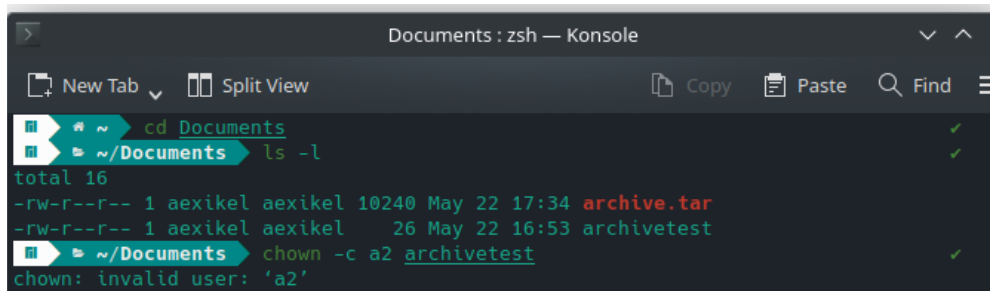
File Permissions:-

1) chmod: this command lets us change permissions of a file.

A terminal window titled 'Documents : zsh — Konsole' showing a sequence of commands: 'cd Documents', 'chmod 750 lyrics1', and a prompt. The first two commands are highlighted with green checkmarks on the right.

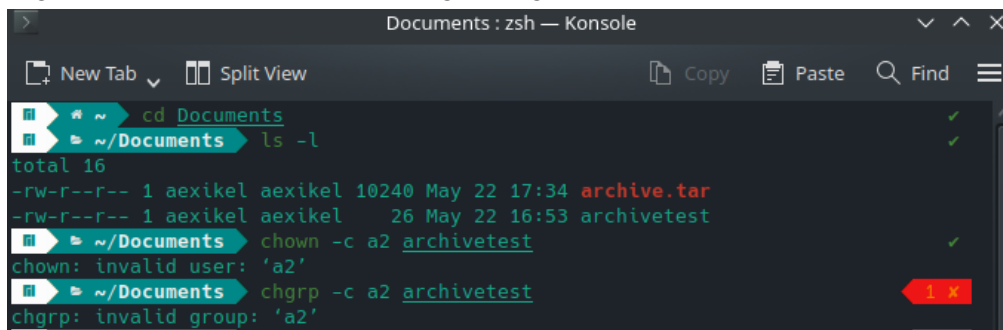
```
> Documents : zsh — Konsole
New Tab Split View Copy Paste Find
~ cd Documents ✓
~/Documents chmod 750 lyrics1 ✓
~/Documents
```

2) chown: this command lets us change the user ownership.

A terminal window titled 'Documents : zsh — Konsole' showing 'cd Documents', 'ls -l', and 'chown -c a2 archivetest'. The 'ls -l' output shows two files: 'archive.tar' and 'archivetest'. The 'chown' command is highlighted with a green checkmark, while the error message 'chown: invalid user: 'a2'' is not.

```
> Documents : zsh — Konsole
New Tab Split View Copy Paste Find
~ cd Documents ✓
~/Documents ls -l ✓
total 16
-rw-r--r-- 1 aexikel aexikel 10240 May 22 17:34 archive.tar
-rw-r--r-- 1 aexikel aexikel 26 May 22 16:53 archivetest
~/Documents chown -c a2 archivetest ✓
chown: invalid user: 'a2'
```

3) chgrp: this command lets us change the group ownership.

A terminal window titled 'Documents : zsh — Konsole' showing 'cd Documents', 'ls -l', 'chown -c a2 archivetest', and 'chgrp -c a2 archivetest'. The 'chown' command is highlighted with a green checkmark, while the 'chgrp' command and its error message 'chgrp: invalid group: 'a2'' are highlighted with a red '1 x' icon.

```
> Documents : zsh — Konsole
New Tab Split View Copy Paste Find
~ cd Documents ✓
~/Documents ls -l ✓
total 16
-rw-r--r-- 1 aexikel aexikel 10240 May 22 17:34 archive.tar
-rw-r--r-- 1 aexikel aexikel 26 May 22 16:53 archivetest
~/Documents chown -c a2 archivetest ✓
chown: invalid user: 'a2'
~/Documents chgrp -c a2 archivetest 1 x
chgrp: invalid group: 'a2'
```

File Compression and Archiving:-

1) tar: this command lets us archive files.


```
total 12
-rwxr-x--- 1 aexikel aexikel 1537 May 22 17:03 archivetest
-rw-r--r-- 1 aexikel aexikel 1538 May 22 17:19 lyrics1.save
-rw-r--r-- 1 aexikel aexikel 26 May 22 16:53 newtestfile1
~/Documents mv lyrics1.save archivetest ✓
~/Documents mv newtestfile1 archivetest ✓
~/Documents ls -l ✓
total 4
-rw-r--r-- 1 aexikel aexikel 26 May 22 16:53 archivetest
~/Documents tar cvf archive.tar archivetest ✓
~/Documents ls -l ✓
total 16
-rw-r--r-- 1 aexikel aexikel 10240 May 22 17:34 archive.tar
-rw-r--r-- 1 aexikel aexikel 26 May 22 16:53 archivetest
~/Documents
```

