

Lab 7

Question 1

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Activities  Firefox Web Browser  Dec 22

1 / 1  +  [F]  [Q]  Tilix: amnobia@cis106vm: ~  [Q]  [≡]  -  □  ×

1: amnobia@cis106vm: ~  AI  □  ×

amnobia@cis106vm:~$ cat /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
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/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/sbin/nologin
syslog:x:104:111:/:home/syslog:/usr/sbin/nologin
_apt:x:105:65534:/:nonexistent:/usr/sbin/nologin
tss:x:106:112:TPM software stack,,,:/var/lib/tpm:/bin/false
uidd:x:107:115:/:run/uidd:/usr/sbin/nologin
systemd-oom:x:108:116:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nologin
tcpdump:x:109:117:/: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
avahi:x:114:121:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin
cups-pk-helper:x:115:122:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin
rtkit:x:116:123:RealtimeKit,,,:/proc:/usr/sbin/nologin
whoopsie:x:117:124:/:nonexistent:/bin/false
sssd:x:118:125:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin
speech-dispatcher:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
nm-openvpn:x:120:126:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
saned:x:121:128:/:/var/lib/saned:/usr/sbin/nologin
colord:x:122:129:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
geoclue:x:123:130:/:/var/lib/geoclue:/usr/sbin/nologin
pulse:x:124:131:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
gnome-initial-setup:x:125:65534:/:run/gnome-initial-setup:/bin/false
hplip:x:126:7:HPLIP system user...:/run/hplip:/bin/false

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Activities  Tilix  Dec 22

1 / 1  +  [F]  [Q]  Tilix: amnobia@cis106vm: ~  [Q]  [≡]  -  □  ×

1: amnobia@cis106vm: ~  AI  □  ×

amnobia@cis106vm:~$ tac /etc/passwd
sshd:x:130:65534:/:run/sshd:/usr/sbin/nologin
fwupd-refresh:x:129:138:fwupd-refresh user,,,:/run/systemd:/usr/sbin/nologin
_flatpak:x:128:137:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
vboxadd:x:999:1:/:var/run/vboxadd:/bin/false
amnobia:x:1000:1000:Angello,,,:/home/amnobia:/bin/bash
gdm:x:127:133:Gnome Display Manager:/var/lib/gdm3:/bin/false
hplip:x:126:7:HPLIP system user,,,:/run/hplip:/bin/false
gnome-initial-setup:x:125:65534:/:run/gnome-initial-setup:/bin/false
pulse:x:124:131:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
geoclue:x:123:130:/:/var/lib/geoclue:/usr/sbin/nologin
colord:x:122:129:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
saned:x:121:128:/:/var/lib/saned:/usr/sbin/nologin
nm-openvpn:x:120:126:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
speech-dispatcher:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
sssd:x:118:125:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin
whoopsie:x:117:124:/:nonexistent:/bin/false

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rtkit:x:116:123:RealtimeKit,,,:/proc:/usr/sbin/nologin
cups-pk-helper:x:115:122:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin
avahi:x:114:121:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin
kernoops:x:113:65534:Kernel Oops Tracking Daemon,,,:/usr/sbin/nologin
dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
usbmux:x:111:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
avahi-autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/nologin
tcpdump:x:109:117:/nonexistent:/usr/sbin/nologin
systemd-oom:x:108:116:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nologin
uidd:x:107:115:/run/uidd:/usr/sbin/nologin
tss:x:106:112:TPM software stack,,,:/var/lib/tpm:/bin/false
_lapt:x:105:65534:/nonexistent:/usr/sbin/nologin
syslog:x:104:111:/home/syslog:/usr/sbin/nologin
systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
messagebus:x:102:105:/nonexistent:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
```

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Activities  Firefox Web Browser  Dec 22
1 / 1  +  [ ]  [ ]  Tilix: amnobia@cis106vm: ~  [ ]  [ ]  [ ]  [ ]
1: amnobia@cis106vm: ~  AI  [ ]  [ ]
amnobia@cis106vm:~$ 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:/run/ircd:/usr/sbin/nologin$
17 gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin$
18 nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin$
19 systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin$
20 systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin$
21 messagebus:x:102:105:/:nonexistent:/usr/sbin/nologin$
22 systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin$
23 syslog:x:104:111:/:home/syslog:/usr/sbin/nologin$
24 _apt:x:105:65534:/:nonexistent:/usr/sbin/nologin$
25 tss:x:106:112:TPM software stack,,,:/var/lib/tpm:/bin/false$
26 uidd:x:107:115:/:run/uidd:/usr/sbin/nologin$
27 systemd-oom:x:108:116:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nologin$
28 tcpdump:x:109:117:/:nonexistent:/usr/sbin/nologin$
29 avahi-autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/nologin$
30 usbmux:x:111:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin$
31 dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin$
32 kernoops:x:113:65534:Kernel Oops Tracking Daemon,,,:/usr/sbin/nologin$
33 avahi:x:114:121:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin$
34 cups-pk-helper:x:115:122:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin$
35 rtkit:x:116:123:RealtimeKit,,,:/proc:/usr/sbin/nologin$
36 whoopsie:x:117:124:/:nonexistent:/bin/false$
37 sssd:x:118:125:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin$
38 speech-dispatcher:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false$
39 nm-openvpn:x:120:126:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin$
40 saned:x:121:128:/:var/lib/saned:/usr/sbin/nologin$
41 colord:x:122:129:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin$
42 geoclue:x:123:130:/:var/lib/geoclue:/usr/sbin/nologin$
43 pulse:x:124:131:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin$
44 gnome-initial-setup:x:125:65534:/:run/gnome-initial-setup:/bin/false$
45 hplio:x:126:7:HPI TP system user...:/run/hplio:/bin/false$

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Activities  Tilix  Dec 22
1 / 1  +  [ ]  [ ]  Tilix: amnobia@cis106vm: ~  [ ]  [ ]  [ ]  [ ]
1: amnobia@cis106vm: ~  [ ]  [ ]
amnobia@cis106vm:~$ 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
amnobia@cis106vm:~$ tail -5 /etc/passwd
amnobia:x:1000:1000:Angello,,,:/home/amnobia:/bin/bash
vboxadd:x:999:1:/:var/run/vboxadd:/bin/false
_flatpak:x:128:137:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
fwupd-refresh:x:129:138:fwupd-refresh user,,,:/run/systemd:/usr/sbin/nologin
sshd:x:130:65534:/:run/sshd:/usr/sbin/nologin
amnobia@cis106vm:~$

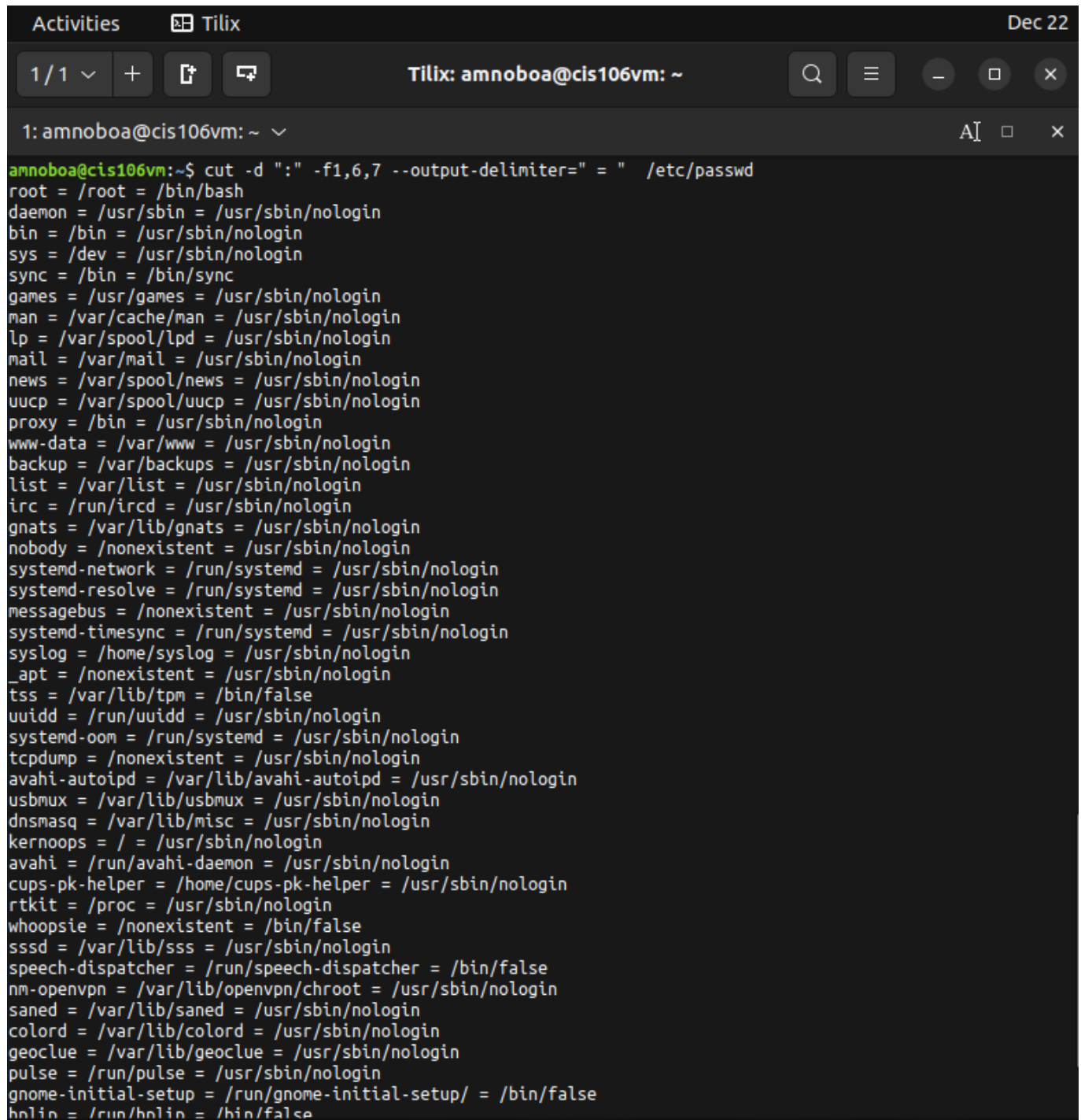
```

Question 2


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Activities Tilix Dec 22
1 / 1 + [ ] [ ] Tilix: amnoba@c1s106vm: ~
1: amnoba@c1s106vm: ~
amnoba@c1s106vm:~$ cut -d ":" -f1 /etc/passwd
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
_apt
tss
uidd
systemd-oom
tcpdump
avahi-autoipd
usbmux
dnsmasq
kernoops
avahi
cups-pk-helper
rtkit
whoopsie
sssd
speech-dispatcher
nm-openvpn
saned
colord
geoclue
pulse
gnome-initial-setup
hplip
```

