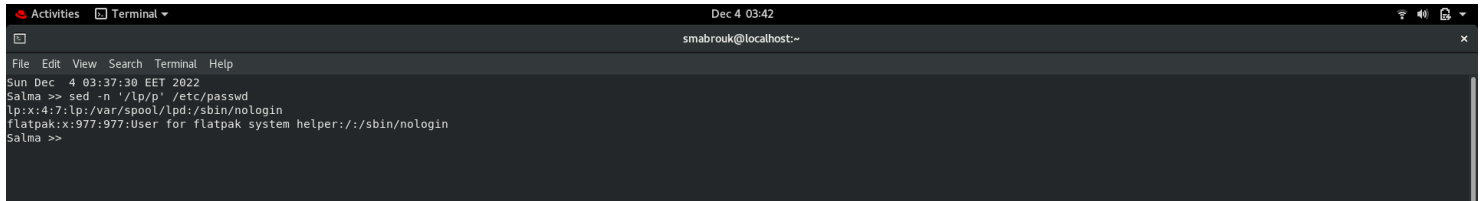


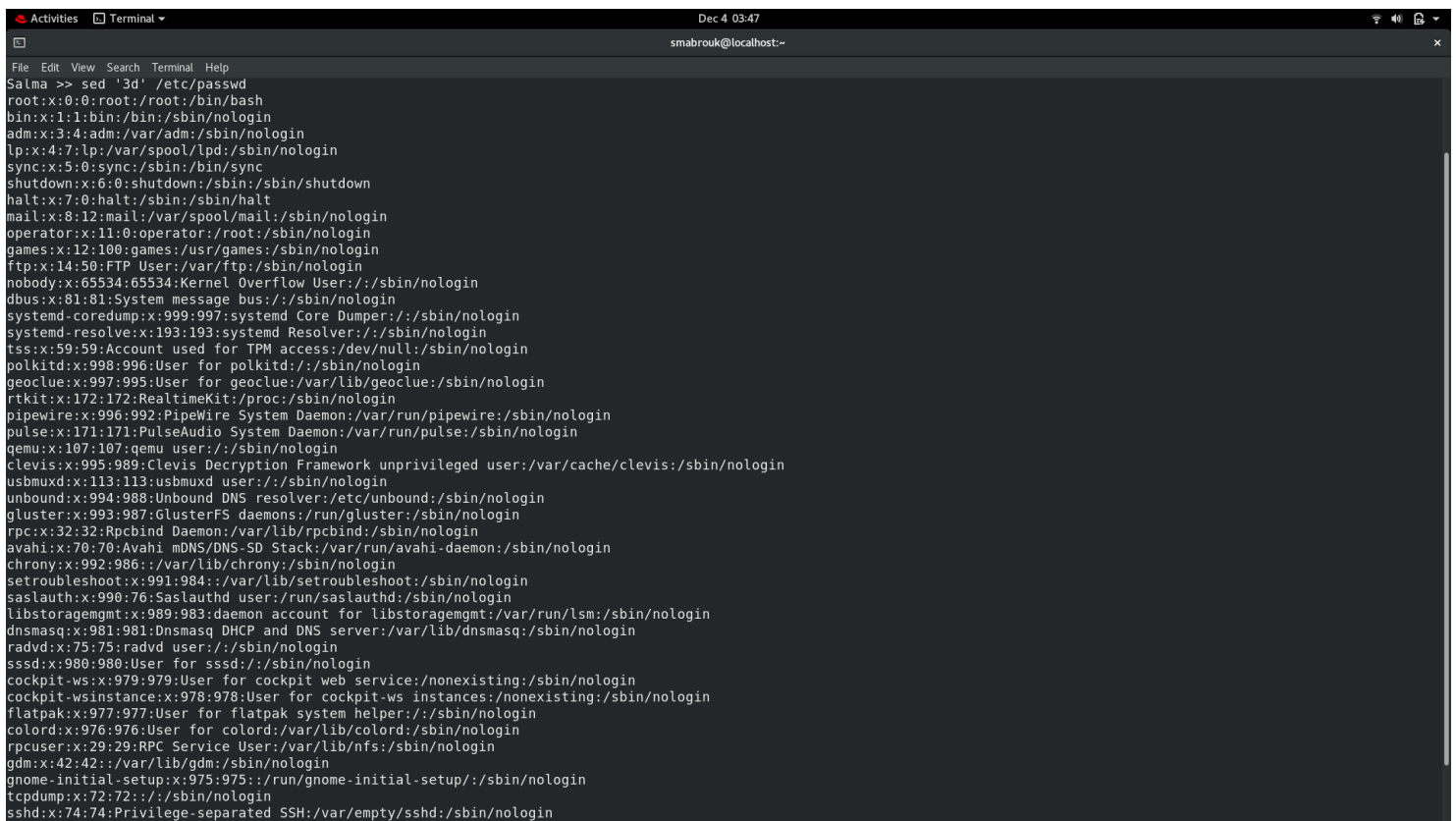
Bash script lab 1

1. Display the lines that contain the word “lp” in /etc/passwd file.



