

8. cal [month] [year]

```
boyka@Jennifer:~/Documents$ cal 08 1993
      August 1993
Su Mo Tu We Th Fr Sa
 1  2  3  4  5  6  7
 8  9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31
```

9. printenv

```
XDG_VTNR=7
XDG_SESSION_ID=c2
XDG_GREETER_DATA_DIR=/var/lib/lightdm-data/boyka
CLUTTER_IM_MODULE=
QT_STYLE_OVERRIDE=gtk
SESSION=xubuntu
GLADE_PIXMAP_PATH=
SHELL=/bin/bash
XDG_MENU_PREFIX=xfce-
TERM=xterm
WINDOWID=50331652
UPSTART_SESSION=unix:abstract=/com/ubuntu/upstart-session/1000/1181
GNOME_KEYRING_CONTROL=
USER=boyka
LS_COLORS=rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd=40;
33;01:or=40;31;01:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=34;42:st=37;44:ex=01;32:*.tar=0
1;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lzh=01;31:*.lзма
=01;31:*.tlz=01;31:*.txz=01;31:*.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;31:*.Z=01;31:*.dz=01
;31:*.gz=01;31:*.lrz=01;31:*.lz=01;31:*.lzo=01;31:*.xz=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;3
1:*.tbz2=01;31:*.tz=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.war=01;31:*.ear=01;31:*.sar=0
1;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab
=01;31:*.jpg=01;35:*.jpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;
35:*.tga=01;35:*.xbm=01;35:*.xpm=01;35:*.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz
=01;35:*.mng=01;35:*.pcx=01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=
01;35:*.webm=01;35:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=0
1;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.avi=01;35:*.fli
=01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.e
mf=01;35:*.axv=01;35:*.anx=01;35:*.ogv=01;35:*.ogx=01;35:*.aac=00;36:*.au=00;36:*.flac=00;3
6:*.m4a=00;36:*.mid=00;36:*.midi=00;36:*.mka=00;36:*.mp3=00;36:*.mpc=00;36:*.ogg=00;36:*.
ra=00;36:*.wav=00;36:*.axa=00;36:*.oga=00;36:*.spx=00;36:*.xspf=00;36:
CLUTTER_BACKEND=x11
XDG_SESSION_PATH=/org/freedesktop/DisplayManager/Session0
GLADE_MODULE_PATH=
```

XDG_SEAT_PATH=/org/freedesktop/DisplayManager/Seat0
SSH_AUTH_SOCK=/run/user/1000/keyring/ssh
SESSION_MANAGER=local/Jennifer:@/tmp/.ICE-unix/1328,unix/Jennifer:/tmp/.ICE-unix/1328
DEFAULTS_PATH=/usr/share/gconf/xubuntu.default.path
XDG_CONFIG_DIRS=/etc/xdg/xdg-xubuntu:/usr/share/upstart/xdg:/etc/xdg:/etc/xdg
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games
DESKTOP_SESSION=xubuntu
QT_IM_MODULE=
XDG_SESSION_TYPE=x11
PWD=/home/boyka
JOB=dbus
XMODIFIERS=
LANG=en_US.UTF-8
GNOME_KEYRING_PID=
GDM_LANG=en_US
MANDATORY_PATH=/usr/share/gconf/xubuntu.mandatory.path
IM_CONFIG_PHASE=1
GDMSESSION=xubuntu
SESSIONTYPE=
XDG_SEAT=seat0
HOME=/home/boyka
SHLVL=1
LANGUAGE=en_US
GTK_OVERLAY_SCROLLING=0
UPSTART_INSTANCE=
UPSTART_EVENTS=started xsession
XDG_SESSION_DESKTOP=xubuntu
LOGNAME=boyka
XDG_DATA_DIRS=/usr/share/xubuntu:/usr/share/xfce4:/usr/local/share:/usr/share:/usr/share
QT4_IM_MODULE=
DBUS_SESSION_BUS_ADDRESS=unix:abstract=/tmp/dbus-bpDFnvvgSQ
LESSOPEN=| /usr/bin/lesspipe %s
INSTANCE=
UPSTART_JOB=startxfce4
DISPLAY=:0.0
XDG_RUNTIME_DIR=/run/user/1000
GLADE_CATALOG_PATH=:
XDG_CURRENT_DESKTOP=XFCE
GTK_IM_MODULE=
LESSCLOSE=/usr/bin/lesspipe %s %s
COLORTERM=xfce4-terminal
XAUTHORITY=/home/boyka/.Xauthority
_=/usr/bin/printenv

10. cat mydata.txt will display the contents of the file.

```
boyka@Jennifer:~/Documents$ cat mydata.txt
My name is Boyka.
My home city is Anaheim.
I would like to graduate in April, 2017.
```