```
Activities Tilix Dec 22
1 / 1 + [ ] [ ] Tilix: amnoba@c1s106vm: ~
1: amnoba@c1s106vm: ~
amnoba@c1s106vm:~$ cut -d ":" -f1,6,7 /etc/passwd
root:/root:/bin/bash
daemon:/usr/sbin:/usr/sbin/nologin
bin:/bin:/usr/sbin/nologin
sys:/dev:/usr/sbin/nologin
sync:/bin:/bin/sync
games:/usr/games:/usr/sbin/nologin
man:/var/cache/man:/usr/sbin/nologin
lp:/var/spool/lpd:/usr/sbin/nologin
mail:/var/mail:/usr/sbin/nologin
news:/var/spool/news:/usr/sbin/nologin
uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:/bin:/usr/sbin/nologin
www-data:/var/www:/usr/sbin/nologin
backup:/var/backups:/usr/sbin/nologin
list:/var/list:/usr/sbin/nologin
irc:/run/ircd:/usr/sbin/nologin
```

```
gnats:/var/lib/gnats:/usr/sbin/nologin
nobody:/nonexistent:/usr/sbin/nologin
systemd-network:/run/systemd:/usr/sbin/nologin
systemd-resolve:/run/systemd:/usr/sbin/nologin
messagebus:/nonexistent:/usr/sbin/nologin
systemd-timesync:/run/systemd:/usr/sbin/nologin
syslog:/home/syslog:/usr/sbin/nologin
_apt:/nonexistent:/usr/sbin/nologin
tss:/var/lib/tpm:/bin/false
uidd:/run/uidd:/usr/sbin/nologin
systemd-oom:/run/systemd:/usr/sbin/nologin
tcpdump:/nonexistent:/usr/sbin/nologin
avahi-autoipd:/var/lib/avahi-autoipd:/usr/sbin/nologin
usbmux:/var/lib/usbmux:/usr/sbin/nologin
dnsmasq:/var/lib/misc:/usr/sbin/nologin
kernoops:/usr/sbin/nologin
avahi:/run/avahi-daemon:/usr/sbin/nologin
cups-pk-helper:/home/cups-pk-helper:/usr/sbin/nologin
rtkit:/proc:/usr/sbin/nologin
whoopsie:/nonexistent:/bin/false
sssd:/var/lib/sss:/usr/sbin/nologin
speech-dispatcher:/run/speech-dispatcher:/bin/false
nm-openvpn:/var/lib/openvpn/chroot:/usr/sbin/nologin
saned:/var/lib/saned:/usr/sbin/nologin
colord:/var/lib/colord:/usr/sbin/nologin
geoclue:/var/lib/geoclue:/usr/sbin/nologin
pulse:/run/pulse:/usr/sbin/nologin
gnome-initial-setup:/run/gnome-initial-setup:/bin/false
holin:/run/holin:/bin/false
```



The screenshot shows a terminal window titled 'Tilix: amnobia@cis106vm: ~'. The command executed is `cut -d ":" -f1,6,7 --output-delimiter=" = " /etc/passwd`. The output lists system users and their home directories, separated by an equals sign. The window includes standard Ubuntu interface elements like the top bar with 'Activities' and 'Tilix' tabs, and window controls. The terminal title bar also shows the user 'amnobia@cis106vm' and the current directory '~'.

```
amnobia@cis106vm:~$ cut -d ":" -f1,6,7 --output-delimiter=" = " /etc/passwd
root = /root = /bin/bash
daemon = /usr/sbin = /usr/sbin/nologin
bin = /bin = /usr/sbin/nologin
sys = /dev = /usr/sbin/nologin
sync = /bin = /bin/sync
games = /usr/games = /usr/sbin/nologin
man = /var/cache/man = /usr/sbin/nologin
lp = /var/spool/lpd = /usr/sbin/nologin
mail = /var/mail = /usr/sbin/nologin
news = /var/spool/news = /usr/sbin/nologin
uucp = /var/spool/uucp = /usr/sbin/nologin
proxy = /bin = /usr/sbin/nologin
www-data = /var/www = /usr/sbin/nologin
backup = /var/backups = /usr/sbin/nologin
list = /var/list = /usr/sbin/nologin
irc = /run/ircd = /usr/sbin/nologin
gnats = /var/lib/gnats = /usr/sbin/nologin
nobody = /nonexistent = /usr/sbin/nologin
systemd-network = /run/systemd = /usr/sbin/nologin
systemd-resolve = /run/systemd = /usr/sbin/nologin
messagebus = /nonexistent = /usr/sbin/nologin
systemd-timesync = /run/systemd = /usr/sbin/nologin
syslog = /home/syslog = /usr/sbin/nologin
_apt = /nonexistent = /usr/sbin/nologin
tss = /var/lib/tpm = /bin/false
uuid = /run/uuid = /usr/sbin/nologin
systemd-oom = /run/systemd = /usr/sbin/nologin
tcpdump = /nonexistent = /usr/sbin/nologin
avahi-autoipd = /var/lib/avahi-autoipd = /usr/sbin/nologin
usbmux = /var/lib/usbmux = /usr/sbin/nologin
dnsmasq = /var/lib/misc = /usr/sbin/nologin
kernoops = / = /usr/sbin/nologin
avahi = /run/avahi-daemon = /usr/sbin/nologin
cups-pk-helper = /home/cups-pk-helper = /usr/sbin/nologin
rtkit = /proc = /usr/sbin/nologin
whoopsie = /nonexistent = /bin/false
sssd = /var/lib/sss = /usr/sbin/nologin
speech-dispatcher = /run/speech-dispatcher = /bin/false
nm-openvpn = /var/lib/openvpn/chroot = /usr/sbin/nologin
saned = /var/lib/saned = /usr/sbin/nologin
colord = /var/lib/colord = /usr/sbin/nologin
geoclue = /var/lib/geoclue = /usr/sbin/nologin
pulse = /run/pulse = /usr/sbin/nologin
gnome-initial-setup = /run/gnome-initial-setup/ = /bin/false
hplip = /run/hplip = /bin/false
```


The screenshot shows a terminal window titled 'Tilix: amnoba@cis106vm: ~'. The command executed is `cut -d ":" -f1,2,4,5,6,7 /etc/passwd`. The output lists system users and their details, including UID, GID, name, and shell path.

```

amnoba@cis106vm:~$ cut -d ":" -f1,2,4,5,6,7 /etc/passwd
root:x:0:root:/root:/bin/bash
daemon:x:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:bin:/bin:/usr/sbin/nologin
sys:x:3:sys:/dev:/usr/sbin/nologin
sync:x:65534:sync:/bin:/bin/sync
games:x:60:games:/usr/games:/usr/sbin/nologin
man:x:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:ircd:/run/ircd:/usr/sbin/nologin
gnats:x:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
messagebus:x:105:/:nonexistent:/usr/sbin/nologin
systemd-timesync:x:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
syslog:x:111:/:home/syslog:/usr/sbin/nologin
_apt:x:65534:/:nonexistent:/usr/sbin/nologin
tss:x:112:TPM software stack,,,:/var/lib/tpm:/bin/false
uidd:x:115:/:run/uidd:/usr/sbin/nologin
systemd-oom:x:116:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nologin
tcpdump:x:117:/:nonexistent:/usr/sbin/nologin
avahi-autoipd:x:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/nologin
usbmux:x:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
dnsmasq:x:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
kernoops:x:65534:Kernel Oops Tracking Daemon,,,:/usr/sbin/nologin
avahi:x:121:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin
cups-pk-helper:x:122:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin
rtkit:x:123:RealtimeKit,,,:/proc:/usr/sbin/nologin
whoopsie:x:124:/:nonexistent:/bin/false
sssd:x:125:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin
speech-dispatcher:x:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
nm-openvpn:x:126:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
saned:x:128:/:var/lib/saned:/usr/sbin/nologin
colord:x:129:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
geoclue:x:130:/:var/lib/geoclue:/usr/sbin/nologin
pulse:x:131:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
gnome-initial-setup:x:65534:/:run/gnome-initial-setup:/bin/false
hplip:x:7:HPLIP system user,,,:/run/hplip:/bin/false

```

Question 3

```

Activities  Tilix  Dec 22
1 / 1  +  [?]  [?]  Tilix: amnobia@cis106vm: ~/Documents/Books  [Q]  [≡]  [–]  [□]  [×]
1: amnobia@cis106vm: ~/Documents/Books  [□]  [×]
amnobia@cis106vm:~$ cd Documents/Books/
amnobia@cis106vm:~/Documents/Books$ wc -l dracula.txt
15860 dracula.txt
amnobia@cis106vm:~/Documents/Books$ wc -w pride-and-prejudice.txt
130406 pride-and-prejudice.txt
amnobia@cis106vm:~/Documents/Books$

```

```

Activities  Tilix  Dec 22
1 / 1  +  [?]  [?]  Tilix: amnobia@cis106vm: ~/Documents/Books  [Q]  [≡]  [–]  [□]  [×]
1: amnobia@cis106vm: ~/Documents/Books  [AI]  [□]  [×]
amnobia@cis106vm:~/Documents/Books$ sort /etc/passwd
amnobia:x:1000:1000:Angello,,,:/home/amnobia:/bin/bash
_apt:x:105:65534::/nonexistent:/usr/sbin/nologin
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:122:129:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
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
_flatpak:x:128:137:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
fwupd-refresh:x:129:138:fwupd-refresh user,,,:/run/systemd:/usr/sbin/nologin
games:x:5:60:games:/usr/games:/usr/sbin/nologin
gdm:x:127:133:Gnome Display Manager:/var/lib/gdm3:/bin/false
geoclue:x:123:130::/var/lib/geoclue:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
gnome-initial-setup:x:125:65534::/run/gnome-initial-setup:/bin/false
hplip:x:126:7:HPLIP system user,,,:/run/hplip:/bin/false
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
kernoops:x:113:65534:Kernel Oops Tracking Daemon,,,:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
messagebus:x:102:105::/nonexistent:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
nm-openvpn:x:120:126:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
pulse:x:124:131:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
root:x:0:0:root:/root:/bin/bash
rtkit:x:116:123:RealtimeKit,,,:/proc:/usr/sbin/nologin
saned:x:121:128::/var/lib/saned:/usr/sbin/nologin
speech-dispatcher:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
sshd:x:130:65534::/run/ssh:/usr/sbin/nologin
sssd:x:118:125:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
syslog:x:104:111::/home/syslog:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin
systemd-oom:x:108:116:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin
systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
tcpdump:x:109:117::/nonexistent:/usr/sbin/nologin
tss:x:106:112:TPM software stack,,,:/var/lib/tpm:/bin/false

```

Question 4