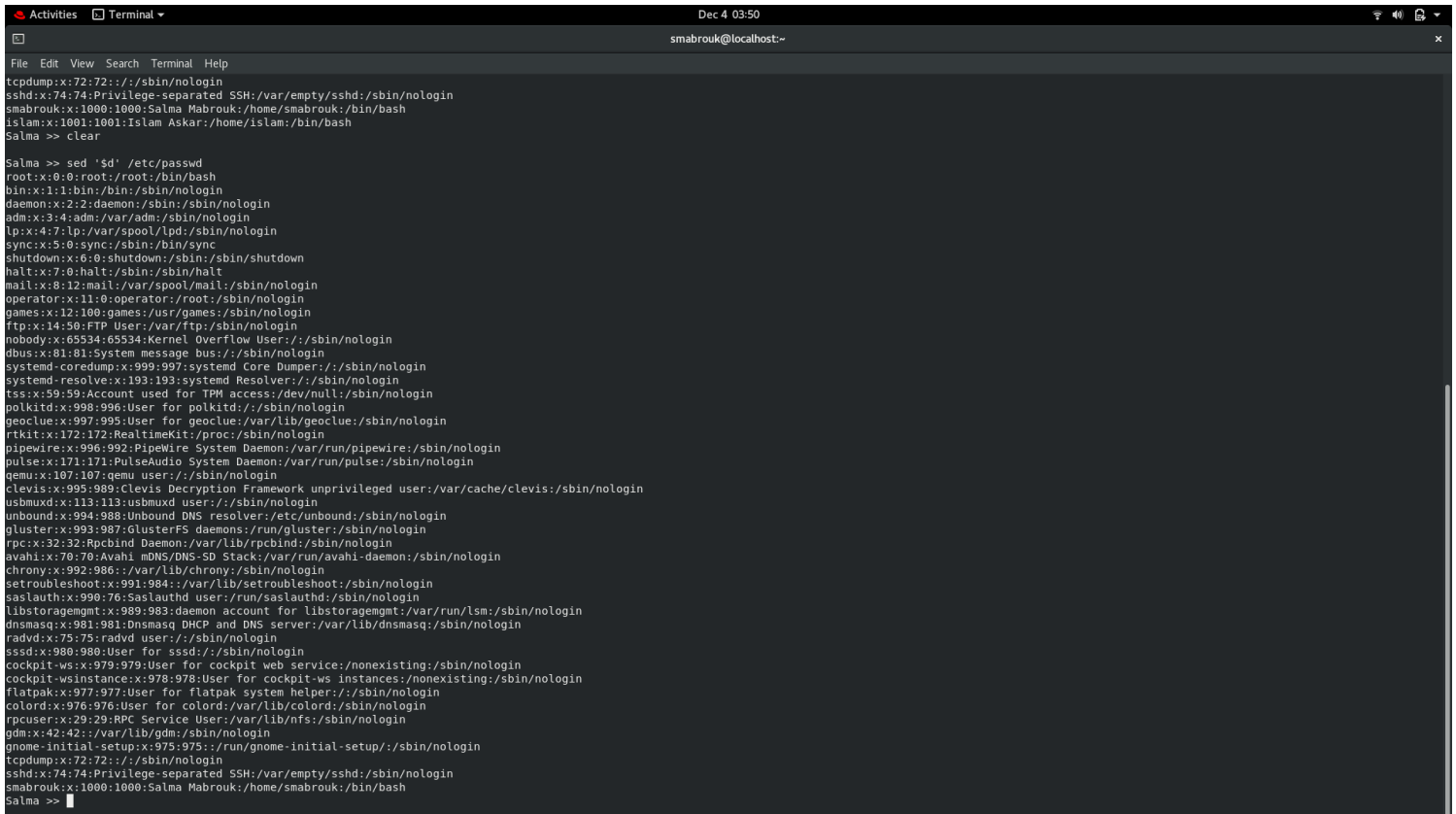
```
Salma >> sed -n '/lp/' /etc/passwd
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
flatpak:x:977:977:User for flatpak system helper:/sbin/nologin
Salma >>
```