2) gzip: this command lets us compress files.

```
Documents : zsh — Konsole
New Tab Split View Copy Paste Find
~/Documents ls -l ✓
total 16
-rw-r--r-- 1 aexikel aexikel 10240 May 22 17:34 archive.tar
-rw-r--r-- 1 aexikel aexikel 26 May 22 16:53 archivetest
~/Documents gzip archive.tar ✓
~/Documents ls -l ✓
total 8
-rw-r--r-- 1 aexikel aexikel 161 May 22 17:34 archive.tar.gz
-rw-r--r-- 1 aexikel aexikel 26 May 22 16:53 archivetest
~/Documents
```

3) gunzip: this command allows us to unzip the compressed file.

```
Documents : zsh — Konsole
New Tab Split View Copy Paste Find
~/Documents ls -l ✓
total 16
-rw-r--r-- 1 aexikel aexikel 10240 May 22 17:34 archive.tar
-rw-r--r-- 1 aexikel aexikel 26 May 22 16:53 archivetest
~/Documents gzip archive.tar ✓
~/Documents ls -l ✓
total 8
-rw-r--r-- 1 aexikel aexikel 161 May 22 17:34 archive.tar.gz
-rw-r--r-- 1 aexikel aexikel 26 May 22 16:53 archivetest
~/Documents gunzip archive.tar.gz ✓
~/Documents ls -l ✓
total 16
-rw-r--r-- 1 aexikel aexikel 10240 May 22 17:34 archive.tar
-rw-r--r-- 1 aexikel aexikel 26 May 22 16:53 archivetest
~/Documents
```

Process Management:-

1) ps: this command lists the running process in the system.

```
~ : zsh — Konsole
New Tab Split View Copy Paste Find
pwd
/home/aexikel
ps
  PID TTY          TIME CMD
 19485 pts/1    00:00:00 zsh
 19491 pts/1    00:00:00 zsh
 19499 pts/1    00:00:00 zsh
 19500 pts/1    00:00:00 zsh
 19502 pts/1    00:00:00 gitstatusd
 19657 pts/1    00:00:00 ps
```

2) top: this command displays real-time system info and processes.

```
~ : top — Konsole
New Tab Split View Copy Paste Find
top - 17:52:21 up 2:34, 3 users, load average: 0.86, 1.47, 1.67
Tasks: 198 total, 3 running, 195 sleeping, 0 stopped, 0 zombie
%Cpu(s): 3.5 us, 1.2 sy, 0.0 ni, 94.8 id, 0.0 wa, 0.3 hi, 0.3 si, 0.0 st
MiB Mem : 7878.1 total, 1709.4 free, 2661.7 used, 3506.9 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used. 4562.0 avail Mem
```