```

Activities  Tilix  Dec 22
1 / 1  +  [?]  [?]  Tilix: amnobia@cis106vm: ~/Documents/Csv  Q  ≡  -  □  ×
1: amnobia@cis106vm: ~/Documents/Csv  AI  □  ×
amnobia@cis106vm:~$ cd Documents/Csv/
amnobia@cis106vm:~/Documents/Csv$ cat cereal.csv | tr ';' ','
name,mfr,type,calories,protein,fat,sodium,fiber,carbo,sugars,potass,vitamins,shelf,weight,cups,rating
String,Categorical,Categorical,Int,Int,Int,Int,Float,Float,Int,Int,Int,Int,Float,Float,Float
100% Bran,N,C,70,4,1,130,10,5,6,280,25,3,1,0.33,68.402973
100% Natural Bran,Q,C,120,3,5,15,2,8,8,135,0,3,1,1,33.983679
All-Bran,K,C,70,4,1,260,9,7,5,320,25,3,1,0.33,59.425505
All-Bran with Extra Fiber,K,C,50,4,0,140,14,8,0,330,25,3,1,0.5,93.704912
Almond Delight,R,C,110,2,2,200,1,14,8,-1,25,3,1,0.75,34.384843
Apple Cinnamon Cheerios,G,C,110,2,2,180,1.5,10.5,10,70,25,1,1,0.75,29.509541
Apple Jacks,K,C,110,2,0,125,1,11,14,30,25,2,1,1,33.174094
Basic 4,G,C,130,3,2,210,2,18,8,100,25,3,1,33,0.75,37.038562
Bran Chex,R,C,90,2,1,200,4,15,6,125,25,1,1,0.67,49.120253
Bran Flakes,P,C,90,3,0,210,5,13,5,190,25,3,1,0.67,53.313813
Cap'n Crunch,Q,C,120,1,2,220,0,12,12,35,25,2,1,0.75,18.042851
Cheerios,G,C,110,6,2,290,2,17,1,105,25,1,1,1,25,50.764999
Cinnamon Toast Crunch,G,C,120,1,3,210,0,13,9,45,25,2,1,0.75,19.823573
Clusters,G,C,110,3,2,140,2,13,7,105,25,3,1,0.5,40.400208
Cocoa Puffs,G,C,110,1,1,180,0,12,13,55,25,2,1,1,22.736446
Corn Chex,R,C,110,2,0,280,0,22,3,25,25,1,1,1,41.445019
Corn Flakes,K,C,100,2,0,290,1,21,2,35,25,1,1,1,45.863324
Corn Pops,K,C,110,1,0,90,1,13,12,20,25,2,1,1,35.782791
Count Chocula,G,C,110,1,1,180,0,12,13,65,25,2,1,1,22.396513
Cracklin' Oat Bran,K,C,110,3,3,140,4,10,7,160,25,3,1,0.5,40.448772
Cream of Wheat (Quick),N,H,100,3,0,80,1,21,0,-1,0,2,1,1,64.533816
Crispix,K,C,110,2,0,220,1,21,3,30,25,3,1,1,46.895644
Crispy Wheat & Raisins,G,C,100,2,1,140,2,11,10,120,25,3,1,0.75,36.176196
Double Chex,R,C,100,2,0,190,1,18,5,80,25,3,1,0.75,44.330856
Froot Loops,K,C,110,2,1,125,1,11,13,30,25,2,1,1,32.207582
Frosted Flakes,K,C,110,1,0,200,1,14,11,25,25,1,1,0.75,31.435973
Frosted Mini-Wheats,K,C,100,3,0,0,3,14,7,100,25,2,1,0.8,58.345141
Fruit & Fibre Dates, Walnuts, and Oats,P,C,120,3,2,160,5,12,10,200,25,3,1,25,0.67,40.917047
Fruitful Bran,K,C,120,3,0,240,5,14,12,190,25,3,1,33,0.67,41.015492
Fruity Pebbles,P,C,110,1,1,135,0,13,12,25,25,2,1,0.75,28.025765
Golden Crisp,P,C,100,2,0,45,0,11,15,40,25,1,1,0.88,35.252444
Golden Grahams,G,C,110,1,1,280,0,15,9,45,25,2,1,0.75,23.804043
Grape Nuts Flakes,P,C,100,3,1,140,3,15,5,85,25,3,1,0.88,52.076897
Grape-Nuts,P,C,110,3,0,170,3,17,3,90,25,3,1,0.25,53.371007
Great Grains Pecan,P,C,120,3,3,75,3,13,4,100,25,3,1,0.33,45.811716
Honey Graham Ohs,Q,C,120,1,2,220,1,12,11,45,25,2,1,1,21.871292
Honey Nut Cheerios,G,C,110,3,1,250,1.5,11.5,10,90,25,1,1,0.75,31.072217
Honey-comb,P,C,110,1,0,180,0,14,11,35,25,1,1,1,33,28.742414
Just Right Crunchy Nuggets,K,C,110,2,1,170,1,17,6,60,100,3,1,1,36.523683
Just Right Fruit & Nut,K,C,140,3,1,170,2,20,9,95,100,3,1,3,0.75,36.471512
Kix,G,C,110,2,1,260,0,21,3,40,25,2,1,1.5,39.241114
Life O.C 100 4.2 150 2 12 6.95 25 2 1 0.67 45.328074

```

```

Activities  Tilix  Dec 22
1 / 1  +  [?]  [?]  Tilix: amnobia@cis106vm: ~/Documents/Books  Q  ≡  -  □  ×
1: amnobia@cis106vm: ~/Documents/Books  AI  □  ×
amnobia@cis106vm:~/Documents/Books$ grep "love" pride-and-prejudice.txt
by allowance" and "loving with personal love." This distinction applies
to their best work than in the case of those others who are loved "by
proper thing to love them. And in the sect--fairly large and yet
All the minor passages--the loves of Jane and Bingley, the advent of Mr.
aversion to actual love. I do not know whether the all-grasping hand of
his falling in love at all is not extremely probable. Here again I
injured in disposition, and thoroughly in love. As for his being in
love, Elizabeth has given as just an exposition of the causes of that
anybody who can read between lines will not find the lovers'
ladies with whom it might be a pleasure to fall in love; there are at
Grant. I should have been most in love with Beatrix and Argemone; I
"So much love and eloquence" 156
_may_ fall in love with one of them, and therefore you must visit him as
persuade you at last. I was sure you loved your girls too well to
for your sakes we would do anything. Lydia, my love, though you _are_
dancing was a certain step towards falling in love; and very lively
way to be very much in love: but she considered with pleasure that it

```


very few of us who have heart enough to be really in **love** without in **love** as much as she chooses."

imagination is very rapid; it jumps from admiration to **love**, from **love** Jane, make haste and tell us; make haste, my **love**."

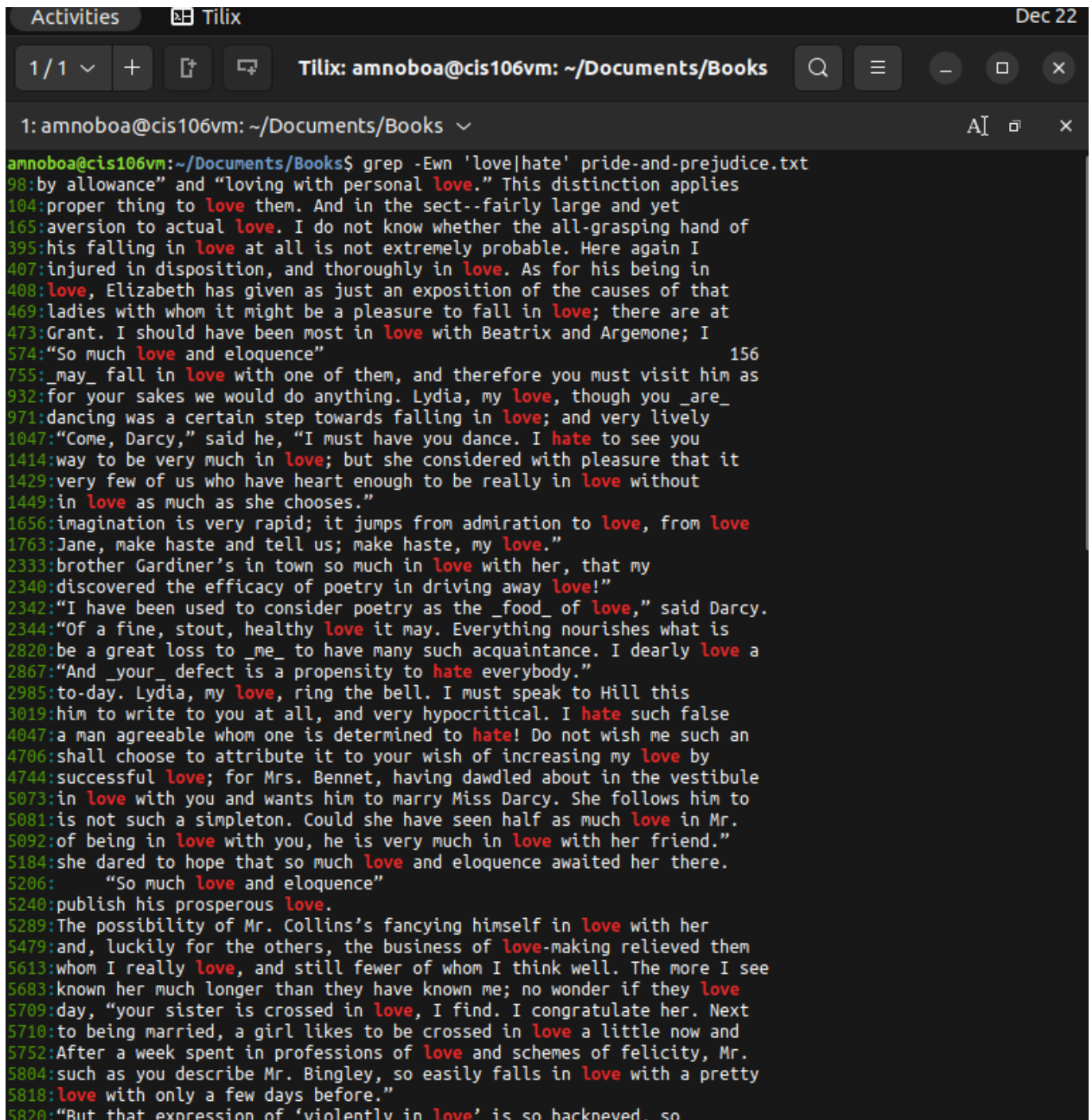
brother Gardiner's in town so much in **love** with her, that my discovered the efficacy of poetry in driving away **love**!"

"I have been used to consider poetry as the **_food_ of love**," said Darcy. "Of a fine, stout, healthy **love** it may. Everything nourishes what is be a great loss to **_me_** to have many such acquaintance. I dearly **love** a to-day. Lydia, my **love**, ring the bell. I must speak to Hill this His plan did not vary on seeing them. Miss Bennet's **lovely** face effects of your **loveliness** and amiable qualifications. As I must, shall choose to attribute it to your wish of increasing my **love** by successful **love**; for Mrs. Bennet, having dawdled about in the vestibule in **love** with you and wants him to marry Miss Darcy. She follows him to is not such a simpleton. Could she have seen half as much **love** in Mr. of being in **love** with you, he is very much in **love** with her friend." she dared to hope that so much **love** and eloquence awaited her there.

"So much **love** and eloquence"

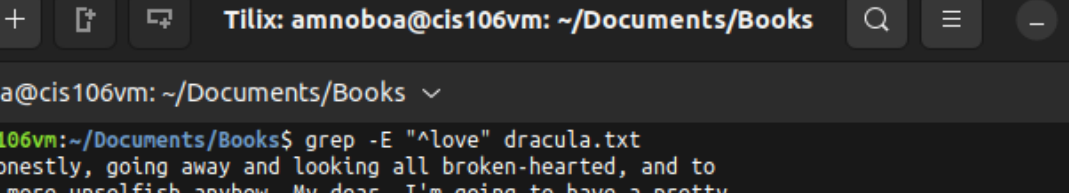
publish his prosperous **love**.

The possibility of Mr. Collins's fancying himself in **love** with her while her health was so indifferent, and **lovers** were of all people the dishonourable to the stability of her **lover**, she could not prevent its and, luckily for the others, the business of **love**-making relieved them you. I feel as if I had never done you justice, or **loved** you as you whom I really **love**, and still fewer of whom I think well. The more I see known her much longer than they have known me; no wonder if they **love** dav. "your sister is crossed in **love**. I find. I congratulate her. Next



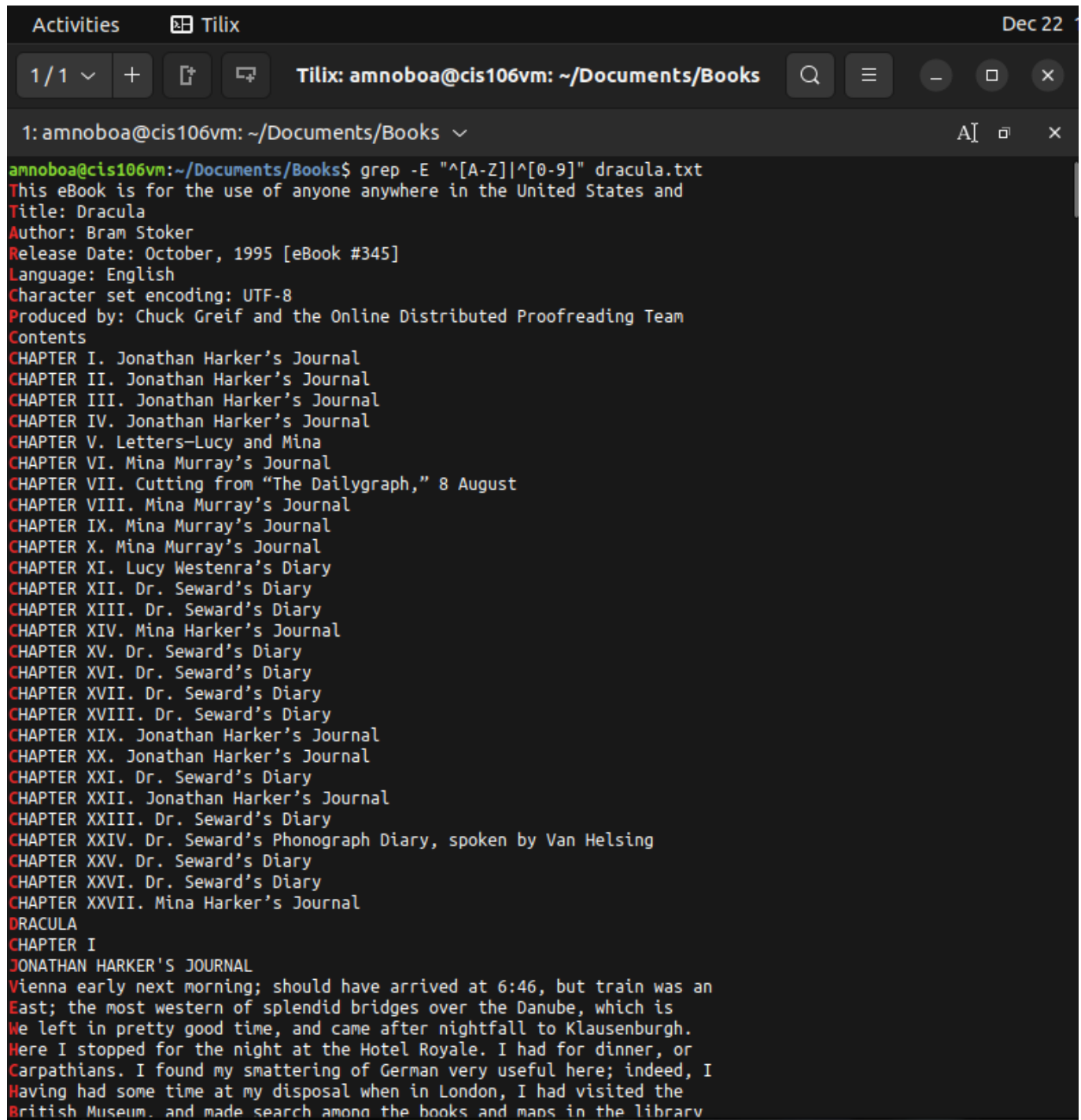
The screenshot shows a terminal window titled 'Tilix: amnoba@cis106vm: ~/Documents/Books'. The terminal displays the command `grep -Ewn 'love|hate' pride-and-prejudice.txt` and its output. The output consists of line numbers followed by text excerpts from 'Pride and Prejudice' where the words 'love' or 'hate' appear. The text is color-coded: 'love' is red and 'hate' is green. The terminal window has a dark theme and standard window controls at the top.