11. touch mydata.txt

```
boyka@Jennifer:~/Documents$ touch mydata.txt
boyka@Jennifer:~/Documents$ cat mydata.txt
My name is Boyka.
My home city is Anaheim.
I would like to graduate in April, 2017.
```

12. tac mydata.txt

```
boyka@Jennifer:~/Documents$ tac mydata.txt
I would like to graduate in April, 2017.
My home city is Anaheim.
My name is Boyka.
```

13. free -m

```
boyka@Jennifer:~/Documents$ free -m
```

	total	used	free	shared	buffers	cached
Mem:	3814	2035	1779	192	57	1053
+/+ buffers/cache:		923	2890			
Swap:	3951	0	3951			

14. history 18

```
boyka@Jennifer:~/Documents$ history 18
31 tac mydata.txt qq
32 tac mydata.txt
33 free -m
34 cat /proc/meminfo
35 htop
36 top
37 vmstat --help
38 free -m
39 free --help
40 free -g
41 free -m
42 clear
43 ls
44 cd
45 cd Documents/
46 ls
47 clear
48 history 18
```

15. history -c

```
boyka@Jennifer:~/Documents$ history -c
boyka@Jennifer:~/Documents$ history
1 history
```

16. lsblk

```
boyka@Jennifer:~$ lsblk
NAME                                MAJ:MIN RM  SIZE RO TYPE  MOUNTPOINT
sda                                  8:0      0  74.5G  0 disk
├─sda1                              8:1      0   243M  0 part  /boot
├─sda2                              8:2      0     1K  0 part
├─sda5                              8:5      0  74.3G  0 part
│   └─sda5_crypt                    252:0      0  74.3G  0 crypt
│       └─xubuntu--vg-root           252:1      0  70.4G  0 lvm    /
│           └─xubuntu--vg-swap_1     252:2      0   3.9G  0 lvm    [SWAP]
sr0                                  11:0      1  1024M  0 rom
```

17. hddtemp

```
boyka@Jennifer:~$ sudo hddtemp --unit=C /dev/sda
/dev/sda: WDC WD800JD-75MSA1: 38°C
boyka@Jennifer:~$ sudo hddtemp --unit=F /dev/sda
/dev/sda: WDC WD800JD-75MSA1: 100°F
```

18. uptime

```
boyka@Jennifer:~$ uptime
15:28:33 up 12 min,  2 users,  load average: 0.11, 0.32, 0.34
```

19. Install handbrake

1. `sudo add-apt-repository ppa:stebbins/handbrake-releases`
2. `sudo apt-get update`
3. `sudo apt-get install handbrake-gtk handbrake-cli`

20. df -k

```
boyka@Jennifer:~$ df -k
Filesystem      1K-blocks    Used Available Use% Mounted on
udev            1933584         0   1933584   0% /dev
tmpfs           390604      6192    384412   2% /run
/dev/dm-1       72492336 4329424 64457468   7% /
tmpfs           1953016     1236   1951780   1% /dev/shm
tmpfs           5120         4       5116   1% /run/lock
tmpfs           1953016         0   1953016   0% /sys/fs/cgroup
/dev/sda1       240972    103556   124975  46% /boot
tmpfs           390604        44    390560   1% /run/user/1000
```

21. du -sh Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/*


```

boyka@Jennifer:~$ du -sh Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/*
4.0K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/ac97_bus.c
296K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/aoa
84K    Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/arm
64K    Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/atmel
1.4M   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/core
380K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/Documentation
696K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/drivers
152K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/firewire
4.0K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/HEAD
172K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/i2c
944K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/include
1.4M   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/isa
4.0K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/Kconfig
4.0K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/last.c
4.0K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/Makefile
120K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/mips
8.0K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/oss
48K    Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/parisc
8.9M   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/pci
116K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/pcmcia
284K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/ppc
48K    Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/sh
9.3M   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/soc
16K    Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/sound_core.c
4.0K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/sound_firmware.c
184K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/sparc
44K    Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/spi
164K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/synth
12K    Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/trace_events
156K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/uapi
968K   Downloads/Rt-Linux-HDAudio-5.18/alsa-driver-RTv5.18/alsa/alsa-kernel/usb

