

# Lab 5 | Handling files Answers to lab

## Questions 1

```
Tilix: koto@koto: ~/Lab5
1: koto@koto: ~/Lab5
koto@koto:~$ cd lab5
bash: cd: lab5: No such file or directory
koto@koto:~$ mkdir Lab5
koto@koto:~$ cd Lab5/
koto@koto:~/Lab5$ cat /etc/passwd
root:x:0:0:root:/root:/bin/bash

Tilix: koto@koto: ~/Lab5
1: koto@koto: ~/Lab5
koto@koto:~/Lab5$ tac /etc/passwd
vboxadd:x:998:1::/var/run/vboxadd:/bin/false
_flatpak:x:127:135:Flatpak system-wide installation helper,,,:/nonexistent:/usr/s
in/nologin
systemd-coredump:x:999:999:systemd Core Dumper:/usr/sbin/nologin
koto:x:1000:1000:koto,,,:/home/koto:/bin/bash
sssd:x:126:131:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin
gdm:x:125:130:Gnome Display Manager:/var/lib/gdm3:/bin/false
gnome-initial-setup:x:124:65534::/run/gnome-initial-setup:/bin/false
pulse:x:123:128:PulseAudio daemon,,,:/var/run/pulse:/usr/sbin/nologin
geoclue:x:122:127::/var/lib/geoclue:/usr/sbin/nologin
colord:x:121:126:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin

Tilix: koto@koto: ~/Lab5
1: koto@koto: ~/Lab5
koto@koto:~/Lab5$ cat -nE /etc/passwd
 1 root:x:0:0:root:/root:/bin/bash$
 2 daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin$
 3 bin:x:2:2:bin:/bin:/usr/sbin/nologin$
 4 sys:x:3:3:sys:/dev:/usr/sbin/nologin$
 5 sync:x:4:65534:sync:/bin:/bin/sync$
 6 games:x:5:60:games:/usr/games:/usr/sbin/nologin$
 7 man:x:6:12:man:/var/cache/man:/usr/sbin/nologin$
 8 lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin$
 9 mail:x:8:8:mail:/var/mail:/usr/sbin/nologin$
10 news:x:9:9:news:/var/spool/news:/usr/sbin/nologin$
11 uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin$
12 proxy:x:13:13:proxy:/bin:/usr/sbin/nologin$
13 www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin$
14 backup:x:34:34:backup:/var/backups:/usr/sbin/nologin$
15 list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin$
16 irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin$
```

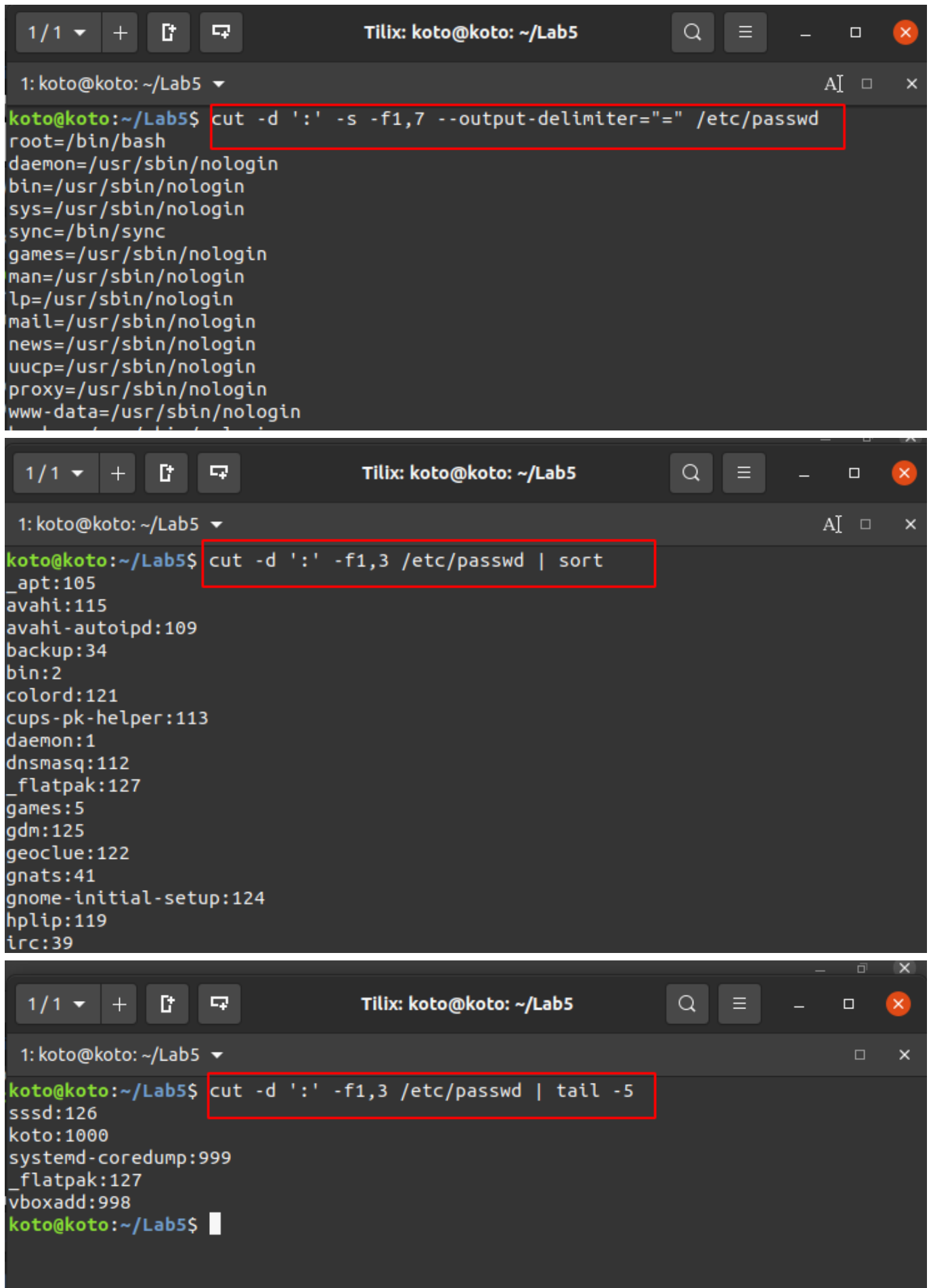
```
Tilix: koto@koto: ~/Lab5
1: koto@koto: ~/Lab5
koto@koto:~/Lab5$ head -5 /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync

koto@koto:~/Lab5$ tail -5 /etc/passwd
sssd:x:126:131:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin
koto:x:1000:1000:koto,,,:/home/koto:/bin/bash
systemd-coredump:x:999:999:systemd Core Dumper:/:/usr/sbin/nologin
_flatpak:x:127:135:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sb
in/nologin
vboxadd:x:998:1:/:/var/run/vboxadd:/bin/false
koto@koto:~/Lab5$
```