```
amnoba@cis106vm:~/Documents/Books$ grep -Ewn 'love|hate' pride-and-prejudice.txt
98:by allowance" and "loving with personal love." This distinction applies
104:proper thing to love them. And in the sect--fairly large and yet
165:aversion to actual love. I do not know whether the all-grasping hand of
395:his falling in love at all is not extremely probable. Here again I
407:injured in disposition, and thoroughly in love. As for his being in
408:love, Elizabeth has given as just an exposition of the causes of that
469:ladies with whom it might be a pleasure to fall in love; there are at
473:Grant. I should have been most in love with Beatrix and Argenone; I
574:"So much love and eloquence" 156
755:_may_ fall in love with one of them, and therefore you must visit him as
932:for your sakes we would do anything. Lydia, my love, though you _are_
971:dancing was a certain step towards falling in love; and very lively
1047:"Come, Darcy," said he, "I must have you dance. I hate to see you
1414:way to be very much in love; but she considered with pleasure that it
1429:very few of us who have heart enough to be really in love without
1449:in love as much as she chooses."
1656:imagination is very rapid; it jumps from admiration to love, from love
1763:Jane, make haste and tell us; make haste, my love."
2333:brother Gardiner's in town so much in love with her, that my
2340:discovered the efficacy of poetry in driving away love!"
2342:"I have been used to consider poetry as the _food_ of love," said Darcy.
2344:"Of a fine, stout, healthy love it may. Everything nourishes what is
2820:be a great loss to _me_ to have many such acquaintance. I dearly love a
2867:"And _your_ defect is a propensity to hate everybody."
2985:to-day. Lydia, my love, ring the bell. I must speak to Hill this
3019:him to write to you at all, and very hypocritical. I hate such false
4047:a man agreeable whom one is determined to hate! Do not wish me such an
4706:shall choose to attribute it to your wish of increasing my love by
4744:successful love; for Mrs. Bennet, having dawdled about in the vestibule
5073:in love with you and wants him to marry Miss Darcy. She follows him to
5081:is not such a simpleton. Could she have seen half as much love in Mr.
5092:of being in love with you, he is very much in love with her friend."
5184:she dared to hope that so much love and eloquence awaited her there.
5206: "So much love and eloquence"
5240:publish his prosperous love.
5289:The possibility of Mr. Collins's fancying himself in love with her
5479:and, luckily for the others, the business of love-making relieved them
5613:whom I really love, and still fewer of whom I think well. The more I see
5683:known her much longer than they have known me; no wonder if they love
5709:day, "your sister is crossed in love, I find. I congratulate her. Next
5710:to being married, a girl likes to be crossed in love a little now and
5752:After a week spent in professions of love and schemes of felicity, Mr.
5804:such as you describe Mr. Bingley, so easily falls in love with a pretty
5818:love with only a few days before."
5820:"But that expression of 'violently in love' is so hackneyed. so
```

The screenshot shows a terminal window with a dark background. The title bar at the top reads "Activities Tilix" on the left and "Dec 22" on the right. Below the title bar is a navigation bar with "1 / 1" and a dropdown arrow, followed by icons for file operations and a search icon. The main terminal area shows a prompt "1: amnoba@c1s106vm: ~/Documents/Books" followed by a command: `grep -E "^love" dracula.txt`. The output of the command is a list of lines from the file `dracula.txt`, each starting with the word "love" (which is highlighted in red in the original image). The lines are: "loves you honestly, going away and looking all broken-hearted, and to", "lover; it's more unselfish anyhow. My dear, I'm going to have a pretty", "lover, such a husband, and such a friend.", "lovelier than ever, and we drove up to the house at the Crescent in", "love her. One, two, three, all open their veins for her, besides one old", "love and pride, seen you grow up. Now I want you to make your home here", "love me, and he loves me, and I love you with all the moods and tenses", "loveliness had come back to her in death, and the hours that had passed,", "loveliness. It frightened and amazed me somewhat; and as for Arthur, he", "love her. Oh, Madam Mina, by that love, I implore you, help me. It is", "lover, but only her physician and her friend. I gave to her my nights", "loved and honoured as our host is, everything regarding him is of", "love and from the good, good wishes of those other strong men.", "love Mina, I know. Oh, do something to save her. It cannot have gone too", "loved him and honoured him more than I can say, and that my latest and", "loved her, that they did dare much for her sake." The prompt "amnoba@c1s106vm:~/Documents/Books\$" is visible at the bottom.

```
Activities Tilix Dec 22
1 / 1 + [ ] [ ] Tilix: amnoba@c1s106vm: ~/Documents/Books [ ] [ ] [ ] [ ]
1: amnoba@c1s106vm: ~/Documents/Books [ ] [ ]
amnoba@c1s106vm:~/Documents/Books$ grep -E "^love" dracula.txt
loves you honestly, going away and looking all broken-hearted, and to
lover; it's more unselfish anyhow. My dear, I'm going to have a pretty
lover, such a husband, and such a friend.
lovelier than ever, and we drove up to the house at the Crescent in
love her. One, two, three, all open their veins for her, besides one old
love and pride, seen you grow up. Now I want you to make your home here
love me, and he loves me, and I love you with all the moods and tenses
loveliness had come back to her in death, and the hours that had passed,
loveliness. It frightened and amazed me somewhat; and as for Arthur, he
love her. Oh, Madam Mina, by that love, I implore you, help me. It is
lover, but only her physician and her friend. I gave to her my nights
loved and honoured as our host is, everything regarding him is of
love and from the good, good wishes of those other strong men.
love Mina, I know. Oh, do something to save her. It cannot have gone too
loved him and honoured him more than I can say, and that my latest and
loved her, that they did dare much for her sake."
amnoba@c1s106vm:~/Documents/Books$
```



The screenshot shows a terminal window titled 'Tilix' with the address bar displaying 'Tilix: amnoboa@cis106vm: ~/Documents/Books'. The terminal prompt is 'amnoboa@cis106vm:~/Documents/Books\$'. The command executed is 'grep -E "[A-Z]|[0-9]" dracula.txt'. The output lists the title, author, release date, language, character set encoding, and producer of the eBook. It then lists the contents of the book, including chapters I through XXVII, and the beginning of Chapter I, 'Jonathan Harker's Journal'.