4) kill: this command is used to kill/terminate processes.

```
~ : zsh — Konsole
New Tab Split View Copy Paste Find
kill 13592
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1076	aexikel	20	0	12.2g	841768	255152	S	23.9	10.4	90:52.61	firefox
16288	aexikel	20	0	3068036	364280	132340	S	20.9	4.5	3:35.76	Isolated +
526	root	20	0	511164	181632	152632	S	13.3	2.3	10:26.47	Xorg
688	aexikel	20	0	1865044	176596	117944	S	11.0	2.2	7:59.29	kwin_x11
19734	aexikel	20	0	1034928	130648	106096	S	10.0	1.6	0:04.71	konsole
13592	aexikel	20	0	3250704	265180	148780	S	3.3	3.3	0:43.96	spotify
898	aexikel	9	-11	2345060	35420	25776	S	3.0	0.4	0:27.96	pulseaudio
13640	aexikel	20	0	49.9g	262940	103924	S	2.0	3.3	0:55.34	spotify
714	aexikel	20	0	3333308	430372	164708	S	0.7	5.3	2:54.92	plasma+sh
471	root	20	0	407432	20596	17664	S	0.3	0.3	0:09.52	NetworkMa+
13613	aexikel	20	0	1511516	166836	97340	S	0.3	2.1	0:12.10	spotify
19983	aexikel	20	0	10768	4296	3432	R	0.3	0.1	0:00.02	top

4) bg: this command lets us run processes in the background.

A terminal window titled '~ : zsh — Konsole' showing the output of the 'ps' command. The terminal has a menu bar with 'New Tab', 'Split View', 'Copy', 'Paste', 'Find', and a hamburger menu. The output of 'ps' is as follows:

PID	TTY	TIME	CMD
2753	pts/1	00:00:05	zsh
2759	pts/1	00:00:00	zsh
2767	pts/1	00:00:00	zsh
2769	pts/1	00:00:00	zsh
2770	pts/1	00:00:00	gitstatusd
6480	pts/1	00:00:00	ps

Below the table, the command 'bg' is entered, resulting in the message 'bg: no current job'.

5) fg: this command lets us bring background processes to the foreground.

A terminal window titled '~ : zsh — Konsole' showing the output of the 'fg' command. The terminal has a menu bar with 'New Tab', 'Split View', 'Copy', 'Paste', 'Find', and a hamburger menu. The output of 'fg' is as follows:

PID	TTY	TIME	CMD
2753	pts/1	00:00:06	zsh
2759	pts/1	00:00:00	zsh
2767	pts/1	00:00:00	zsh
2769	pts/1	00:00:00	zsh
2770	pts/1	00:00:00	gitstatusd
6538	pts/1	00:00:00	ps

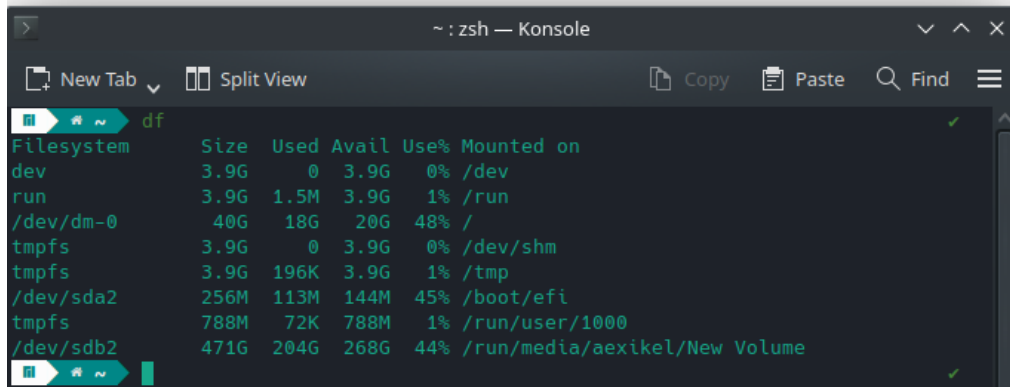
Below the table, the command 'fg' is entered, resulting in the message 'fg: no current job'.

System Information:

1) uname: this command outputs the system info.

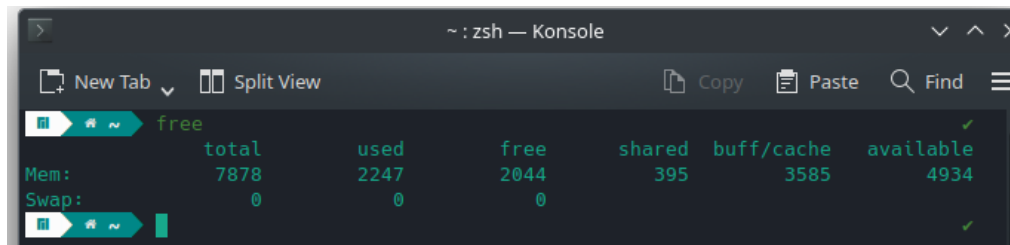
A terminal window titled '~ : zsh — Konsole' showing the output of the 'uname' command. The terminal has a menu bar with 'New Tab', 'Split View', 'Copy', 'Paste', 'Find', and a hamburger menu. The output of 'uname' is 'Linux'.

2) `df`: this command displays the disk space usage.



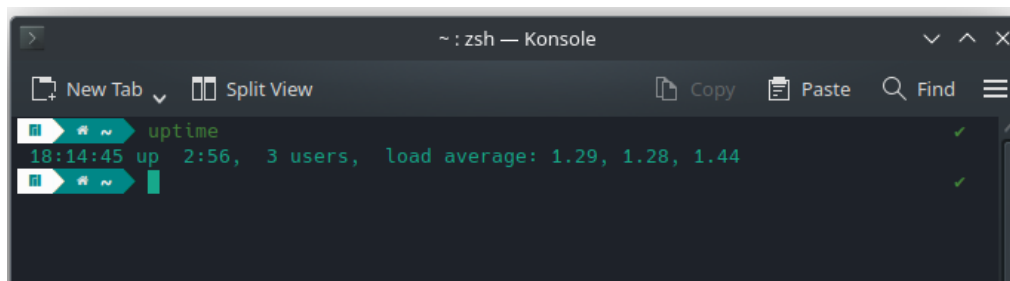
```
~ : zsh — Konsole
New Tab Split View Copy Paste Find
df
Filesystem      Size  Used Avail Use% Mounted on
dev              3.9G   0    3.9G   0% /dev
run              3.9G  1.5M   3.9G   1% /run
/dev/dm-0        40G   18G   20G  48% /
tmpfs            3.9G   0    3.9G   0% /dev/shm
tmpfs            3.9G  196K   3.9G   1% /tmp
/dev/sda2        256M  113M  144M  45% /boot/efi
tmpfs            788M   72K   788M   1% /run/user/1000
/dev/sdb2        471G  204G  268G  44% /run/media/aexikel/New Volume
```

3) `free`: this command displays the memory usage.



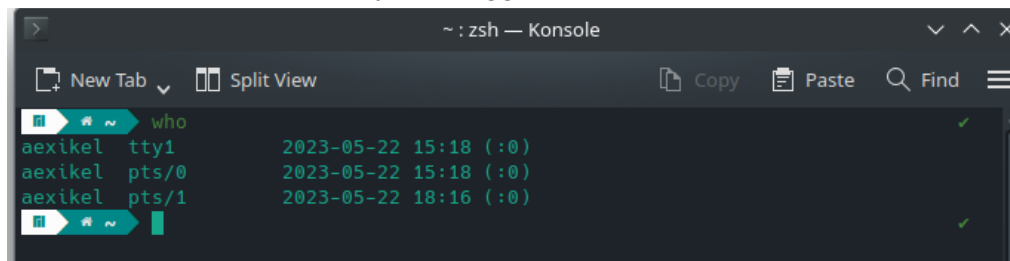
```
~ : zsh — Konsole
New Tab Split View Copy Paste Find
free
total      used      free      shared  buff/cache  available
Mem:       7878      2247      2044       395      3585      4934
Swap:      0         0         0
```

4) `uptime`: this command shows the system uptime.



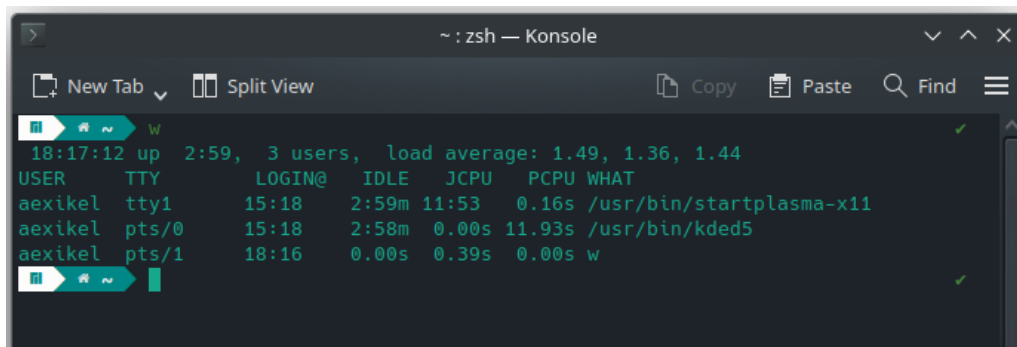
```
~ : zsh — Konsole
New Tab Split View Copy Paste Find
uptime
18:14:45 up 2:56, 3 users, load average: 1.29, 1.28, 1.44
```

5) `who`: this command displays the logged in users.