```

22. ls -l

```

boyka@Jennifer:~/Pictures$ ls -l
total 424
-rw-rw-r-- 1 boyka boyka 131660 Apr 14 14:13 10.png
-rw-rw-r-- 1 boyka boyka  9080 Apr 14 14:26 11.png
-rw-rw-r-- 1 boyka boyka  8524 Apr 14 14:29 12.png
-rw-rw-r-- 1 boyka boyka 10310 Apr 14 14:34 13.png
-rw-rw-r-- 1 boyka boyka 18098 Apr 14 14:37 14.png
-rw-rw-r-- 1 boyka boyka  4252 Apr 14 14:38 15.png
-rw-rw-r-- 1 boyka boyka 17953 Apr 14 15:22 16.png
-rw-rw-r-- 1 boyka boyka 12409 Apr 14 15:26 17.png
-rw-rw-r-- 1 boyka boyka  5967 Apr 14 15:28 18.png
-rw-rw-r-- 1 boyka boyka 21709 Apr 14 16:02 20.png
-rw-rw-r-- 1 boyka boyka 148154 Apr 14 16:14 21.png
-rw-rw-r-- 1 boyka boyka 11316 Apr 14 14:22 8.png

```

23. chmod 436 printenv.txt

```
boyka@Jennifer:~/Documents$ ls -l
total 8
-rw-rw-r-- 1 boyka boyka 84 Apr 14 14:25 mydata.txt
-rw-rw-r-- 1 boyka boyka 3131 Apr 14 14:08 printenv.txt
boyka@Jennifer:~/Documents$ chmod 436 printenv.txt
boyka@Jennifer:~/Documents$ ls -l
total 8
-rw-rw-r-- 1 boyka boyka 84 Apr 14 14:25 mydata.txt
-r---wxrw- 1 boyka boyka 3131 Apr 14 14:08 printenv.txt
```

24. chmod 241 mydatacopy.txt

```
boyka@Jennifer:~/Documents$ ls -l
total 12
-rw-rw-r-- 1 boyka boyka 84 Apr 14 16:25 mydatacopy.txt
-rw-rw-r-- 1 boyka boyka 84 Apr 14 14:25 mydata.txt
-r---wxrw- 1 boyka boyka 3131 Apr 14 14:08 printenv.txt
boyka@Jennifer:~/Documents$ chmod 241 mydatacopy.txt
boyka@Jennifer:~/Documents$ ls -l
total 12
--w-r---x 1 boyka boyka 84 Apr 14 16:25 mydatacopy.txt
-rw-rw-r-- 1 boyka boyka 84 Apr 14 14:25 mydata.txt
-r---wxrw- 1 boyka boyka 3131 Apr 14 14:08 printenv.txt
```

25. sudo chgrp Linux253 mydatacopy.txt

```
boyka@Jennifer:~/Documents$ ls -l
total 12
--w-r---x 1 boyka boyka 84 Apr 14 16:25 mydatacopy.txt
-rw-rw-r-- 1 boyka boyka 84 Apr 14 14:25 mydata.txt
-r---wxrw- 1 boyka boyka 3131 Apr 14 14:08 printenv.txt
boyka@Jennifer:~/Documents$ sudo chgrp Linux253 mydatacopy.txt
boyka@Jennifer:~/Documents$ ls -l
total 12
--w-r---x 1 boyka Linux253 84 Apr 14 16:25 mydatacopy.txt
-rw-rw-r-- 1 boyka boyka 84 Apr 14 14:25 mydata.txt
-r---wxrw- 1 boyka boyka 3131 Apr 14 14:08 printenv.txt
```

26. sudo chown root printenvcopy.txt

```
boyka@Jennifer:~/Documents$ ls -l
total 16
--w-r---x 1 boyka Linux253 84 Apr 14 16:25 mydatacopy.txt
-rw-rw-r-- 1 boyka boyka 84 Apr 14 14:25 mydata.txt
-r---wxr-- 1 boyka boyka 3131 Apr 14 16:36 printenvcopy.txt
-r---wxrw- 1 boyka boyka 3131 Apr 14 14:08 printenv.txt
boyka@Jennifer:~/Documents$ sudo chown root printenvcopy.txt
boyka@Jennifer:~/Documents$ ls -l
total 16
--w-r---x 1 boyka Linux253 84 Apr 14 16:25 mydatacopy.txt
-rw-rw-r-- 1 boyka boyka 84 Apr 14 14:25 mydata.txt
-r---wxr-- 1 root boyka 3131 Apr 14 16:36 printenvcopy.txt
-r---wxrw- 1 boyka boyka 3131 Apr 14 14:08 printenv.txt
```


27. mkdir Francine
cp mydata.txt Francine/

```
boyka@Jennifer:~/Documents$ mkdir Francine
boyka@Jennifer:~/Documents$ cp mydata.txt Francine/
boyka@Jennifer:~/Documents$ ls -l -R
.:
total 20
drwxrwxr-x 2 boyka boyka 4096 Apr 14 16:40 Francine
--w-r---x 1 boyka Linux253 84 Apr 14 16:25 mydatacopy.txt
-rw-rw-r-- 1 boyka boyka 84 Apr 14 14:25 mydata.txt
-r---wxr-- 1 root boyka 3131 Apr 14 16:36 printenvcopy.txt
-r---wxrw- 1 boyka boyka 3131 Apr 14 14:08 printenv.txt

./Francine:
total 4
-rw-rw-r-- 1 boyka boyka 84 Apr 14 16:40 mydata.txt
```