```
amnoboa@cis106vm:~/Documents/Books$ grep -E "[A-Z]|[0-9]" dracula.txt
This eBook is for the use of anyone anywhere in the United States and
Title: Dracula
Author: Bram Stoker
Release Date: October, 1995 [eBook #345]
Language: English
Character set encoding: UTF-8
Produced by: Chuck Greif and the Online Distributed Proofreading Team
Contents
CHAPTER I. Jonathan Harker's Journal
CHAPTER II. Jonathan Harker's Journal
CHAPTER III. Jonathan Harker's Journal
CHAPTER IV. Jonathan Harker's Journal
CHAPTER V. Letters—Lucy and Mina
CHAPTER VI. Mina Murray's Journal
CHAPTER VII. Cutting from "The Dailygraph," 8 August
CHAPTER VIII. Mina Murray's Journal
CHAPTER IX. Mina Murray's Journal
CHAPTER X. Mina Murray's Journal
CHAPTER XI. Lucy Westenra's Diary
CHAPTER XII. Dr. Seward's Diary
CHAPTER XIII. Dr. Seward's Diary
CHAPTER XIV. Mina Harker's Journal
CHAPTER XV. Dr. Seward's Diary
CHAPTER XVI. Dr. Seward's Diary
CHAPTER XVII. Dr. Seward's Diary
CHAPTER XVIII. Dr. Seward's Diary
CHAPTER XIX. Jonathan Harker's Journal
CHAPTER XX. Jonathan Harker's Journal
CHAPTER XXI. Dr. Seward's Diary
CHAPTER XXII. Jonathan Harker's Journal
CHAPTER XXIII. Dr. Seward's Diary
CHAPTER XXIV. Dr. Seward's Phonograph Diary, spoken by Van Helsing
CHAPTER XXV. Dr. Seward's Diary
CHAPTER XXVI. Dr. Seward's Diary
CHAPTER XXVII. Mina Harker's Journal
DRACULA
CHAPTER I
JONATHAN HARKER'S JOURNAL
Vienna early next morning; should have arrived at 6:46, but train was an
East; the most western of splendid bridges over the Danube, which is
We left in pretty good time, and came after nightfall to Klausenburgh.
Here I stopped for the night at the Hotel Royale. I had for dinner, or
Carpathians. I found my smattering of German very useful here; indeed, I
Having had some time at my disposal when in London, I had visited the
British Museum. and made search among the books and maps in the library
```

Question 5


```

Activities Tilix Dec 22 1
1 / 1 + [ ] [ ] Tilix: amnoboa@cis106vm: ~/Documents/Csv
1: amnoboa@cis106vm: ~/Documents/Csv
amnoboa@cis106vm:~/Documents/Csv$ awk -F: '{print $1,$NF}' cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
STRING;DOUBLE;INT;DOUBLE;DOUBLE;DOUBLE;DOUBLE;INT;CAT
Chevrolet Chevelle Malibu;18.0;8;307.0;130.0;3504.;12.0;70;US
Buick Skylark 320;15.0;8;350.0;165.0;3693.;11.5;70;US
Plymouth Satellite;18.0;8;318.0;150.0;3436.;11.0;70;US
AMC Rebel SST;16.0;8;304.0;150.0;3433.;12.0;70;US
Ford Torino;17.0;8;302.0;140.0;3449.;10.5;70;US
Ford Galaxie 500;15.0;8;429.0;198.0;4341.;10.0;70;US
Chevrolet Impala;14.0;8;454.0;220.0;4354.;9.0;70;US
Plymouth Fury iii;14.0;8;440.0;215.0;4312.;8.5;70;US
Pontiac Catalina;14.0;8;455.0;225.0;4425.;10.0;70;US
AMC Ambassador DPL;15.0;8;390.0;190.0;3850.;8.5;70;US
Citroen DS-21 Pallas;0;4;133.0;115.0;3090.;17.5;70;Europe
Chevrolet Chevelle Concours (sw);0;8;350.0;165.0;4142.;11.5;70;US
Ford Torino (sw);0;8;351.0;153.0;4034.;11.0;70;US
Plymouth Satellite (sw);0;8;383.0;175.0;4166.;10.5;70;US
AMC Rebel SST (sw);0;8;360.0;175.0;3850.;11.0;70;US
Dodge Challenger SE;15.0;8;383.0;170.0;3563.;10.0;70;US
Plymouth 'Cuda 340;14.0;8;340.0;160.0;3609.;8.0;70;US
Ford Mustang Boss 302;0;8;302.0;140.0;3353.;8.0;70;US
Chevrolet Monte Carlo;15.0;8;400.0;150.0;3761.;9.5;70;US
Buick Estate Wagon (sw);14.0;8;455.0;225.0;3086.;10.0;70;US
Toyota Corolla Mark ii;24.0;4;113.0;95.00;2372.;15.0;70;Japan
Plymouth Duster;22.0;6;198.0;95.00;2833.;15.5;70;US
AMC Hornet;18.0;6;199.0;97.00;2774.;15.5;70;US
Ford Maverick;21.0;6;200.0;85.00;2587.;16.0;70;US
Datsun PL510;27.0;4;97.00;88.00;2130.;14.5;70;Japan
Volkswagen 1131 Deluxe Sedan;26.0;4;97.00;46.00;1835.;20.5;70;Europe
Peugeot 504;25.0;4;110.0;87.00;2672.;17.5;70;Europe
Audi 100 LS;24.0;4;107.0;90.00;2430.;14.5;70;Europe
Saab 99e;25.0;4;104.0;95.00;2375.;17.5;70;Europe
BMW 2002;26.0;4;121.0;113.0;2234.;12.5;70;Europe
AMC Gremlin;21.0;6;199.0;90.00;2648.;15.0;70;US
Ford F250;10.0;8;360.0;215.0;4615.;14.0;70;US
Chevy C20;10.0;8;307.0;200.0;4376.;15.0;70;US
Dodge D200;11.0;8;318.0;210.0;4382.;13.5;70;US
Hi 1200D;9.0;8;304.0;193.0;4732.;18.5;70;US
Datsun PL510;27.0;4;97.00;88.00;2130.;14.5;71;Japan
Chevrolet Vega 2300;28.0;4;140.0;90.00;2264.;15.5;71;US
Toyota Corolla;25.0;4;113.0;95.00;2228.;14.0;71;Japan
Ford Pinto;25.0;4;98.00;0;2046.;19.0;71;US
Volkswagen Super Beetle 117;0;4;97.00;48.00;1978.;20.0;71;Europe
AMC Gremlin;19.0;6;232.0;100.0;2634.;13.0;71;US
Plymouth Satellite Custom;16.0;6;225.0;105.0;3439.;15.5;71;US
Chevrolet Chevelle Malibu;17.0;6;250.0;100.0;3329.;15.5;71;US

```

```

Activities Tilix Dec 22 1
1 / 1 + [ ] [ ] Tilix: amnoboa@cis106vm: ~/Documents/Csv
1: amnoboa@cis106vm: ~/Documents/Csv
amnoboa@cis106vm:~/Documents/Csv$ awk -F';' '{OFS=" made in "}{print $1,$NF}' cars.csv
Car made in Origin
STRING made in CAT
Chevrolet Chevelle Malibu made in US
Buick Skylark 320 made in US
Plymouth Satellite made in US
AMC Rebel SST made in US
Ford Torino made in US
Ford Galaxie 500 made in US
Chevrolet Impala made in US
Plymouth Fury iii made in US
Pontiac Catalina made in US
AMC Ambassador DPL made in US
Citroen DS-21 Pallas made in Europe
Chevrolet Chevelle Concours (sw) made in US
Ford Torino (sw) made in US
Plymouth Satellite (sw) made in US

```

```
AMC Rebel SST (sw) made in US
Dodge Challenger SE made in US
Plymouth 'Cuda 340 made in US
Ford Mustang Boss 302 made in US
Chevrolet Monte Carlo made in US
Buick Estate Wagon (sw) made in US
Toyota Corolla Mark ii made in Japan
Plymouth Duster made in US
AMC Hornet made in US
Ford Maverick made in US
Datsun PL510 made in Japan
Volkswagen 1131 Deluxe Sedan made in Europe
Peugeot 504 made in Europe
Audi 100 LS made in Europe
Saab 99e made in Europe
BMW 2002 made in Europe
AMC Gremlin made in US
Ford F250 made in US
Chevy C20 made in US
Dodge D200 made in US
Hi 1200D made in US
Datsun PL510 made in Japan
Chevrolet Vega 2300 made in US
Toyota Corolla made in Japan
Ford Pinto made in US
Volkswagen Super Beetle 117 made in Europe
AMC Gremlin made in US
Plymouth Satellite Custom made in US
Chevrolet Chevelle Malibu made in US
```