```
~ : zsh — Konsole
New Tab Split View Copy Paste Find
who
aexikel tty1      2023-05-22 15:18 (:0)
aexikel pts/0      2023-05-22 15:18 (:0)
aexikel pts/1      2023-05-22 18:16 (:0)
```

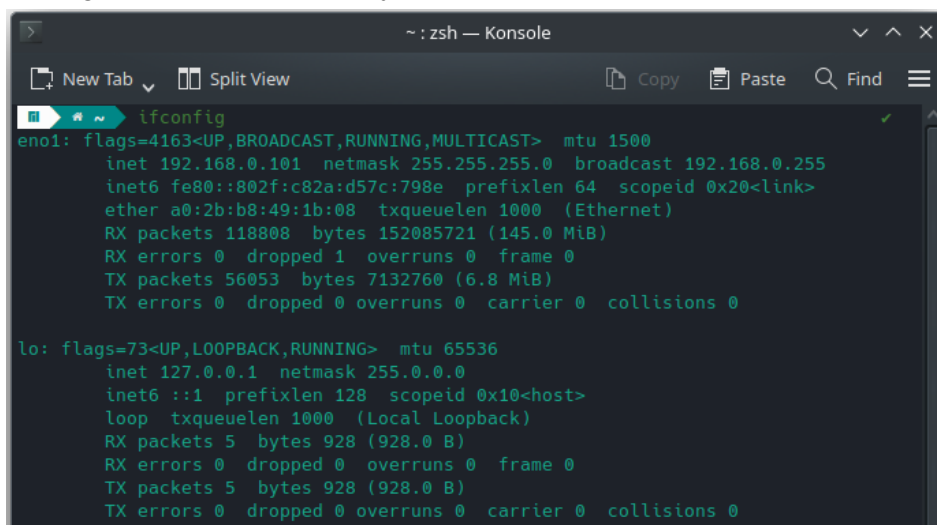
6) `w`: this command displays the logged in user and their activities.



```
~ : zsh — Konsole
New Tab Split View Copy Paste Find
18:17:12 up 2:59, 3 users, load average: 1.49, 1.36, 1.44
USER      TTY      LOGIN@   IDLE   JCPU   PCPU   WHAT
aexikel   tty1     15:18    2:59m  11:53   0.16s  /usr/bin/startplasma-x11
aexikel   pts/0    15:18    2:58m  0.00s   11.93s /usr/bin/kded5
aexikel   pts/1    18:16    0.00s   0.39s   0.00s  w
```

Networking:-

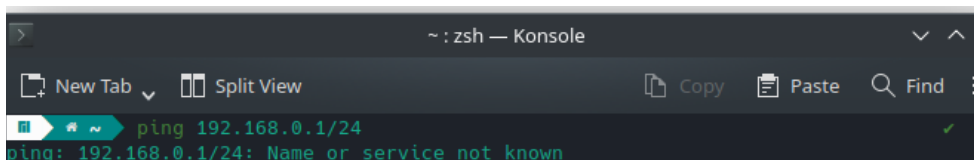
- 1) Ifconfig: this command displays the connected network interface.