2. Display /etc/passwd file except the third line.



```
Salma >> sed '3d' /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:65534:65534:Kernel Overflow User:/sbin/nologin
dbus:x:81:81:System message bus:/sbin/nologin
systemd-coredump:x:999:997:systemd Core Dumper:/sbin/nologin
systemd-resolve:x:193:193:systemd Resolver:/sbin/nologin
tss:x:59:59:Account used for TPM access:/dev/null:/sbin/nologin
polkitd:x:998:996:User for polkitd:/sbin/nologin
geoclue:x:997:995:User for geoclue:/var/lib/geoclue:/sbin/nologin
rtkit:x:172:172:RealtimeKit:/proc:/sbin/nologin
pipewire:x:996:992:PipeWire System Daemon:/var/run/pipewire:/sbin/nologin
pulse:x:171:171:PulseAudio System Daemon:/var/run/pulse:/sbin/nologin
qemu:x:107:107:qemu user:/sbin/nologin
clevis:x:995:989:clevis Decryption Framework unprivileged user:/var/cache/clevis:/sbin/nologin
usbmuxd:x:113:113:usbmuxd user:/sbin/nologin
unbound:x:994:988:Unbound DNS resolver:/etc/unbound:/sbin/nologin
gluster:x:993:987:GlusterFS daemons:/run/gluster:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
avahi:x:70:70:Avahi mDNS/DNS-SD Stack:/var/run/avahi-daemon:/sbin/nologin
chrony:x:992:986:/var/lib/chrony:/sbin/nologin
setroubleshoot:x:991:984:/var/lib/setroubleshoot:/sbin/nologin
sasauthd:x:990:76:Sasauthd user:/run/sasauthd:/sbin/nologin
libstoragemgmt:x:989:983:daemon account for libstoragemgmt:/var/run/lsm:/sbin/nologin
dnsmasq:x:981:981:Dnsmasq DHCP and DNS server:/var/lib/dnsmasq:/sbin/nologin
radvd:x:75:75:radvd user:/sbin/nologin
sssd:x:980:980:User for sssd:/sbin/nologin
cockpit-ws:x:979:979:User for cockpit web service:/nonexisting:/sbin/nologin
cockpit-wsinstance:x:978:978:User for cockpit-ws instances:/nonexisting:/sbin/nologin
flatpak:x:977:977:User for flatpak system helper:/sbin/nologin
colord:x:976:976:User for colord:/var/lib/colord:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
gdm:x:42:42:/var/lib/gdm:/sbin/nologin
gnome-initial-setup:x:975:975:/run/gnome-initial-setup:/sbin/nologin
tcpdump:x:72:72:/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/ssh:/sbin/nologin
```