28. cd Francine

```
boyka@Jennifer:~/Documents$ cd Francine/
boyka@Jennifer:~/Documents/Francine$
```

29. cd ..

```
boyka@Jennifer:~/Documents/Francine$ cd ..
boyka@Jennifer:~/Documents$
```

30. rm printenvcopy.txt

```
boyka@Jennifer:~/Documents$ ls
Francine mydatacopy.txt mydata.txt printenvcopy.txt printenv.txt
boyka@Jennifer:~/Documents$ rm printenvcopy.txt
boyka@Jennifer:~/Documents$ ls
Francine mydatacopy.txt mydata.txt printenv.txt
```

31. exit

No, the history of the previous session was not removed once I exit the window.

```
boyka@Jennifer:~$ history
1  whoami
2  hostname
3  history
4  lsblk
5  tar xfvj 0001-LinuxPkg_5.18rc8.tar.bz2
6  ls
7  cd Rt-Linux-HDAudio-5.18/
8  ls
9  cat Readme.txt
10 ls
11 tar xfvj alsa-driver-RTv5.18rc8.tar.bz2
12 cd alsa-driver-RTv5.18/
13 ls
14 cd alsa/
```

32. shutdown -h now

33. boyka@Jennifer:~\$ df --block-size=1024 /dev/sda1
Filesystem 1K-blocks Used Available Use% Mounted on
/dev/sda1 240972 103556 124975 46% /boot
boyka@Jennifer:~\$ df --block-size=1000 /dev/sda1
Filesystem 1kB-blocks Used Available Use% Mounted on
/dev/sda1 246756 106042 127975 46% /boot
boyka@Jennifer:~\$ df -h /dev/sda1
Filesystem Size Used Avail Use% Mounted on
/dev/sda1 236M 102M 123M 46% /boot
boyka@Jennifer:~\$ df -H /dev/sda1
Filesystem Size Used Avail Use% Mounted on
/dev/sda1 247M 107M 128M 46% /boot

34. boyka@Jennifer:~/Documents\$ du -ah *

12K	Francine/Pictures/11.png
12K	Francine/Pictures/12.png
12K	Francine/Pictures/8/8.png
12K	Francine/Pictures/8/10/10.png
16K	Francine/Pictures/8/10
32K	Francine/Pictures/8
60K	Francine/Pictures
4.0K	Francine/francinedata.txt
68K	Francine
4.0K	Misc/miscdata.txt
81M	Misc/chrome-linux.zip
73M	Misc/New Folder/Waterfox/WaterfoxPortable_44.0.3_English.paf.exe
73M	Misc/New Folder/Waterfox
4.0K	Misc/New Folder/newfolderdata.txt
73M	Misc/New Folder
154M	Misc
4.0K	mydatacopy.txt
4.0K	mydata.txt
4.0K	printenv.txt

boyka@Jennifer:~/Documents\$ du -a --block-size=1024 --max-depth=3 *

12	Francine/Pictures/11.png
12	Francine/Pictures/12.png
12	Francine/Pictures/8/8.png
16	Francine/Pictures/8/10
32	Francine/Pictures/8
60	Francine/Pictures
4	Francine/francinedata.txt
68	Francine
4	Misc/miscdata.txt
82540	Misc/chrome-linux.zip
74208	Misc/New Folder/Waterfox/WaterfoxPortable_44.0.3_English.paf.exe
74212	Misc/New Folder/Waterfox
4	Misc/New Folder/newfolderdata.txt
74220	Misc/New Folder
156768	Misc
4	mydatacopy.txt
4	mydata.txt
4	printenv.txt


```
boyka@Jennifer:~/Documents$ du -a --block-size=1000 --max-depth=2 *
13    Francine/Pictures/11.png
13    Francine/Pictures/12.png
33    Francine/Pictures/8
62    Francine/Pictures
5     Francine/francinedata.txt
70    Francine
5     Misc/miscdata.txt
84521 Misc/chrome-linux.zip
75994 Misc/New Folder/Waterfox
5     Misc/New Folder/newfolderdata.txt
76002 Misc/New Folder
160531 Misc
5     mydatacopy.txt
5     mydata.txt
5     printenv.txt
```

35. `sudo apt-cache show vlc`

Yes, the command shows very useful information like, application-version, dependencies, description, maintainer, architecture, installation size as well as security information like MD5sum, SHA1 and SHA256 keys.