```
~ : zsh — Konsole
New Tab Split View Copy Paste Find
ifconfig
eno1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.101 netmask 255.255.255.0 broadcast 192.168.0.255
    inet6 fe80::802f:c82a:d57c:798e prefixlen 64 scopeid 0x20<link>
    ether a0:2b:b8:49:1b:08 txqueuelen 1000 (Ethernet)
    RX packets 118808 bytes 152085721 (145.0 MiB)
    RX errors 0 dropped 1 overruns 0 frame 0
    TX packets 56053 bytes 7132760 (6.8 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

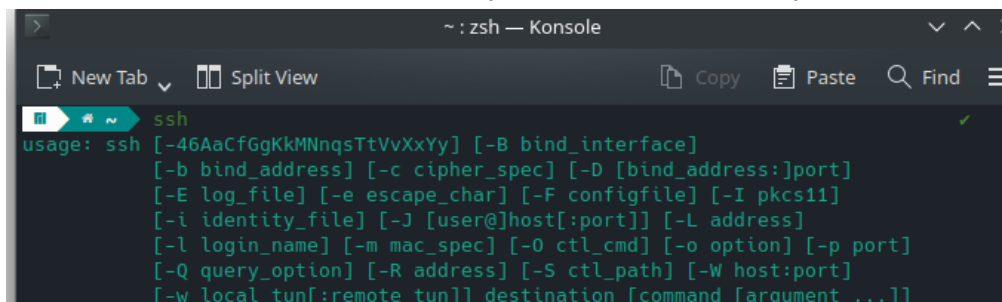
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 5 bytes 928 (928.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 5 bytes 928 (928.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

- 2) Ping: this command is used to send ICMP echo requests to a network host.



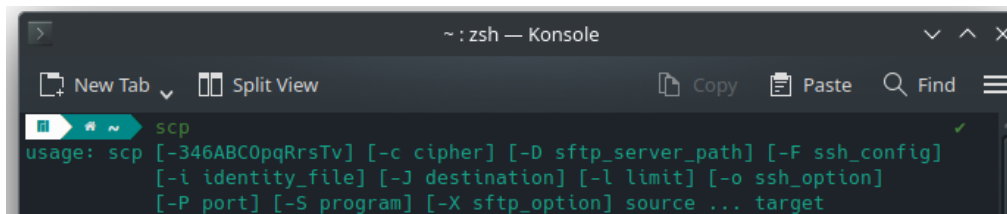
```
~ : zsh — Konsole
New Tab Split View Copy Paste Find
ping 192.168.0.1/24
ping: 192.168.0.1/24: Name or service not known
```

- 3) Ssh: this command is used to securely connect to a remote system.



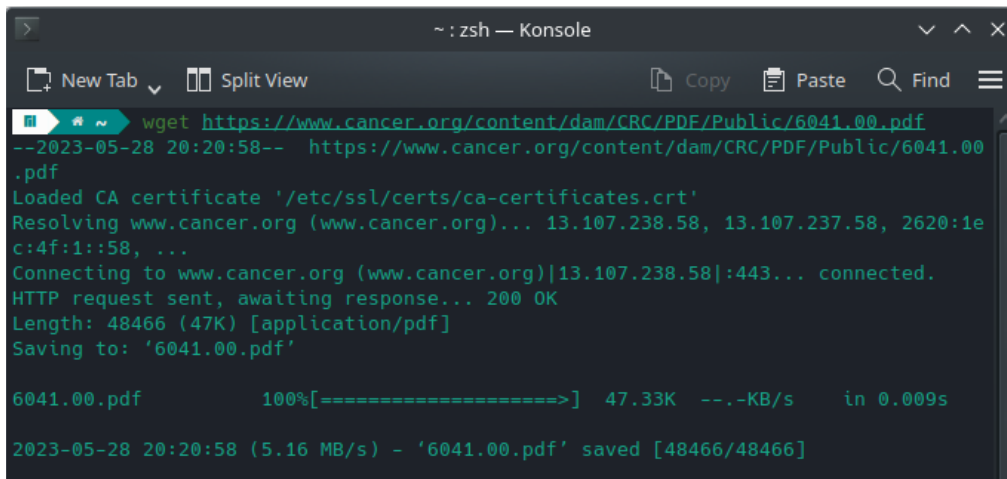
```
~ : zsh — Konsole
New Tab Split View Copy Paste Find
ssh
usage: ssh [-46AaCfGgKkMmnqsTtVvXxYy] [-B bind_interface]
          [-b bind_address] [-c cipher_spec] [-D [bind_address:]port]
          [-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]
          [-i identity_file] [-J [user@]host[:port]] [-L address]
          [-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port]
          [-Q query_option] [-R address] [-S ctl_path] [-W host:port]
          [-w local_tun[:remote_tun]] destination [command [argument ...]]
```

- 4) scp: this command lets us to securely copy files between systems.



```
> ~ : zsh — Konsole
New Tab Split View Copy Paste Find
scp
usage: scp [-346ABCOpqRrsTv] [-c cipher] [-D sftp_server_path] [-F ssh_config]
        [-i identity_file] [-J destination] [-l limit] [-o ssh_option]
        [-P port] [-S program] [-X sftp_option] source ... target
```

- 5) wget: this command allows us to download files from the internet.