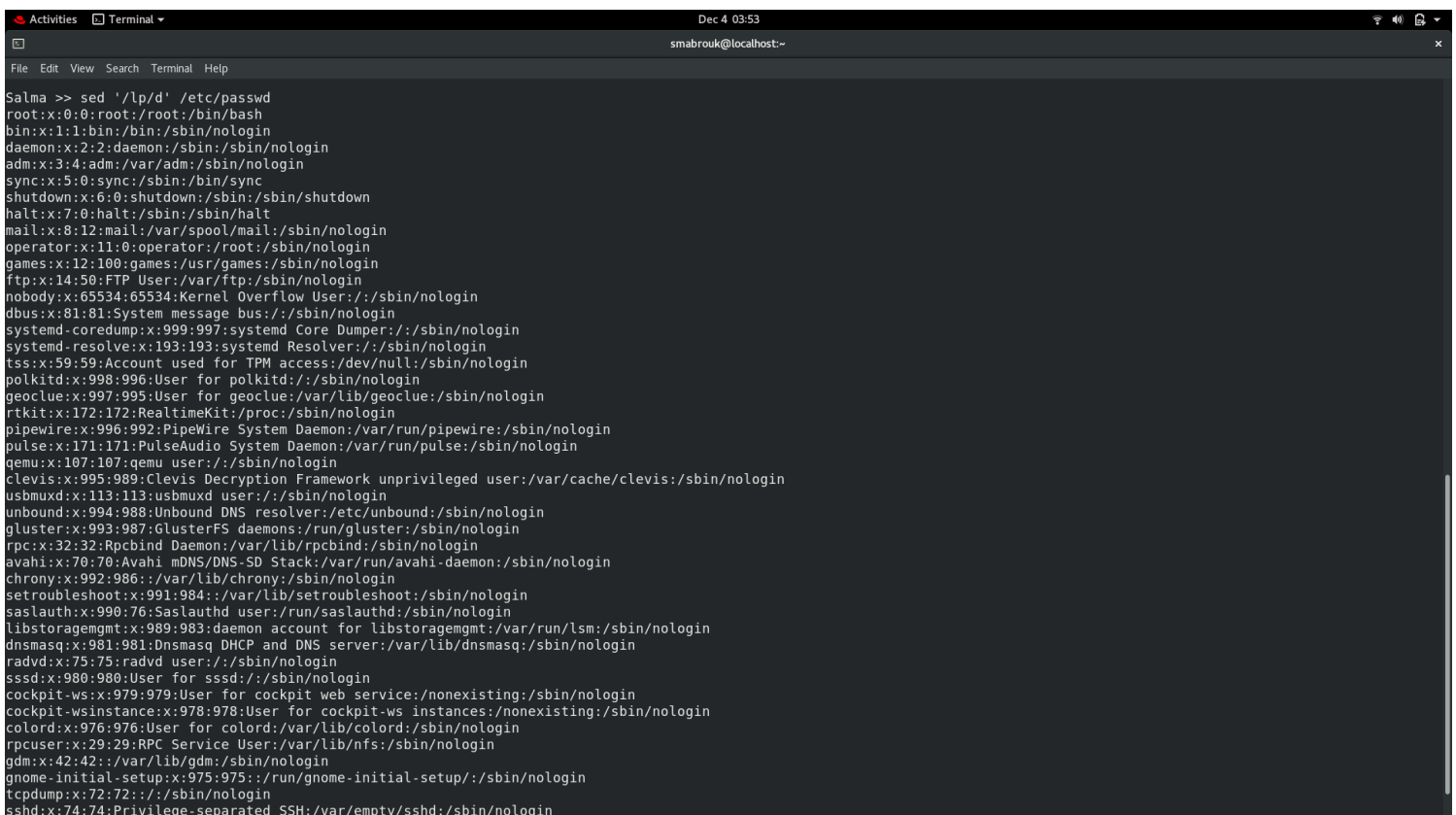
3. Display /etc/passwd file except the last line.



```
Activities Terminal ▾ Dec 4 03:50
smabrouk@localhost:~
File Edit View Search Terminal Help
tcpdump:x:72:72:/:sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin
smabrouk:x:1000:1000:Salma Mabrouk:/home/smabrouk:/bin/bash
islam:x:1001:1001:Islam Askar:/home/islam:/bin/bash
Salma >> clear

Salma >> sed -n 1,999p /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:65534:65534:Kernel Overflow User:/sbin/nologin
dbus:x:81:81:System message bus:/sbin/nologin
systemd-coredump:x:999:997:systemd Core Dumper:/sbin/nologin
systemd-resolve:x:193:193:systemd Resolver:/sbin/nologin
tss:x:59:59:Account used for TPM access:/dev/null:/sbin/nologin
polkitd:x:998:996:User for polkitd:/sbin/nologin
geoclue:x:997:995:User for geoclue:/var/lib/geoclue:/sbin/nologin
rtkit:x:172:172:RealtimeKit:/proc:/sbin/nologin
pipewire:x:996:992:PipeWire System Daemon:/var/run/pipewire:/sbin/nologin
pulse:x:171:171:PulseAudio System Daemon:/var/run/pulse:/sbin/nologin
qemu:x:107:107:qemu user:/sbin/nologin
clevis:x:995:989:clevis Decryption Framework unprivileged user:/var/cache/clevis:/sbin/nologin
usbmuxd:x:113:113:usbmuxd user:/sbin/nologin
unbound:x:994:988:Unbound DNS resolver:/etc/unbound:/sbin/nologin
gluster:x:993:987:GlusterFS daemons:/run/gluster:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
avahi:x:70:70:Avahi mDNS/DNS-SD Stack:/var/run/avahi-daemon:/sbin/nologin
chrony:x:992:986:/var/lib/chrony:/sbin/nologin
setroubleshoot:x:991:984:/var/lib/setroubleshoot:/sbin/nologin
sasauth:x:990:76:Sasauthd user:/run/sasauthd:/sbin/nologin
libstoragemgmt:x:989:983:daemon account for libstoragemgmt:/var/run/lsm:/sbin/nologin
dnsmasq:x:981:981:Dnsmasq DHCP and DNS server:/var/lib/dnsmasq:/sbin/nologin
radvd:x:75:75:radvd user:/sbin/nologin
sssd:x:980:980:User for sssd:/sbin/nologin
cockpit-ws:x:979:979:User for cockpit web service:/nonexisting:/sbin/nologin
cockpit-wsinstance:x:978:978:User for cockpit-ws instances:/nonexisting:/sbin/nologin
flatpak:x:977:977:User for flatpak system helper:/sbin/nologin
colord:x:976:976:User for colord:/var/lib/colord:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
gdm:x:42:42:/var/lib/gdm:/sbin/nologin
gnome-initial-setup:x:975:975:/run/gnome-initial-setup:/sbin/nologin
tcpdump:x:72:72:/:sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin
smabrouk:x:1000:1000:Salma Mabrouk:/home/smabrouk:/bin/bash
Salma >>
```