```
Activities Tilix Dec 22 1
1 / 1 + [ ] [ ] Tilix: amnobia@cis106vm: ~/Documents/Csv [ ] [ ] [ ] [ ]
1: amnobia@cis106vm: ~/Documents/Csv AI [ ] [ ]
amnobia@cis106vm:~/Documents/Csv$ awk -F';' '{print "The " , $1, " has " , $3, " cylinders", " and is made in " , $NF
}' cars.csv
The Car has Cylinders cylinders and is made in Origin
The STRING has INT cylinders and is made in CAT
The Chevrolet Chevelle Malibu has 8 cylinders and is made in US
The Buick Skylark 320 has 8 cylinders and is made in US
The Plymouth Satellite has 8 cylinders and is made in US
The AMC Rebel SST has 8 cylinders and is made in US
The Ford Torino has 8 cylinders and is made in US
The Ford Galaxie 500 has 8 cylinders and is made in US
The Chevrolet Impala has 8 cylinders and is made in US
The Plymouth Fury iii has 8 cylinders and is made in US
The Pontiac Catalina has 8 cylinders and is made in US
The AMC Ambassador DPL has 8 cylinders and is made in US
The Citroen DS-21 Pallas has 4 cylinders and is made in Europe
The Chevrolet Chevelle Concours (sw) has 8 cylinders and is made in US
The Ford Torino (sw) has 8 cylinders and is made in US
The Plymouth Satellite (sw) has 8 cylinders and is made in US
The AMC Rebel SST (sw) has 8 cylinders and is made in US
The Dodge Challenger SE has 8 cylinders and is made in US
The Plymouth 'Cuda 340 has 8 cylinders and is made in US
The Ford Mustang Boss 302 has 8 cylinders and is made in US
The Chevrolet Monte Carlo has 8 cylinders and is made in US
The Buick Estate Wagon (sw) has 8 cylinders and is made in US
The Toyota Corolla Mark ii has 4 cylinders and is made in Japan
The Plymouth Duster has 6 cylinders and is made in US
The AMC Hornet has 6 cylinders and is made in US
The Ford Maverick has 6 cylinders and is made in US
The Datsun PL510 has 4 cylinders and is made in Japan
The Volkswagen 1131 Deluxe Sedan has 4 cylinders and is made in Europe
The Peugeot 504 has 4 cylinders and is made in Europe
The Audi 100 LS has 4 cylinders and is made in Europe
The Saab 99e has 4 cylinders and is made in Europe
The BMW 2002 has 4 cylinders and is made in Europe
The AMC Gremlin has 6 cylinders and is made in US
The Ford F250 has 8 cylinders and is made in US
The Chevy C20 has 8 cylinders and is made in US
The Dodge D200 has 8 cylinders and is made in US
The Hi 1200D has 8 cylinders and is made in US
The Datsun PL510 has 4 cylinders and is made in Japan
The Chevrolet Vega 2300 has 4 cylinders and is made in US
The Toyota Corolla has 4 cylinders and is made in Japan
The Ford Pinto has 4 cylinders and is made in US
The Volkswagen Super Beetle 117 has 4 cylinders and is made in Europe
The AMC Gremlin has 6 cylinders and is made in US
The Plymouth Satellite Custom has 6 cylinders and is made in US
```



```
Activities  Tilix  Dec 22 1
1 / 1  +  [?]  [?]  Tilix: amnoba@cis106vm: ~/Documents/Csv  [?]  [≡]  [–]  [□]  [×]
1: amnoba@cis106vm: ~/Documents/Csv  AI  [□]  [×]
amnoba@cis106vm:~/Documents/Csv$ awk -F';' 'NR > 3 {print "The " , $1, " has " , $3, " cylinders", " and is made i
n " , $NF}' cars.csv
The Buick Skylark 320 has 8 cylinders and is made in US
The Plymouth Satellite has 8 cylinders and is made in US
The AMC Rebel SST has 8 cylinders and is made in US
The Ford Torino has 8 cylinders and is made in US
The Ford Galaxie 500 has 8 cylinders and is made in US
The Chevrolet Impala has 8 cylinders and is made in US
The Plymouth Fury iii has 8 cylinders and is made in US
The Pontiac Catalina has 8 cylinders and is made in US
The AMC Ambassador DPL has 8 cylinders and is made in US
The Citroen DS-21 Pallas has 4 cylinders and is made in Europe
The Chevrolet Chevelle Concours (sw) has 8 cylinders and is made in US
The Ford Torino (sw) has 8 cylinders and is made in US
The Plymouth Satellite (sw) has 8 cylinders and is made in US
The AMC Rebel SST (sw) has 8 cylinders and is made in US
The Dodge Challenger SE has 8 cylinders and is made in US
The Plymouth 'Cuda 340 has 8 cylinders and is made in US
The Ford Mustang Boss 302 has 8 cylinders and is made in US
The Chevrolet Monte Carlo has 8 cylinders and is made in US
The Buick Estate Wagon (sw) has 8 cylinders and is made in US
The Toyota Corolla Mark ii has 4 cylinders and is made in Japan
The Plymouth Duster has 6 cylinders and is made in US
The AMC Hornet has 6 cylinders and is made in US
The Ford Maverick has 6 cylinders and is made in US
The Datsun PL510 has 4 cylinders and is made in Japan
The Volkswagen 1131 Deluxe Sedan has 4 cylinders and is made in Europe
The Peugeot 504 has 4 cylinders and is made in Europe
The Audi 100 LS has 4 cylinders and is made in Europe
The Saab 99e has 4 cylinders and is made in Europe
The BMW 2002 has 4 cylinders and is made in Europe
The AMC Gremlin has 6 cylinders and is made in US
The Ford F250 has 8 cylinders and is made in US
The Chevy C20 has 8 cylinders and is made in US
The Dodge D200 has 8 cylinders and is made in US
The Hi 1200D has 8 cylinders and is made in US
The Datsun PL510 has 4 cylinders and is made in Japan
The Chevrolet Vega 2300 has 4 cylinders and is made in US
The Toyota Corolla has 4 cylinders and is made in Japan
The Ford Pinto has 4 cylinders and is made in US
The Volkswagen Super Beetle 117 has 4 cylinders and is made in Europe
The AMC Gremlin has 6 cylinders and is made in US
The Plymouth Satellite Custom has 6 cylinders and is made in US
The Chevrolet Chevelle Malibu has 6 cylinders and is made in US
The Ford Torino 500 has 6 cylinders and is made in US
The AMC Matador has 6 cylinders and is made in US
```

```
Activities  TiliX  Dec 22 1
1 / 1  +  [?]  TiliX: amnoboa@cis106vm: ~/Documents/Books  🔍  ☰  -  □  ×
1: amnoboa@cis106vm: ~/Documents/Books  ▢  ×
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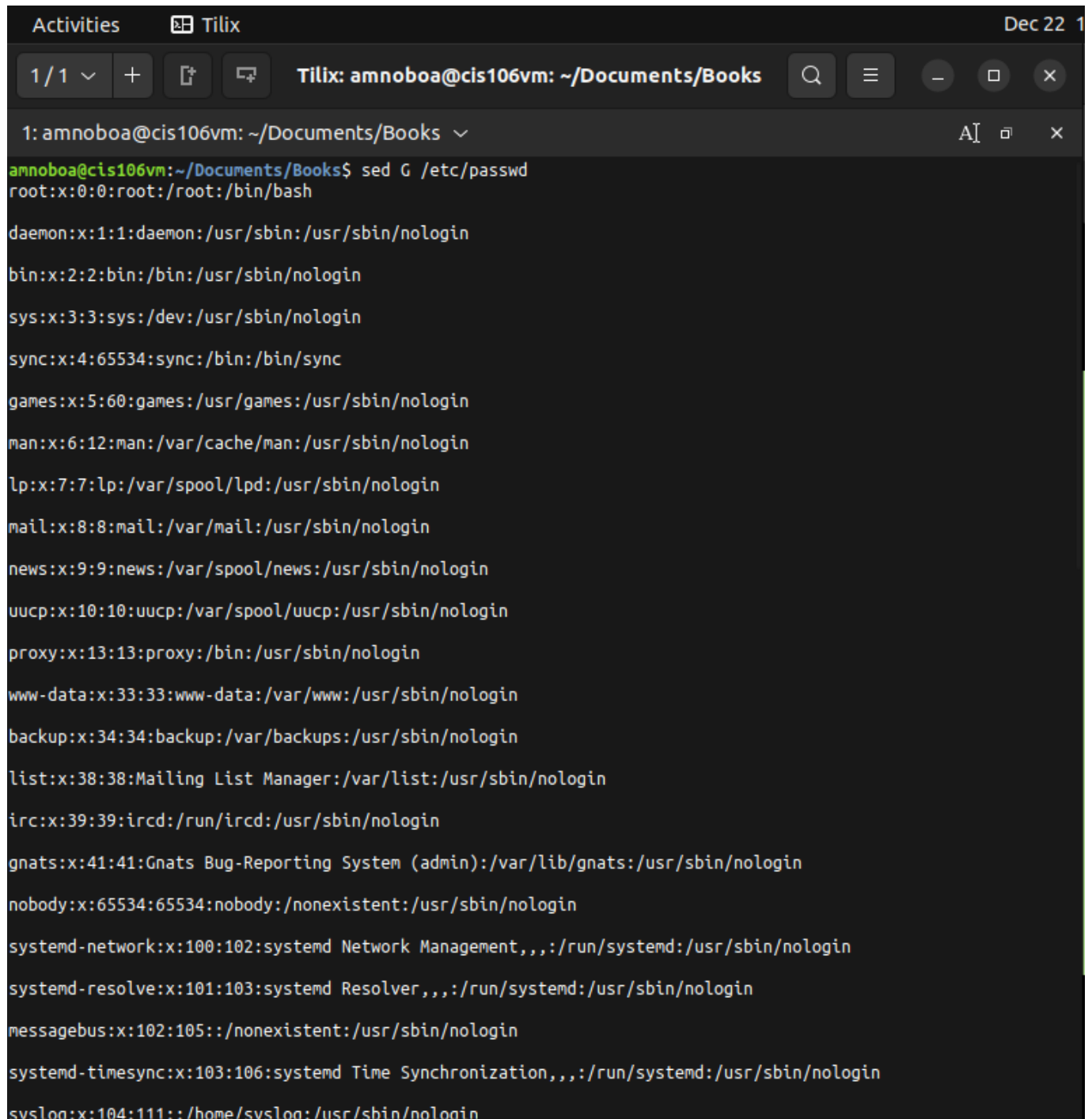
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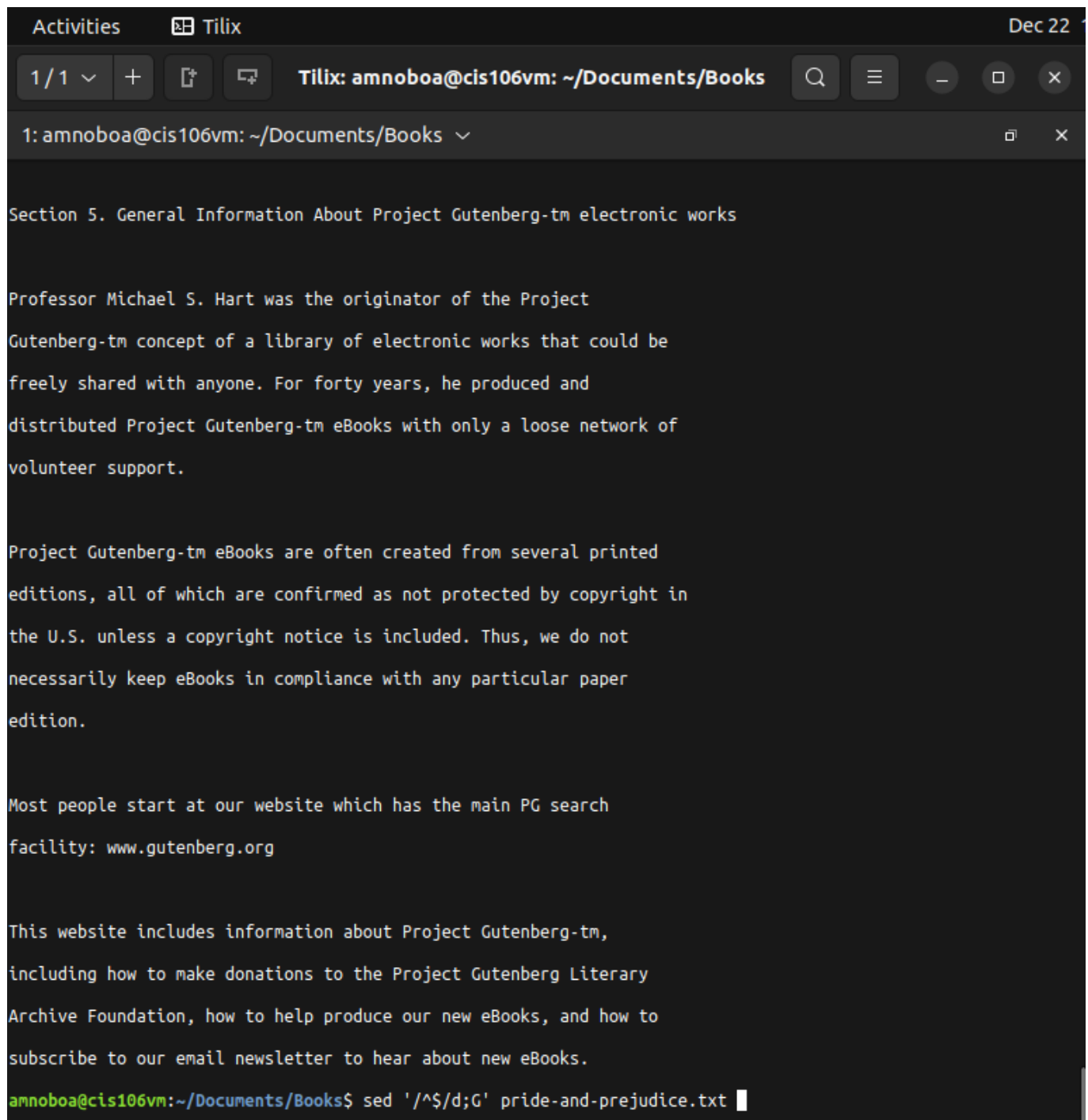
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amnoboa@cis106vm:~/Documents/Books$ sed 's/Dracula/Alucard/g' dracula.txt | grep "Dracula"
amnoboa@cis106vm:~/Documents/Books$
```