## Questions 2

```
Tilix: koto@koto: ~/Lab5
1: koto@koto: ~/Lab5
koto@koto:~/Lab5$ cut -d ':' -f 1 /etc/passwd
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
```

```
Tilix: koto@koto: ~/Lab5
1: koto@koto: ~/Lab5
koto@koto:~/Lab5$ tail -5 /etc/passwd | cut -d ':' -f 1
sssd
koto
systemd-coredump
_flatpak
vboxadd
koto@koto:~/Lab5$
```



The image displays three sequential screenshots of a terminal window titled "Tilix: koto@koto: ~/Lab5". Each screenshot shows a command being executed and its output.

**First Screenshot:** The command `cut -d ':' -s -f1,7 --output-delimiter="=" /etc/passwd` is highlighted in a red box. The output lists system users with their home directories separated by equals signs:

```
root=/bin/bash
daemon=/usr/sbin/nologin
bin=/usr/sbin/nologin
sys=/usr/sbin/nologin
sync=/bin/sync
games=/usr/sbin/nologin
man=/usr/sbin/nologin
lp=/usr/sbin/nologin
mail=/usr/sbin/nologin
news=/usr/sbin/nologin
uucp=/usr/sbin/nologin
proxy=/usr/sbin/nologin
www-data=/usr/sbin/nologin
```

**Second Screenshot:** The command `cut -d ':' -f1,3 /etc/passwd | sort` is highlighted in a red box. The output shows a sorted list of users and their IDs:

```
_apt:105
avahi:115
avahi-autoipd:109
backup:34
bin:2
colord:121
cups-pk-helper:113
daemon:1
dnsmasq:112
_flatpak:127
games:5
gdm:125
geoclue:122
gnats:41
gnome-initial-setup:124
hplip:119
irc:39
```

**Third Screenshot:** The command `cut -d ':' -f1,3 /etc/passwd | tail -5` is highlighted in a red box. The output shows the last five entries from the sorted list:

```
sssd:126
koto:1000
systemd-coredump:999
_flatpak:127
vboxadd:998
```