4. Display /etc/passwd file except the lines that contain the word “lp”.



```
Activities Terminal ▾ Dec 4 03:53
smabrouk@localhost:~
File Edit View Search Terminal Help
Salma >> sed -n 1,999p /etc/passwd | grep -v lp
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:65534:65534:Kernel Overflow User:/sbin/nologin
dbus:x:81:81:System message bus:/sbin/nologin
systemd-coredump:x:999:997:systemd Core Dumper:/sbin/nologin
systemd-resolve:x:193:193:systemd Resolver:/sbin/nologin
tss:x:59:59:Account used for TPM access:/dev/null:/sbin/nologin
polkitd:x:998:996:User for polkitd:/sbin/nologin
geoclue:x:997:995:User for geoclue:/var/lib/geoclue:/sbin/nologin
rtkit:x:172:172:RealtimeKit:/proc:/sbin/nologin
pipewire:x:996:992:PipeWire System Daemon:/var/run/pipewire:/sbin/nologin
pulse:x:171:171:PulseAudio System Daemon:/var/run/pulse:/sbin/nologin
qemu:x:107:107:qemu user:/sbin/nologin
clevis:x:995:989:clevis Decryption Framework unprivileged user:/var/cache/clevis:/sbin/nologin
usbmuxd:x:113:113:usbmuxd user:/sbin/nologin
unbound:x:994:988:Unbound DNS resolver:/etc/unbound:/sbin/nologin
gluster:x:993:987:GlusterFS daemons:/run/gluster:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
avahi:x:70:70:Avahi mDNS/DNS-SD Stack:/var/run/avahi-daemon:/sbin/nologin
chrony:x:992:986:/var/lib/chrony:/sbin/nologin
setroubleshoot:x:991:984:/var/lib/setroubleshoot:/sbin/nologin
sasauth:x:990:76:Sasauthd user:/run/sasauthd:/sbin/nologin
libstoragemgmt:x:989:983:daemon account for libstoragemgmt:/var/run/lsm:/sbin/nologin
dnsmasq:x:981:981:Dnsmasq DHCP and DNS server:/var/lib/dnsmasq:/sbin/nologin
radvd:x:75:75:radvd user:/sbin/nologin
sssd:x:980:980:User for sssd:/sbin/nologin
cockpit-ws:x:979:979:User for cockpit web service:/nonexisting:/sbin/nologin
cockpit-wsinstance:x:978:978:User for cockpit-ws instances:/nonexisting:/sbin/nologin
colord:x:976:976:User for colord:/var/lib/colord:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
gdm:x:42:42:/var/lib/gdm:/sbin/nologin
gnome-initial-setup:x:975:975:/run/gnome-initial-setup:/sbin/nologin
tcpdump:x:72:72:/:sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin
```