```
Activities  Tilix  Dec 22 1
1 / 1  +  [?]  [?]  Tilix: amnoboa@cis106vm: ~/Documents/Books  Q  ≡  -  □  ×
1: amnoboa@cis106vm: ~/Documents/Books  AI  □  ×
amnoboa@cis106vm:~/Documents/Books$ cat /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
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/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/sbin/nologin
syslog:x:104:111:/:/home/syslog:/usr/sbin/nologin
```



The screenshot shows a Tmux terminal window with a dark background. The title bar at the top reads 'Activities Tmux Dec 22 1'. Below the title bar is a navigation bar with '1 / 1', a '+' button, a '[*]' button, a 'Tmux: amnoba@c1s106vm: ~/Documents/Books' title, and search, menu, and window control icons. The main terminal area displays the text of 'Pride and Prejudice' in a monospaced font. The text is as follows:

```
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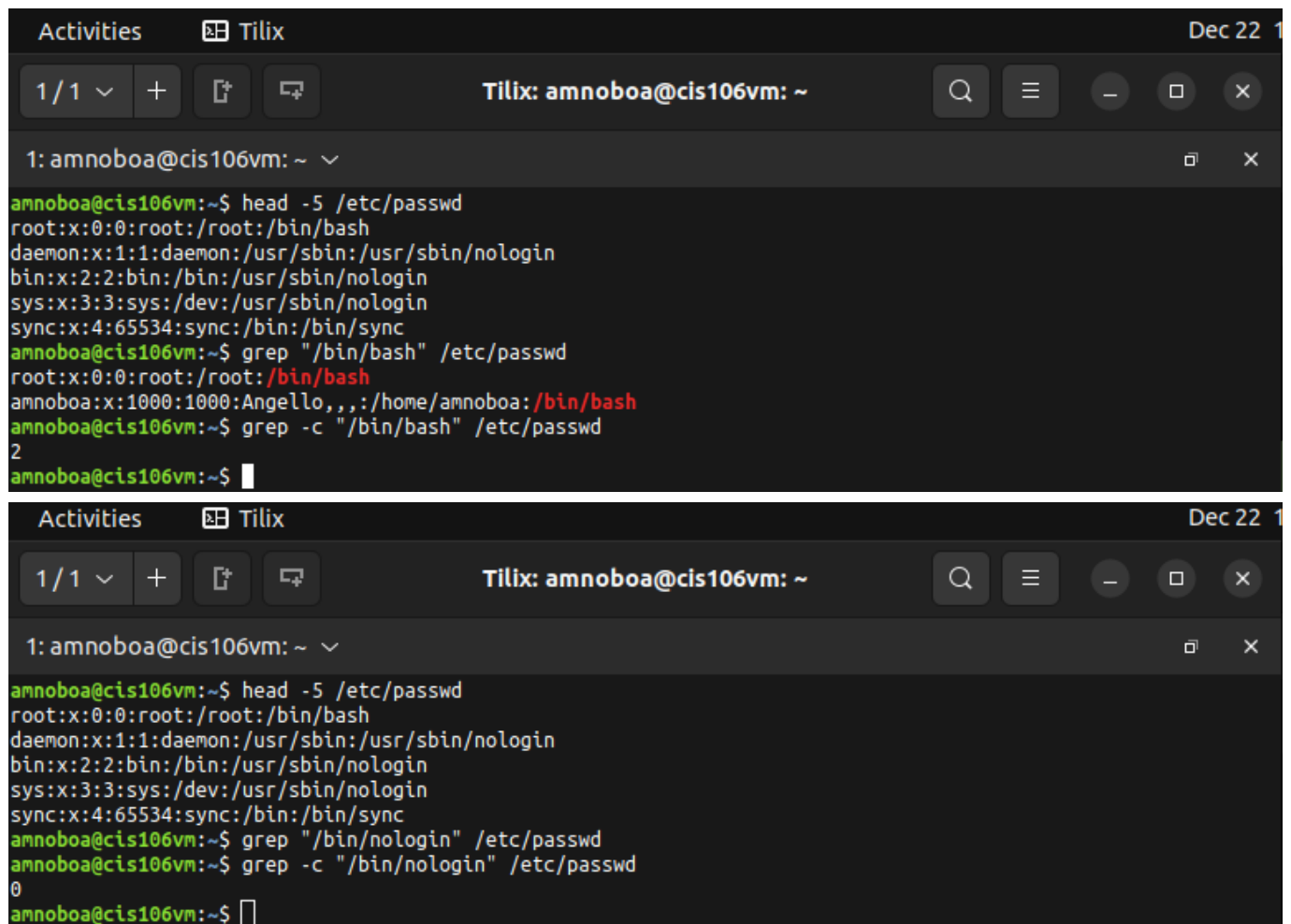
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amnoba@c1s106vm:~/Documents/Books$ sed '/^$/d;G' pride-and-prejudice.txt
```

Question 6



The image shows two screenshots of a terminal window titled 'Tilix: amnobia@cis106vm: ~'. The terminal displays the output of several commands related to the /etc/passwd file.

Top Screenshot:

```
amnobia@cis106vm:~$ 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
amnobia@cis106vm:~$ grep "/bin/bash" /etc/passwd
root:x:0:0:root:/root:/bin/bash
amnobia:x:1000:1000:Angello,,,:/home/amnobia:/bin/bash
amnobia@cis106vm:~$ grep -c "/bin/bash" /etc/passwd
2
amnobia@cis106vm:~$
```

Bottom Screenshot:

```
amnobia@cis106vm:~$ 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
amnobia@cis106vm:~$ grep "/bin/nologin" /etc/passwd
amnobia@cis106vm:~$ grep -c "/bin/nologin" /etc/passwd
0
amnobia@cis106vm:~$
```

```
Activities  TiliX  Dec 22
1 / 1  +  [?]  TiliX: amnoba@cis106vm: ~/Documents/Csv  Q  ≡  -  □  ×
1: amnoba@cis106vm: ~/Documents/Csv  ▢  ×

Ford Pinto Runabout;21.0;4;122.0;86.00;2226.;16.5;72;US
Ford Galaxie 500;14.0;8;351.0;153.0;4129.;13.0;72;US
Ford Gran Torino (sw);13.0;8;302.0;140.0;4294.;16.0;72;US
Ford Pinto (sw);22.0;4;122.0;86.00;2395.;16.0;72;US
Ford Gran Torino;14.0;8;302.0;137.0;4042.;14.5;73;US
Ford LTD;13.0;8;351.0;158.0;4363.;13.0;73;US
Ford Maverick;18.0;6;250.0;88.00;3021.;16.5;73;US
Ford Country;12.0;8;400.0;167.0;4906.;12.5;73;US
Ford Pinto;19.0;4;122.0;85.00;2310.;18.5;73;US
Ford Maverick;21.0;6;200.0;0;2875.;17.0;74;US
Ford Pinto;26.0;4;122.0;80.00;2451.;16.5;74;US
Ford Gran Torino;16.0;8;302.0;140.0;4141.;14.0;74;US
Ford Gran Torino (sw);14.0;8;302.0;140.0;4638.;16.0;74;US
Ford Maverick;15.0;6;250.0;72.00;3158.;19.5;75;US
Ford LTD;14.0;8;351.0;148.0;4657.;13.5;75;US
Ford Mustang II;13.0;8;302.0;129.0;3169.;12.0;75;US
Ford Pinto;23.0;4;140.0;83.00;2639.;17.0;75;US
Ford Pinto;18.0;6;171.0;97.00;2984.;14.5;75;US
Ford Gran Torino;14.5;8;351.0;152.0;4215.;12.8;76;US
Ford Maverick;24.0;6;200.0;81.00;3012.;17.6;76;US
Ford Grenada ghia;18.0;6;250.0;78.00;3574.;21.0;76;US
Ford Pinto;26.5;4;140.0;72.00;2565.;13.6;76;US
Ford F108;13.0;8;302.0;130.0;3870.;15.0;76;US
Ford Grenada;18.5;6;250.0;98.00;3525.;19.0;77;US
Ford Thunderbird;16.0;8;351.0;149.0;4335.;14.5;77;US
Ford Mustang II 2+2;25.5;4;140.0;89.00;2755.;15.8;77;US
Ford Fiesta;36.1;4;98.00;66.00;1800.;14.4;78;US
Ford Fairmont (auto);20.2;6;200.0;85.00;2965.;15.8;78;US
Ford Fairmont (man);25.1;4;140.0;88.00;2720.;15.4;78;US
Ford Futura;18.1;8;302.0;139.0;3205.;11.2;78;US
Ford Fairmont 4;22.3;4;140.0;88.00;2890.;17.3;79;US
Ford LTD Landau;17.6;8;302.0;129.0;3725.;13.4;79;US
Ford Country Squire (sw);15.5;8;351.0;142.0;4054.;14.3;79;US
Ford Fairmont;26.4;4;140.0;88.00;2870.;18.1;80;US
Ford Mustang Cobra;23.6;4;140.0;0;2905.;14.3;80;US
Ford Escort 4W;34.4;4;98.00;65.00;2045.;16.2;81;US
Ford Escort 2H;29.9;4;98.00;65.00;2380.;20.7;81;US
Ford Grenada gl;20.2;6;200.0;88.00;3060.;17.1;81;US
Ford Fairmont Futura;24.0;4;140.0;92.00;2865.;16.4;82;US
Ford Grenada l;22.0;6;232.0;112.0;2835;14.7;82;US
Ford Mustang GL;27.0;4;140.0;86.00;2790.;15.6;82;US
Ford Ranger;28.0;4;120.0;79.00;2625.;18.6;82;US
amnoba@cis106vm:~/Documents/Csv$ grep -i 'ford' cars.csv | wc -l
53
amnoba@cis106vm:~/Documents/Csv$
```