## Questions 3

```
Tilix: koto@koto: ~/Lab5
1: koto@koto: ~/Lab5
koto@koto:~/Lab5$ wc -l /etc/passwd
49 /etc/passwd
koto@koto:~/Lab5$ wc -w /etc/passwd
89 /etc/passwd
koto@koto:~/Lab5$
```

```
Tilix: koto@koto: ~/Lab5
1: koto@koto: ~/Lab5
koto@koto:~/Lab5$ grep '/bin/bash' /etc/passwd
root:x:0:0:root:/root:/bin/bash
koto:x:1000:1000:koto,,,:/home/koto:/bin/bash
koto@koto:~/Lab5$
```

```
Tilix: koto@koto: ~/Lab5
1: koto@koto: ~/Lab5
koto@koto:~/Lab5$ grep '/bin/bash' /etc/passwd
root:x:0:0:root:/root:/bin/bash
koto:x:1000:1000:koto,,,:/home/koto:/bin/bash
koto@koto:~/Lab5$ grep '/sbin/nologin/' /etc/passwd | wc
0      0      0
koto@koto:~/Lab5$
```

## Questions 4

```
1/1 ▾ + [🔍] [📄] [🔄] Tilix: koto@koto: ~/Lab5 [🔍] [☰] [—] [□] [✖]

1: koto@koto: ~/Lab5 ▾ □ ✖

koto@koto:~/Lab5$ ip ad | grep 'inet'
inet 127.0.0.1/8 scope host lo
inet6 ::1/128 scope host
inet 10.0.2.5/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
inet6 fe80::fb1f:8b5b:15e3:de7b/64 scope link noprefixroute
koto@koto:~/Lab5$ ip ad | grep 'inet' | wc
      4      23     208
koto@koto:~/Lab5$

koto@koto:~/Lab5$ ip ad | grep 'inet6' | tac
inet6 fe80::fb1f:8b5b:15e3:de7b/64 scope link noprefixroute
inet6 ::1/128 scope host
koto@koto:~/Lab5$

1: koto@koto: ~/Lab5 ▾ □ ✖

koto@koto:~/Lab5$ ip ad | grep -E 'inet|inet6'
inet 127.0.0.1/8 scope host lo
inet6 ::1/128 scope host
inet 10.0.2.5/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
inet6 fe80::fb1f:8b5b:15e3:de7b/64 scope link noprefixroute
koto@koto:~/Lab5$ ip ad | grep 'inet' | head -3 | tail -1
inet 10.0.2.5/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
koto@koto:~/Lab5$

koto@koto:~/Lab5$ ip add | grep -E '[:digit:]{1,3}\.[:digit:]{1,3}\.[:digit:]{1,3}\.[:digit:]{1,3}'
inet 127.0.0.1/8 scope host lo
inet 10.0.2.5/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
koto@koto:~/Lab5$
```

## Questions 5

```
1/1 + [ ] [ ] Tilix: koto@koto: ~/Lab5 [ ] [ ] [X]
1: koto@koto: ~/Lab5
koto@koto:~/Lab5$ echo "# Information about my pc" > mypc.md
koto@koto:~/Lab5$ ls
mypc.md
koto@koto:~/Lab5$ echo "## CPU Inforamtion" >> mypc.md
koto@koto:~/Lab5$ echo "### CPU Inforamtion" >> mypc.md
koto@koto:~/Lab5$ cat mypc.md
# Information about my pc
## CPU Inforamtion
koto@koto:~/Lab5$ lscpu | grep -i "architecture"
Architecture:                x86_64
koto@koto:~/Lab5$ lscpu | grep -i "Threads"
koto@koto:~/Lab5$ lscpu | grep -i "Cores"
koto@koto:~/Lab5$ lscpu | grep -i "architecture" >> mypc.md
koto@koto:~/Lab5$ lscpu | grep -i "Threads" >> mypc.md
koto@koto:~/Lab5$ lscpu | grep -i "Threads" >> mypc.md
koto@koto:~/Lab5$ lscpu | grep -i "Cores" >> mypc.md
koto@koto:~/Lab5$ lscpu | grep -i "model name"
Model name:                   11th Gen Intel(R) Core(TM) i7-1165G7 @ 2.80GHz
koto@koto:~/Lab5$ lscpu | grep -i "model name" >> mypc.md
koto@koto:~/Lab5$ lscpu | grep -i "cpu frequency"
koto@koto:~/Lab5$ lscpu | grep -i "cpu frequency" >> mypc.md
koto@koto:~/Lab5$ echo "## Information" >> mypc.md
## Information
koto@koto:~/Lab5$ echo "### Information" >> mypc.md
koto@koto:~/Lab5$ lshw | grep -i "memory size:"
WARNING: you should run this program as super-user.
WARNING: output may be incomplete or inaccurate, you should run this program as super-user.
koto@koto:~/Lab5$ sudo lshw | grep -i "memory size:"
[sudo] password for koto:
koto@koto:~/Lab5$ sudo lshw | grep -i "memory size:" >> mypc.md
koto@koto:~/Lab5$ cat mypc.md
# Information about my pc
## CPU Inforamtion
Architecture:                x86_64
Model name:                   11th Gen Intel(R) Core(TM) i7-1165G7 @ 2.80GHz
## Information
koto@koto:~/Lab5$
```