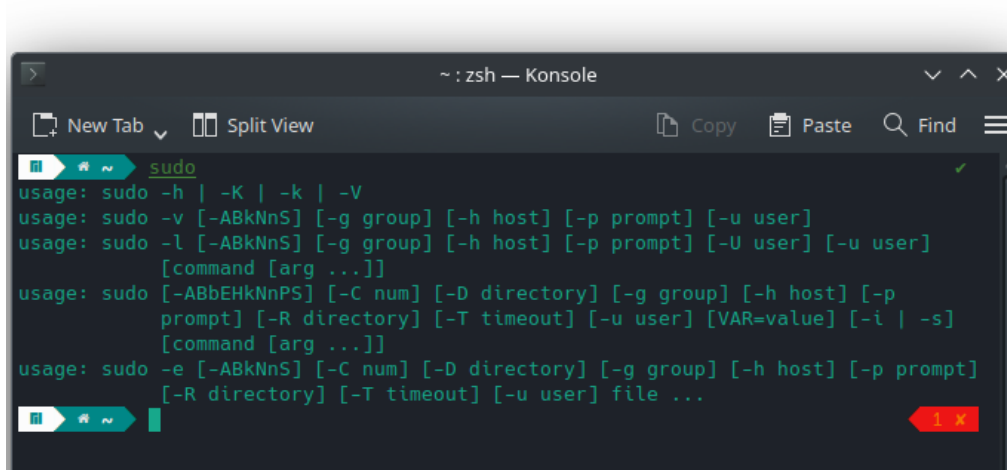


```
> ~ : zsh — Konsole
New Tab Split View Copy Paste Find
wget https://www.cancer.org/content/dam/CRC/PDF/Public/6041.00.pdf
--2023-05-28 20:20:58-- https://www.cancer.org/content/dam/CRC/PDF/Public/6041.00.pdf
Loaded CA certificate '/etc/ssl/certs/ca-certificates.crt'
Resolving www.cancer.org (www.cancer.org)... 13.107.238.58, 13.107.237.58, 2620:1e
c:4f:1::58, ...
Connecting to www.cancer.org (www.cancer.org)|13.107.238.58|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 48466 (47K) [application/pdf]
Saving to: '6041.00.pdf'

6041.00.pdf      100%[=====>] 47.33K  --.-KB/s   in 0.009s
2023-05-28 20:20:58 (5.16 MB/s) - '6041.00.pdf' saved [48466/48466]
```

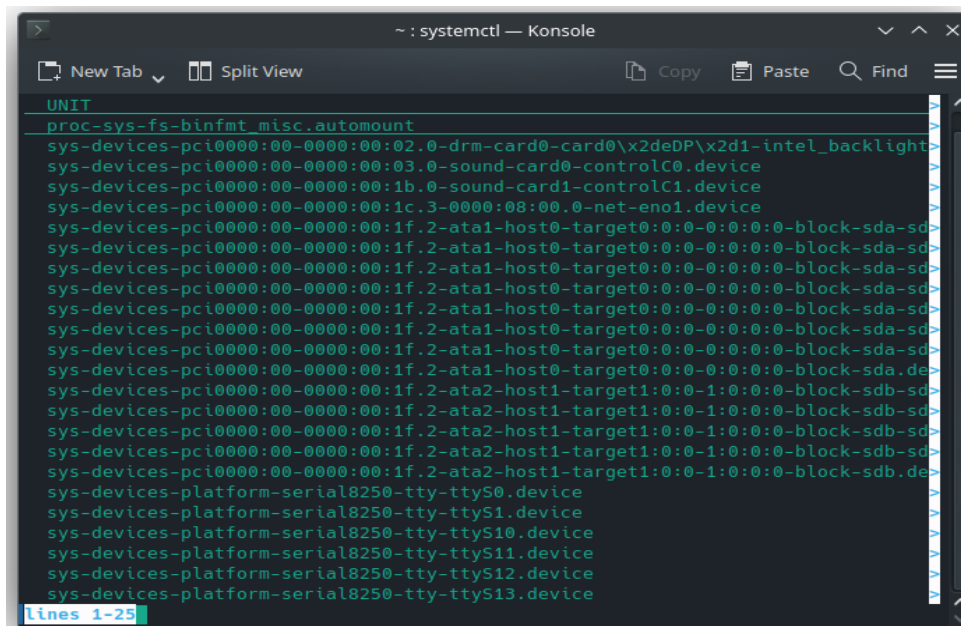
System Administration:-

- 1) sudo: it stands for SuperUser DO. Sudo command is used to access restricted files and operations in linux OS.