5. Substitute all the words that contain “lp” with “mylp” in /etc/passwd file.

```
Activities Terminal Dec 4 03:55
smabrouk@localhost:~$

sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin
smabrouk:x:1000:1000:Salma Mabrouk:/home/smabrouk:/bin/bash
islam:x:1001:1001:Islam Askar:/home/islam:/bin/bash
Salma >> clear

Salma >> sed 's/lp/mylp/g' /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
mylp:x:4:7:mylp:/var/spool/mylpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:65534:65534:Kernel Overflow User:/sbin/nologin
dbus:x:81:81:System message bus:/sbin/nologin
systemd_coredump:x:999:997:systemd Core Dumper:/sbin/nologin
systemd_resolve:x:193:193:systemd Resolver:/sbin/nologin
tss:x:59:59:Account used for TPM access:/dev/null:/sbin/nologin
polkitd:x:998:996:User for polkitd:/sbin/nologin
geoclue:x:997:995:User for geoclue:/var/lib/geoclue:/sbin/nologin
rtkit:x:172:172:RealtimeKit:/proc:/sbin/nologin
pipewire:x:996:992:PipeWire System Daemon:/var/run/pipewire:/sbin/nologin
pulse:x:171:171:PulseAudio System Daemon:/var/run/pulse:/sbin/nologin
qemu:x:107:107:qemu user:/sbin/nologin
clevis:x:995:989:Clevis Decryption Framework unprivileged user:/var/cache/clevis:/sbin/nologin
usbmuxd:x:113:113:usbmuxd user:/sbin/nologin
unbound:x:994:988:Unbound DNS resolver:/etc/unbound:/sbin/nologin
gluster:x:993:987:GlusterFS daemons:/run/gluster:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
avahi:x:70:70:Avahi mDNS/DNS-SD Stack:/var/run/avahi-daemon:/sbin/nologin
chrony:x:992:986:/var/lib/chrony:/sbin/nologin
setroubleshoot:x:991:984:/var/lib/setroubleshoot:/sbin/nologin
sasauthd:x:990:76:Sasauthd user:/run/sasauthd:/sbin/nologin
libstoragemgmt:x:989:983:daemon account for libstoragemgmt:/var/run/lsm:/sbin/nologin
dnsmasq:x:981:981:Dnsmasq DHCP and DNS server:/var/lib/dnsmasq:/sbin/nologin
radvd:x:75:75:radvd user:/sbin/nologin
sssd:x:988:980:User for sssd:/sbin/nologin
cockpit-ws:x:979:979:User for cockpit web service:/nonexisting:/sbin/nologin
cockpit-wsinstance:x:978:978:User for cockpit-ws instances:/nonexisting:/sbin/nologin
flatpak:x:977:977:User for flatpak system hemylper:/sbin/nologin
colord:x:976:976:User for colord:/var/lib/colord:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
gdm:x:42:42:/var/lib/gdm:/sbin/nologin
gnome-initial-setup:x:975:975:/run/gnome-initial-setup:/sbin/nologin
tcpdump:x:72:72:/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin
smabrouk:x:1000:1000:Salma Mabrouk:/home/smabrouk:/bin/bash
islam:x:1001:1001:Islam Askar:/home/islam:/bin/bash
Salma >>
```

Using awk utility

6. Print full name (comment) of all users in the system.

```
Activities Terminal Dec 4 03:59
smabrouk@localhost:~$

Salma >> awk -F: '{print $5}' /etc/passwd
root
bin
daemon
adm
lp
sync
shutdown
halt
mail
operator
games
FTP User
Kernel Overflow User
System message bus
systemd Core Dumper
systemd Resolver
Account used for TPM access
User for polkitd
User for geoclue
RealtimeKit
PipeWire System Daemon
PulseAudio System Daemon
qemu user
Clevis Decryption Framework unprivileged user
usbmuxd user
Unbound DNS resolver
GlusterFS daemons
Rpcbind Daemon
Avahi mDNS/DNS-SD Stack

Sasauthd user
daemon account for libstoragemgmt
Dnsmasq DHCP and DNS server
radvd user
User for sssd
User for cockpit web service
User for cockpit-ws instances
User for flatpak system helper
User for colord
RPC Service User

Privilege-separated SSH
Salma Mabrouk
Islam Askar
Salma >>
```

7. Print login, full name (comment) and home directory of all users.(Print each line preceded by a line number)

```

Activities Terminal
Dec 4 04:04
smabrouk@localhost:~
File Edit View Search Terminal Help
Salma >> awk -F: '{print NR, $1, $5, $6}' /etc/passwd
1 root root /root
2 bin bin /bin
3 daemon daemon /sbin
4 adm adm /var/adm
5 lp lp /var/spool/lpd
6 sync sync /sbin
7 shutdown shutdown /sbin
8 halt halt /sbin
9 mail mail /var/spool/mail
10 operator operator /root
11 games games /usr/games
12 ftp FTP User /var/ftp
13 nobody Kernel Overflow User /
14 dbus System message bus /
15 systemd-coredump systemd Core Dumper /
16 systemd-resolve systemd Resolver /
17 tss Account used for TPM access /dev/null
18 polkitd User for polkitd /
19 geoclue User for geoclue /var/lib/geoclue
20 rtkit RealtimeKit /proc
21 pipewire Pipewire System Daemon /var/run/pipewire
22 pulse PulseAudio System Daemon /var/run/pulse
23 qemu qemu user /
24 clevis Clevis Decryption Framework unprivileged user /var/cache/clevis
25 usbmuxd usbmuxd user /
26 unbound Unbound DNS resolver /etc/unbound
27 gluster GlusterFS daemons /run/gluster
28 rpc Rpcbind Daemon /var/lib/rpcbind
29 avahi Avahi mDNS-DNS-SD stack /var/run/avahi-daemon
30 chrony /var/lib/chrony
31 setroubleshoot /var/lib/setroubleshoot
32 saslauthd Saslauthd user /run/saslauthd
33 libstoragemgmt daemon account for libstoragemgmt /var/run/lsm
34 dnsmasq Dnsmasq DHCP and DNS server /var/lib/dnsmasq
35 radvd radvd user /
36 sssd User for sssd /
37 cockpit-ws User for cockpit web service /nonexisting
38 cockpit-wsinstance User for cockpit-ws instances /nonexisting
39 flatpak User for flatpak system helper /
40 colord User for colord /var/lib/colord
41 rpcuser RPC Service User /var/lib/nfs
42 gdm /var/lib/gdm
43 gnome-initial-setup /run/gnome-initial-setup/
44 tcpdump /
45 sshd Privilege-separated SSH /var/empty/ssh
46 smabrouk Salma Mabrouk /home/smabrouk
47 islam Islam Askar /home/islam
Salma >>