```

Activities  Tilix  Dec 22 1
1 / 1  +  [?]  [?]  Tilix: amnoboa@cis106vm: ~/Documents/Books  [?]  [?]  [?]  [?]
1: amnoboa@cis106vm: ~/Documents/Books  [?]  [?]
worketh abomination, or maketh a lie: but they which are written in the Lamb's book of life.
31082:Revelation 22:1 And he shewed me a pure river of water of life, clear as crystal, proceeding out of t
he throne of God and of the Lamb.
31083:Revelation 22:2 In the midst of the street of it, and on either side of the river, was there the tree
of life, which bare twelve manner of fruits, and yielded her fruit every month: and the leaves of the tree w
ere for the healing of the nations.
31084:Revelation 22:3 And there shall be no more curse: but the throne of God and of the Lamb shall be in i
t; and his servants shall serve him:
31085:Revelation 22:4 And they shall see his face; and his name shall be in their foreheads.
31086:Revelation 22:5 And there shall be no night there; and they need no candle, neither light of the sun;
for the Lord God giveth them light: and they shall reign for ever and ever.
31087:Revelation 22:6 And he said unto me, These sayings are faithful and true: and the Lord God of the hol
y prophets sent his angel to shew unto his servants the things which must shortly be done.
31088:Revelation 22:7 Behold, I come quickly: blessed is he that keepeth the sayings of the prophecy of thi
s book.
31089:Revelation 22:8 And I John saw these things, and heard them. And when I had heard and seen, I fell do
wn to worship before the feet of the angel which shewed me these things.
31090:Revelation 22:9 Then saith he unto me, See thou do it not: for I am thy fellowservant, and of thy bre
thren the prophets, and of them which keep the sayings of this book: worship God.
31091:Revelation 22:10 And he saith unto me, Seal not the sayings of the prophecy of this book: for the time
is at hand.
31092:Revelation 22:11 He that is unjust, let him be unjust still: and he which is filthy, let him be filthy
still: and he that is righteous, let him be righteous still: and he that is holy, let him be holy still.
31093:Revelation 22:12 And, behold, I come quickly; and my reward is with me, to give every man according as
31094:Revelation 22:13 I am Alpha and Omega, the beginning and the end, the first and the last.
31095:Revelation 22:14 Blessed are they that do his commandments, that they may have right to the tree of li
fe, and may enter in through the gates into the city.
31096:Revelation 22:15 For without are dogs, and sorcerers, and whoremongers, and murderers, and idolaters,
and whosoever loveth and maketh a lie.
31097:Revelation 22:16 I Jesus have sent mine angel to testify unto you these things in the churches. I am t
he root and the offspring of David, and the bright and morning star.
31098:Revelation 22:17 And the Spirit and the bride say, Come. And let him that heareth say, Come. And let h
im that is athirst come. And whosoever will, let him take the water of life freely.
31099:Revelation 22:18 For I testify unto every man that heareth the words of the prophecy of this book, If
any man shall add unto these things, God shall add unto him the plagues that are written in this book:
31100:Revelation 22:19 And if any man shall take away from the words of the book of this prophecy, God shall
take away his part out of the book of life, and out of the holy city, and from the things which are written
in this book.
31101:Revelation 22:20 He which testifieth these things saith, Surely I come quickly. Amen. Even so, come, L
ord Jesus.
31102:Revelation 22:21 The grace of our Lord Jesus Christ be with you all. Amen.
amnoboa@cis106vm:~/Documents/Books$ grep -inEw '[a-z]...' bible.txt | wc -l
30516
amnoboa@cis106vm:~/Documents/Books$

```

Challenge Question


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Activities  Tilix  Dec 22 1
1 / 1  +  [?]  [?]  Tilix: amnoboa@cis106vm: ~/Documents/Csv  Q  [≡]  -  □  ×
1: amnoboa@cis106vm: ~/Documents/Csv  AI  □  ×
amnoboa@cis106vm:~/Documents/Csv$ awk -F';' 'NR > 3 {print $1}' cereal.csv
100% Natural Bran
All-Bran
All-Bran with Extra Fiber
Almond Delight
Apple Cinnamon Cheerios
Apple Jacks
Basic 4
Bran Chex
Bran Flakes
Cap'n'Crunch
Cheerios
Cinnamon Toast Crunch
Clusters
Cocoa Puffs
Corn Chex
Corn Flakes
Corn Pops
Count Chocula
Cracklin' Oat Bran
Cream of Wheat (Quick)
Crispix
Crispy Wheat & Raisins
Double Chex
Froot Loops
Frosted Flakes
Frosted Mini-Wheats
Fruit & Fibre Dates, Walnuts, and Oats
Fruitful Bran
Fruity Pebbles
Golden Crisp
Golden Grahams
Grape Nuts Flakes
Grape-Nuts
Great Grains Pecan
Honey Graham Ohs
Honey Nut Cheerios
Honey-comb
Just Right Crunchy  Nuggets
Just Right Fruit & Nut
Kix
Life
Lucky Charms
Maypo
Muesli Raisins, Dates, & Almonds
Muesli Raisins, Peaches, & Pecans
```

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Activities  Tilix  Dec 22 1
1 / 1  +  [?]  [?]  Tilix: amnoboa@cis106vm: ~/Documents/Csv  Q  [≡]  -  □  ×
1: amnoboa@cis106vm: ~/Documents/Csv  AI  □  ×
Great Grains Pecan
Honey-comb
Honey Graham Ohs
Honey Nut Cheerios
Just Right Crunchy  Nuggets
Just Right Fruit & Nut
Kix
Life
Lucky Charms
Maypo
Muesli Raisins, Dates, & Almonds
Muesli Raisins, Peaches, & Pecans
Mueslix Crispy Blend
Multi-Grain Cheerios
Nut&Honey Crunch
Nutri-Grain Almond-Raisin
Nutri-grain Wheat
```

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Oatmeal Raisin Crisp
Post Nat. Raisin Bran
Product 19
Puffed Rice
Puffed Wheat
Quaker Oatmeal
Quaker Oat Squares
Raisin Bran
Raisin Nut Bran
Raisin Squares
Rice Chex
Rice Krispies
Shredded Wheat
Shredded Wheat 'n'Bran
Shredded Wheat spoon size
Smacks
Special K
Strawberry Fruit Wheats
Total Corn Flakes
Total Raisin Bran
Total Whole Grain
Triples
Trix
Wheat Chex
Wheaties
Wheaties Honey Gold
amnoba@cis106vm:~/Documents/Csv$ awk -F';' 'NR > 3 {print $1}' cereal.csv | sort >> cereal-sorted.csv
amnoba@cis106vm:~/Documents/Csv$ ls
3 cars.csv cereal.csv cereal-sorted.csv contacts.csv country.csv film.csv
```

Activities Tilix Dec 22 1

1 / 1 + [] [] Tilix: amnoboa@cis106vm: ~/Documents/Csv 🔍 ☰ - □ ×

1: amnoboa@cis106vm: ~/Documents/Csv AI □ ×

```
wneatles Money Gold 110 0.75
amnoboa@cis106vm:~/Documents/Csv$ awk -F';' '{print $1," has ",$4," of calories," ,"$5," per cup"}' cereal.csv
name has calories of calories, cups per cup
String has Int of calories, Float per cup
100% Bran has 70 of calories, 0.33 per cup
100% Natural Bran has 120 of calories, 1 per cup
All-Bran has 70 of calories, 0.33 per cup
All-Bran with Extra Fiber has 50 of calories, 0.5 per cup
Almond Delight has 110 of calories, 0.75 per cup
Apple Cinnamon Cheerios has 110 of calories, 0.75 per cup
Apple Jacks has 110 of calories, 1 per cup
Basic 4 has 130 of calories, 0.75 per cup
Bran Chex has 90 of calories, 0.67 per cup
Bran Flakes has 90 of calories, 0.67 per cup
Cap'n'Crunch has 120 of calories, 0.75 per cup
Cheerios has 110 of calories, 1.25 per cup
Cinnamon Toast Crunch has 120 of calories, 0.75 per cup
Clusters has 110 of calories, 0.5 per cup
Cocoa Puffs has 110 of calories, 1 per cup
Corn Chex has 110 of calories, 1 per cup
Corn Flakes has 100 of calories, 1 per cup
Corn Pops has 110 of calories, 1 per cup
Count Chocula has 110 of calories, 1 per cup
Cracklin' Oat Bran has 110 of calories, 0.5 per cup
Cream of Wheat (Quick) has 100 of calories, 1 per cup
Crispix has 110 of calories, 1 per cup
Crispy Wheat & Raisins has 100 of calories, 0.75 per cup
Double Chex has 100 of calories, 0.75 per cup
Froot Loops has 110 of calories, 1 per cup
Frosted Flakes has 110 of calories, 0.75 per cup
Frosted Mini-Wheats has 100 of calories, 0.8 per cup
Fruit & Fibre Dates, Walnuts, and Oats has 120 of calories, 0.67 per cup
Fruitful Bran has 120 of calories, 0.67 per cup
Fruity Pebbles has 110 of calories, 0.75 per cup
Golden Crisp has 100 of calories, 0.88 per cup
Golden Grahams has 110 of calories, 0.75 per cup
Grape Nuts Flakes has 100 of calories, 0.88 per cup
Grape-Nuts has 110 of calories, 0.25 per cup
Great Grains Pecan has 120 of calories, 0.33 per cup
Honey Graham Ohs has 120 of calories, 1 per cup
Honey Nut Cheerios has 110 of calories, 0.75 per cup
Honey-comb has 110 of calories, 1.33 per cup
Just Right Crunchy Nuggets has 110 of calories, 1 per cup
Just Right Fruit & Nut has 140 of calories, 0.75 per cup
Kix has 110 of calories, 1.5 per cup
Life has 100 of calories, 0.67 per cup
Lucky Charms has 110 of calories, 1 per cup
Maypo has 100 of calories, 1 per cup
Muesli Raisins, Dates, & Almonds has 150 of calories, 1 per cup
...

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