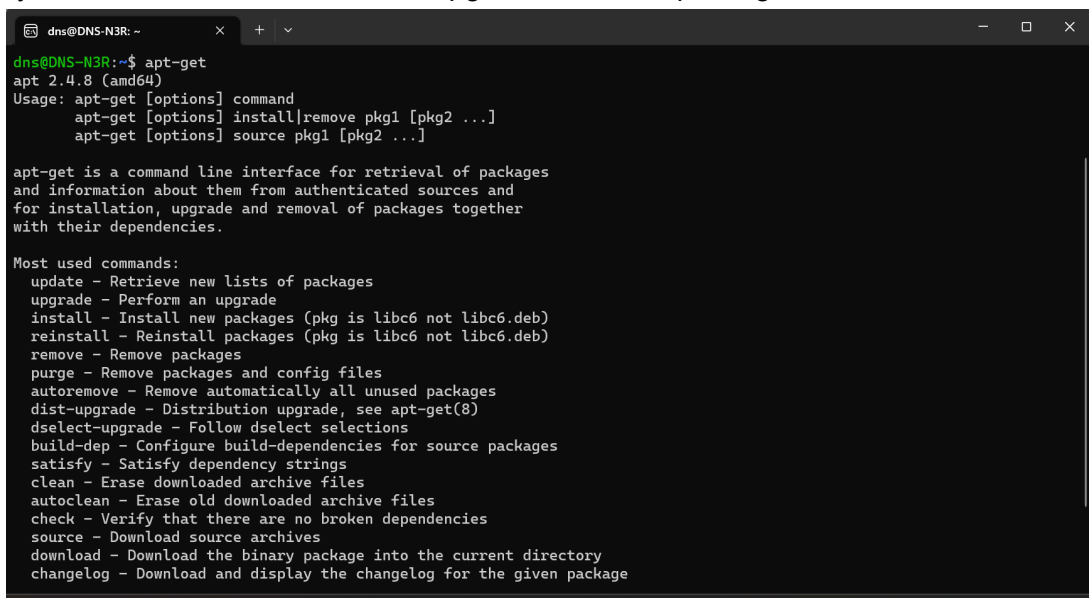
```
> ~ : zsh — Konsole
New Tab Split View Copy Paste Find
sudo
usage: sudo -h | -K | -k | -V
usage: sudo -v [-ABkNnS] [-g group] [-h host] [-p prompt] [-u user]
usage: sudo -l [-ABkNnS] [-g group] [-h host] [-p prompt] [-U user] [-u user]
        [command [arg ...]]
usage: sudo [-ABbEHkNnPS] [-C num] [-D directory] [-g group] [-h host] [-p
prompt] [-R directory] [-T timeout] [-u user] [VAR=value] [-i | -s]
        [command [arg ...]]
usage: sudo -e [-ABkNnS] [-C num] [-D directory] [-g group] [-h host] [-p prompt]
        [-R directory] [-T timeout] [-u user] file ...
```

- 2) systemctl: this command lets us manage system services.



```
~ : systemctl — Konsole
New Tab Split View Copy Paste Find
UNIT
proc-sys-fs-binfmt_misc.automount
sys-devices-pci0000:00-0000:00:02.0-drm-card0-card0\x2deDP\x2d1-intel_backlight>
sys-devices-pci0000:00-0000:00:03.0-sound-card0-controlC0.device>
sys-devices-pci0000:00-0000:00:1b.0-sound-card1-controlC1.device>
sys-devices-pci0000:00-0000:00:1c.3-0000:08:00.0-net-eno1.device>
sys-devices-pci0000:00-0000:00:1f.2-ata1-host0-target0:0:0-0:0:0-0:0:0-block-sda-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata1-host0-target0:0:0-0:0:0-0:0:0-block-sda-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata1-host0-target0:0:0-0:0:0-0:0:0-block-sda-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata1-host0-target0:0:0-0:0:0-0:0:0-block-sda-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata1-host0-target0:0:0-0:0:0-0:0:0-block-sda-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata1-host0-target0:0:0-0:0:0-0:0:0-block-sda-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata1-host0-target0:0:0-0:0:0-0:0:0-block-sda-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata1-host0-target0:0:0-0:0:0-0:0:0-block-sda-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata2-host1-target1:0:0-1:0:0-0:0:0-block-sdb-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata2-host1-target1:0:0-1:0:0-0:0:0-block-sdb-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata2-host1-target1:0:0-1:0:0-0:0:0-block-sdb-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata2-host1-target1:0:0-1:0:0-0:0:0-block-sdb-sd>
sys-devices-pci0000:00-0000:00:1f.2-ata2-host1-target1:0:0-1:0:0-0:0:0-block-sdb-sd>
sys-devices-platform-serial8250-tty-ttyS0.device>
sys-devices-platform-serial8250-tty-ttyS1.device>
sys-devices-platform-serial8250-tty-ttyS10.device>
sys-devices-platform-serial8250-tty-ttyS11.device>
sys-devices-platform-serial8250-tty-ttyS12.device>
sys-devices-platform-serial8250-tty-ttyS13.device>
lines 1-25
```

- 3) apt-get: APT (Advanced Packing Tool) is the command-line to manage the packing system. It is used to find , install, upgrade , or clean packages.