```

8. Print login, uid and full name (comment) of those uid is greater than 500.

[illegible]

9. Print login, uid and full name (comment) of those uid is exactly 500

```
Salma >> chmod +x uid.sh
Salma >> ./uid.sh
Salma >> 
```

10. Print line from 5 to 15 from /etc/passwd

[illegible]

11. Change lp to mylp

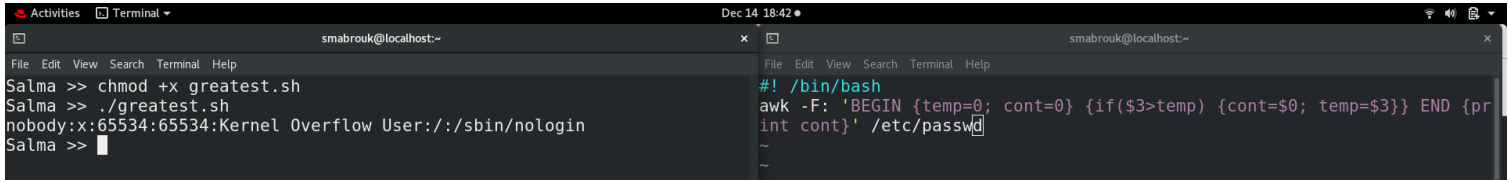
The image shows two terminal windows side-by-side. The left window, titled 'Terminal', displays the output of the command 'cat /etc/passwd'. It lists system users (daemon, adm, mylp, sync, shutdown, halt, mail, operator, games, ftp, nobody, dbus, systemd, tss, polkitd, geoclue, rtkit, pipewire, pulse, clemis, usbmuxd, unbound, gluster, rpc, avahi, chrony, setroubleshoot, saslauthd, libstoragemgmt, dnsmasq, radvd, sssd, cockpit, flatpak, colord, rpcuser, gdm, gnome-initial-setup, tcpdump, sshd) and regular users (smabrouk, islam, mailnull, smms, postfix, Salma). The right window, titled 'Terminal', shows the command 'cat /etc/passwd' being executed, followed by the command 'cat /etc/passwd | awk -F : { if(NR >= 5 && NR <= 15){print \$0} }' /etc/passwd, which prints the password field for the first 10 users. The status bar at the bottom indicates 'change.sh' [New] 4L, 121C written, 4,0-1, and All.

```
Salma >> chmod +x change.sh
Salma >> ./change.sh
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
mylp:x:4:7:mylp:/var/spool/mylpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:65534:65534:Kernel Overflow User:/:/sbin/nologin
dbus:x:81:81:System message bus:/:/sbin/nologin
systemd-coredump:x:999:997:systemd Core Dumper:/:/sbin/nologin
systemd-resolve:x:193:193:systemd Resolver:/:/sbin/nologin
tss:x:59:59:Account used for TPM access:/dev/null:/sbin/nologin
polkitd:x:998:996:User for polkitd:/:/sbin/nologin
geoclue:x:997:995:User for geoclue:/var/lib/geoclue:/sbin/nologin
rtkit:x:172:172:RealtimeKit:/proc:/sbin/nologin
pipewire:x:996:992:PipeWire System Daemon:/var/run/pipewire:/sbin/nologin
pulse:x:171:171:PulseAudio System Daemon:/var/run/pulse:/sbin/nologin
clemis:x:107:107:gnss user:/:/sbin/nologin
clemis:x:995:989:clemis Decryption Framework unprivileged user:/var/cache/clemis:/sbin/nologin
usbmuxd:x:113:113:usbmuxd user:/:/sbin/nologin
unbound:x:994:988:Unbound DNS resolver:/etc/unbound:/sbin/nologin
gluster:x:993:987:GlusterFS daemons:/run/gluster:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
avahi:x:70:70:Avahi mDNS/SD Stack:/var/run/avahi-daemon:/sbin/nologin
chrony:x:992:936:/var/lib/chrony:/sbin/nologin
setroubleshoot:x:991:984:/var/lib/setroubleshoot:/sbin/nologin
saslauthd:x:990:76:Saslauthd user:/run/saslauthd:/sbin/nologin
libstoragemgmt:x:989:983:daemon account for libstoragemgmt:/var/run/lsm:/sbin/nologin
dnsmasq:x:981:981:Dnsmasq DHCP and DNS server:/var/lib/dnsmasq:/sbin/nologin
radvd:x:75:75:radvd user:/:/sbin/nologin
sssd:x:980:980:User for sssd:/:/sbin/nologin
cockpit-ws:x:979:979:User for cockpit web service:/nonexistent:/sbin/nologin
cockpit-ws-ns:x:978:978:User for cockpit-ws instances:/nonexistent:/sbin/nologin
flatpak:x:977:977:User for flatpak system hemlyper:/:/sbin/nologin
colord:x:976:976:User for colord:/var/lib/colord:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
gdm:x:42:42:/var/lib/gdm:/sbin/nologin
gnome-initial-setup:x:975:975:/run/gnome-initial-setup:/sbin/nologin
tcpdump:x:72:72:/:/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/ssh:/sbin/nologin
smabrouk:x:1000:1000:Salma Mabrouk:/home/smaabrouk:/bin/bash
islam:x:1001:1001:Islam Askar:/home/islam:/bin/bash
mailnull:x:47:47:/var/spool/mqueue:/sbin/nologin
smms:x:51:51:/var/spool/mqueue:/sbin/nologin
postfix:x:89:89:/var/spool/postfix:/sbin/nologin
Salma >>
```

```
#!/bin/bash
#awk -F : { if(NR >= 5 && NR <= 15){print $0} }' /etc/passwd
awk '{gsub(/^lp/, "mylp");print}' /etc/passwd

"change.sh" [New] 4L, 121C written
4,0-1
All
```

