EmbedUR - Linux Training Program

Module - 2

Assignment – 9 (Simple Filters)

1. Try to get the first 10 lines from /etc/passwd

```
aswinsankesh@aswin-linux:~$ head /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
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
aswinsankesh@aswin-linux:~$
```

2. try to get just the first 3 lines from /etc/passwd

```
aswinsankesh@aswin-linux:~$ head -n3 /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
aswinsankesh@aswin-linux:~$
```

1. Try to get the Last 10 lines from /etc/passwd

```
aswinsankesh@aswin-linux:~$ tail /etc/passwd
saned:x:122:129::/var/lib/saned:/usr/sbin/nologin
colord:x:123:130:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/no
login
geoclue:x:124:131::/var/lib/geoclue:/usr/sbin/nologin
pulse:x:125:132:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
gnome-initial-setup:x:126:65534::/run/gnome-initial-setup/:/bin/false
hplip:x:127:7:HPLIP system user,,,:/run/hplip:/bin/false
gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false
aswinsankesh:x:1000:1000:Aswin Sankesh,,,:/home/aswinsankesh:/bin/bash
aswin2:x:1001:1001::/home/aswin2:/bin/sh
family:x:1002:1002::/home/family:/bin/sh
aswinsankesh@aswin-linux:~$
```

2. Try to get just the Last 3 lines from /etc/passwd

```
aswinsankesh@aswin-linux:~$ tail -n3 /etc/passwd
aswinsankesh:x:1000:1000:Aswin Sankesh,,,:/home/aswinsankesh:/bin/bash
aswin2:x:1001:1001::/home/aswin2:/bin/sh
family:x:1002:1002::/home/family:/bin/sh
aswinsankesh@aswin-linux:~$
```

3. Try to follow the log file /var/log/auth.log

```
aswinsankesh@aswin-linux:~$ tail -f /var/log/auth.log
Sep 18 21:38:39 aswin-linux userdel[3207]: delete user 'duck'
Sep 18 21:38:39 aswin-linux userdel[3207]: removed group 'duck' owned by 'duck'
Sep 18 21:38:39 aswin-linux userdel[3207]: removed shadow group 'duck' owned by
'duck'
Sep 18 21:38:39 aswin-linux sudo: pam_unix(sudo:session): session closed for use
r root
Sep 18 22:09:46 aswin-linux gdm-password]: gkr-pam: unlocked login keyring
Sep 18 22:17:01 aswin-linux CRON[3330]: pam_unix(cron:session): session opened f
or user root(uid=0) by (uid=0)
Sep 18 22:17:01 aswin-linux CRON[3330]: pam_unix(cron:session): session closed f
or user root
Sep 18 22:30:01 aswin-linux CRON[3342]: pam_unix(cron:session): session opened f
or user root(uid=0) by (uid=0)
Sep 18 22:30:01 aswin-linux CRON[3342]: pam_unix(cron:session): session closed f
or user root
Sep 18 23:03:54 aswin-linux gdm-password]: gkr-pam: unlocked login keyring
```

1. Try to sort the file /etc/passwd in assending order.

```
aswinsankesh@aswin-linux:~$ sort /etc/passwd
_apt:x:105:65534::/nonexistent:/usr/sbin/nologin
aswin2:x:1001:1001::/home/aswin2:/bin/sh
aswinsankesh:x:1000:1000:Aswin Sankesh,,,:/home/aswinsankesh:/bin/bash
avahi-autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/
nologin
avahi:x:114:121:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
colord:x:123:130:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/no
login
cups-pk-helper:x:115:122:user for cups-pk-helper service,,,:/home/cups-pk-helper
:/usr/sbin/nologin
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
family:x:1002:1002::/home/family:/bin/sh
fwupd-refresh:x:120:126:fwupd-refresh user,,,:/run/systemd:/usr/sbin/nologin
games:x:5:60:games:/usr/games:/usr/sbin/nologin
gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false
geoclue:x:124:131::/var/lib/geoclue:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologi
n
gnome-initial-setup:x:126:65534::/run/gnome-initial-setup/:/bin/false
hplip:x:127:7:HPLIP system user,,,:/run/hplip:/bin/false
```

2. Try to sort the file /etc/passwd in decending order.

Output:

```
aswinsankesh@aswin-linux:~$ sort -r /etc/passwd
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
whoopsie:x:117:124::/nonexistent:/bin/false
uuidd:x:107:116::/run/uuidd:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
usbmux:x:111:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
tss:x:106:113:TPM software stack,,,:/var/lib/tpm:/bin/false
tcpdump:x:109:118::/nonexistent:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbi
n/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
systemd-oom:x:108:117:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nol
ogin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/n
ologin
syslog:x:104:111::/home/syslog:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
sssd:x:118:125:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin
speech-dispatcher:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/fals
e
saned:x:122:129::/var/lib/saned:/usr/sbin/nologin
rtkit:x:116:123:RealtimeKit,,,:/proc:/usr/sbin/nologin
root:x:0:0:root:/root:/bin/bash
```

3. Try to sort the file /etc/passwd in assending order based on the 3rd column.

Output:

```
aswinsankesh@aswin-linux:~$ sort -t ":" -k3 /etc/passwd
root:x:0:0:root:/root:/bin/bash
aswinsankesh:x:1000:1000:Aswin Sankesh,,,:/home/aswinsankesh:/bin/bash
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/n
ologin
aswin2:x:1001:1001::/home/aswin2:/bin/sh
family:x:1002:1002::/home/family:/bin/sh
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
messagebus:x:102:105::/nonexistent:/usr/sbin/nologin
systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbi
n/nologin
syslog:x:104:111::/home/syslog:/usr/sbin/nologin
_apt:x:105:65534::/nonexistent:/usr/sbin/nologin
tss:x:106:113:TPM software stack,,,:/var/lib/tpm:/bin/false
uuidd:x:107:116::/run/uuidd:/usr/sbin/nologin
systemd-oom:x:108:117:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nol
ogin
tcpdump:x:109:118::/nonexistent:/usr/sbin/nologin
avahi-autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/
nologin
usbmux:x:111:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
kernoops:x:113:65534:Kernel Oops Tracking Daemon,,,:/:/usr/sbin/nologin
```

1. Try to cut just the usernames from the file /etc/passwd

Output:

```
aswinsankesh@aswin-linux:~$ cut /etc/passwd -d ":" -f1
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
list
irc
gnats
nobody
systemd-network
systemd-resolve
messagebus
systemd-timesync
syslog
```

1. Create a file alphabets.txt and key in all the 26 alphabets each one in a new line. 2. Create a file number.txt and key in 1 to 26 each one in a new line. 3. Try to paste those two files, to see which letter appears at what number

```
aswinsankesh@aswin-linux:~$ paste alphabets.txt numbers.txt
a       1
b       2
c       3
d       4
e       5
f       6
g       7
h       8
i       9
j       10
k       11
l       12
m       13
n       14
o       15
p       16
q       17
r       18
s       19
t       20
u       21
v       22
```