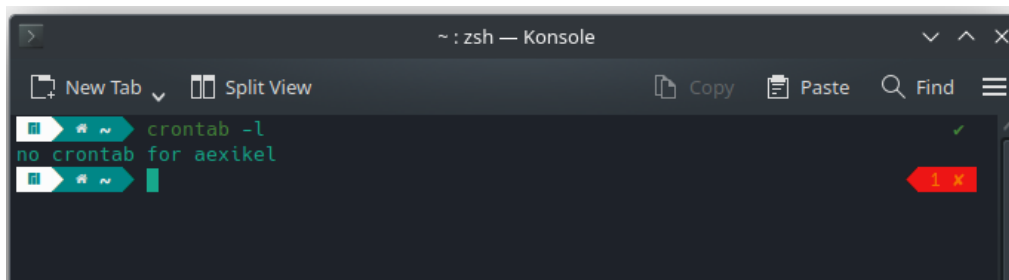


```
dns@DNS-N3R: ~$ apt-get
apt 2.4.8 (amd64)
Usage: apt-get [options] command
       apt-get [options] install|remove pkg1 [pkg2 ...]
       apt-get [options] source pkg1 [pkg2 ...]

apt-get is a command line interface for retrieval of packages
and information about them from authenticated sources and
for installation, upgrade and removal of packages together
with their dependencies.

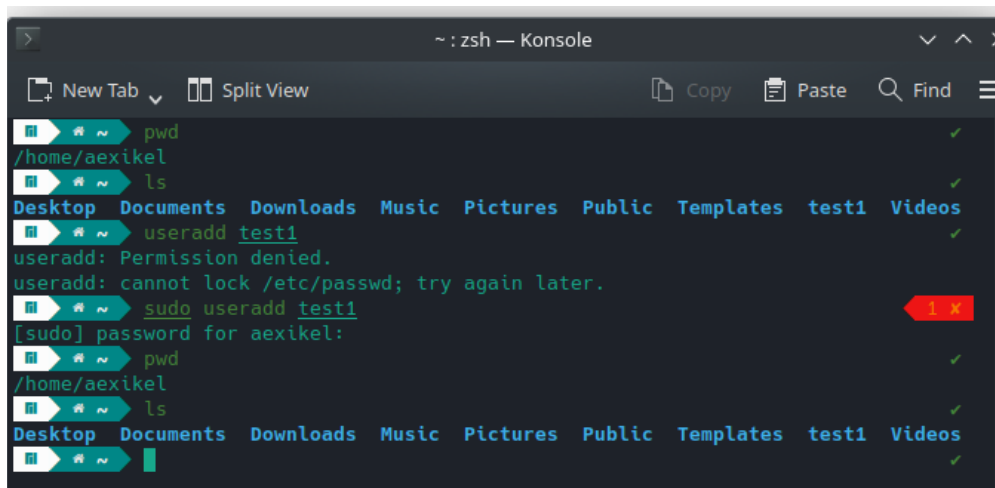
Most used commands:
update - Retrieve new lists of packages
upgrade - Perform an upgrade
install - Install new packages (pkg is libc6 not libc6.deb)
reinstall - Reinstall packages (pkg is libc6 not libc6.deb)
remove - Remove packages
purge - Remove packages and config files
autoremove - Remove automatically all unused packages
dist-upgrade - Distribution upgrade, see apt-get(8)
dselect-upgrade - Follow dselect selections
build-dep - Configure build-dependencies for source packages
satisfy - Satisfy dependency strings
clean - Erase downloaded archive files
autoclean - Erase old downloaded archive files
check - Verify that there are no broken dependencies
source - Download source archives
download - Download the binary package into the current directory
changelog - Download and display the changelog for the given package
```

- 4) crontab: This command lets us automate tasks.



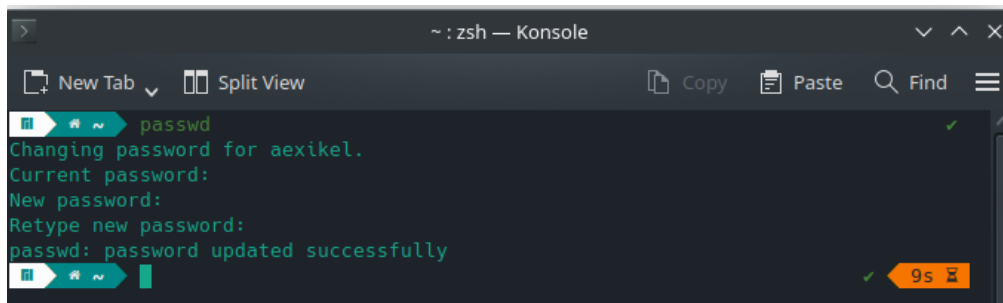
```
~ : zsh — Konsole
New Tab Split View Copy Paste Find
crontab -l
no crontab for aexikel
1 x
```

- 5) useradd: This command lets us add a new user.



A terminal window titled '~ : zsh — Konsole' showing a series of commands and their outputs. The user 'aexikel' is at the prompt. The commands and outputs are:
1. `pwd` → `/home/aexikel` ✓
2. `ls` → `Desktop Documents Downloads Music Pictures Public Templates test1 Videos` ✓
3. `useradd test1` → `useradd: Permission denied.`
4. `useradd: cannot lock /etc/passwd; try again later.`
5. `sudo useradd test1` → `[sudo] password for aexikel:` (password masked with dots) 1 ✗
6. `pwd` → `/home/aexikel` ✓
7. `ls` → `Desktop Documents Downloads Music Pictures Public Templates test1 Videos` ✓
8. The prompt returns to `~` ✓

6) `passwd`: This command lets us change the user password.



A terminal window titled '~ : zsh — Konsole' showing the `passwd` command being used to change the user's password. The user 'aexikel' is at the prompt. The output is:
1. `passwd` → `Changing password for aexikel.` ✓
2. `Current password:` (password masked with dots)
3. `New password:` (password masked with dots)
4. `Retype new password:` (password masked with dots)
5. `passwd: password updated successfully` ✓
6. The prompt returns to `~` ✓
A timer in the bottom right corner shows '9s'.