12. Print all information about greatest uid.

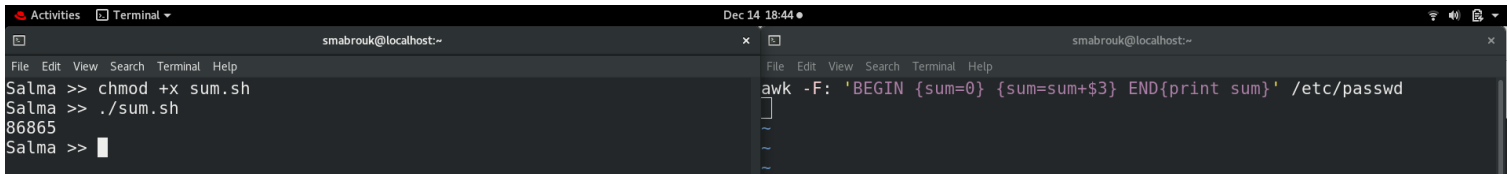


The image shows two terminal windows. The left window shows the execution of a script named 'greatest.sh' which outputs the user 'nobody' with UID 65534. The right window shows an awk command being typed to process the output of 'cat /etc/passwd'.

```
Salma >> chmod +x greatest.sh
Salma >> ./greatest.sh
nobody:x:65534:65534:Kernel Overflow User:/:sbin/nologin
Salma >>

# /bin/bash
awk -F: 'BEGIN {temp=0; cont=0} {if($3>temp) {cont=$0; temp=$3}} END {pr
int cont}' /etc/passwd
```

13. Get the sum of all accounts id's.



The image shows two terminal windows. The left window shows the execution of a script named 'sum.sh' which outputs the sum of all UIDs, 86865. The right window shows an awk command being typed to calculate the sum of all UIDs from the /etc/passwd file.

```
Salma >> chmod +x sum.sh
Salma >> ./sum.sh
86865
Salma >>

awk -F: 'BEGIN {sum=0} {sum=sum+$3} END{print sum}' /etc/passwd
```