

Lab 8

Q1

Practice 1

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1/1  +  [ ]  [ ]  Tilix: map@cis106: ~
1: map@cis106: ~
map@cis106:~$ 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:List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
_apt:x:42:65534::/nonexistent:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:998:998:systemd Network Management:/:/usr/sbin/nologin
dhcpcd:x:100:65534:DHCP Client Daemon:/usr/lib/dhcpcd:/bin/false
tss:x:101:103:TPM software stack:/var/lib/tpm:/bin/false
systemd-timesync:x:991:991:systemd Time Synchronization:/:/usr/sbin/nologin
messagebus:x:990:990:System Message Bus:/nonexistent:/usr/sbin/nologin
dnsmasq:x:999:65534:dnsmasq:/var/lib/misc:/usr/sbin/nologin
avahi:x:102:107:Avahi mDNS daemon:/run/avahi-daemon:/usr/sbin/nologin
speech-dispatcher:x:103:29:Speech Dispatcher:/run/speech-dispatcher:/bin/false
usbmux:x:104:46:usbmux daemon:/var/lib/usbmux:/usr/sbin/nologin
cups-pk-helper:x:105:108:user for cups-pk-helper service:/nonexistent:/usr/sbin/nologin
fwupd-refresh:x:989:989:Firmware update daemon:/var/lib/fwupd:/usr/sbin/nologin
geoclue:x:106:110:/:/var/lib/geoclue:/usr/sbin/nologin
gnome-remote-desktop:x:988:988:GNOME Remote Desktop:/var/lib/gnome-remote-desktop:/usr/sbin/nologin
saned:x:107:111:/:/var/lib/saned:/usr/sbin/nologin
polkitd:x:987:987:User for polkitd:/:/usr/sbin/nologin
rtkit:x:108:112:RealtimeKit:/proc:/usr/sbin/nologin
colord:x:109:113:colord colour management daemon:/var/lib/colord:/usr/sbin/nologin
Debian-gdm:x:110:114:Gnome Display Manager:/var/lib/gdm3:/bin/false
map:x:1000:1000:Miguel Ponce,,,:/home/map:/bin/bash
flatpak:x:111:115:Flatpak system-wide installation helper:/nonexistent:/usr/sbin/nologin

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1/1  +  [ ]  [ ]  Tilix: map@cis106: ~
1: map@cis106: ~
vboxadd:x:997:1:/:/var/run/vboxadd:/bin/false
map@cis106:~$ tac /etc/passwd
vboxadd:x:997:1:/:/var/run/vboxadd:/bin/false
_flatpak:x:111:115:Flatpak system-wide installation helper:/nonexistent:/usr/sbin/nologin
map:x:1000:1000:Miguel Ponce,,,:/home/map:/bin/bash
Debian-gdm:x:110:114:Gnome Display Manager:/var/lib/gdm3:/bin/false
colord:x:109:113:colord colour management daemon:/var/lib/colord:/usr/sbin/nologin
rtkit:x:108:112:RealtimeKit:/proc:/usr/sbin/nologin
polkitd:x:987:987:User for polkitd:/:/usr/sbin/nologin
saned:x:107:111:/:/var/lib/saned:/usr/sbin/nologin
gnome-remote-desktop:x:988:988:GNOME Remote Desktop:/var/lib/gnome-remote-desktop:/usr/sbin/nologin
geoclue:x:106:110:/:/var/lib/geoclue:/usr/sbin/nologin
fwupd-refresh:x:989:989:Firmware update daemon:/var/lib/fwupd:/usr/sbin/nologin
cups-pk-helper:x:105:108:user for cups-pk-helper service:/nonexistent:/usr/sbin/nologin
usbmux:x:104:46:usbmux daemon:/var/lib/usbmux:/usr/sbin/nologin
speech-dispatcher:x:103:29:Speech Dispatcher:/run/speech-dispatcher:/bin/false
avahi:x:102:107:Avahi mDNS daemon:/run/avahi-daemon:/usr/sbin/nologin
dnsmasq:x:999:65534:dnsmasq:/var/lib/misc:/usr/sbin/nologin
messagebus:x:990:990:System Message Bus:/nonexistent:/usr/sbin/nologin
systemd-timesync:x:991:991:systemd Time Synchronization:/:/usr/sbin/nologin
tss:x:101:103:TPM software stack:/var/lib/tpm:/bin/false
dhcpcd:x:100:65534:DHCP Client Daemon:/usr/lib/dhcpcd:/bin/false
systemd-network:x:998:998:systemd Network Management:/:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin

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nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
_apt:x:42:65534::/nonexistent:/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
games:x:5:60:games:/usr/games:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
sys:x:3:3:sys:/dev:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin

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1/1 + [ ] [ ] Tilix: map@cis106: ~
1: map@cis106: ~
bin:x:2:2:bin:/bin:/usr/sbin/nologin
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
root:x:0:0:root:/root:/bin/bash
map@cis106:~$ 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 _apt:x:42:65534::/nonexistent:/usr/sbin/nologin$
18 nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin$
19 systemd-network:x:998:998:systemd Network Management:/:/usr/sbin/nologin$
20 dhcpcd:x:100:65534:DHCP Client Daemon:/usr/lib/dhcpcd:/bin/false$
21 tss:x:101:103:TPM software stack:/var/lib/tpm:/bin/false$
22 systemd-timesync:x:991:991:systemd Time Synchronization:/:/usr/sbin/nologin$
23 messagebus:x:990:990:System Message Bus:/nonexistent:/usr/sbin/nologin$
24 dnsmasq:x:999:65534:dnsmasq:/var/lib/misc:/usr/sbin/nologin$
25 avahi:x:102:107:Avahi mDNS daemon:/run/avahi-daemon:/usr/sbin/nologin$
26 speech-dispatcher:x:103:29:Speech Dispatcher:/run/speech-dispatcher:/bin/false$
27 usbmux:x:104:46:usbmux daemon:/var/lib/usbmux:/usr/sbin/nologin$
28 cups-pk-helper:x:105:108:user for cups-pk-helper service:/nonexistent:/usr/sbin/nologin$
$
29 fwupd-refresh:x:989:989:Firmware update daemon:/var/lib/fwupd:/usr/sbin/nologin$
30 geoclue:x:106:110::/var/lib/geoclue:/usr/sbin/nologin$
31 gnome-remote-desktop:x:988:988:GNOME Remote Desktop:/var/lib/gnome-remote-desktop:/usr/
sbin/nologin$
32 saned:x:107:111::/var/lib/saned:/usr/sbin/nologin$
33 polkitd:x:987:987:User for polkitd:/:/usr/sbin/nologin$
34 rtkit:x:108:112:RealtimeKit:/proc:/usr/sbin/nologin$

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1/1  +  [ ]  [ ]  Tilix: map@cis106: ~
1: map@cis106: ~
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 _apt:x:42:65534::/nonexistent:/usr/sbin/nologin$
18 nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin$
19 systemd-network:x:998:998:systemd Network Management:/:usr/sbin/nologin$
20 dhcpcd:x:100:65534:DHCP Client Daemon:/usr/lib/dhcpcd:/bin/false$
21 tss:x:101:103:TPM software stack:/var/lib/tpm:/bin/false$
22 systemd-timesync:x:991:991:systemd Time Synchronization:/:usr/sbin/nologin$
23 messagebus:x:990:990:System Message Bus:/nonexistent:/usr/sbin/nologin$
24 dnsmasq:x:999:65534:dnsmasq:/var/lib/misc:/usr/sbin/nologin$
25 avahi:x:102:107:Avahi mDNS daemon:/run/avahi-daemon:/usr/sbin/nologin$
26 speech-dispatcher:x:103:29:Speech Dispatcher:/run/speech-dispatcher:/bin/false$
27 usbmux:x:104:46:usbmux daemon:/var/lib/usbmux:/usr/sbin/nologin$
28 cups-pk-helper:x:105:108:user for cups-pk-helper service:/nonexistent:/usr/sbin/nologin$
$
29 fwupd-refresh:x:989:989:Firmware update daemon:/var/lib/fwupd:/usr/sbin/nologin$
30 geoclue:x:106:110::/var/lib/geoclue:/usr/sbin/nologin$
31 gnome-remote-desktop:x:988:988:GNOME Remote Desktop:/var/lib/gnome-remote-desktop:/usr/
sbin/nologin$
32 saned:x:107:111::/var/lib/saned:/usr/sbin/nologin$
33 polkitd:x:987:987:User for polkitd:/:usr/sbin/nologin$
34 rtkit:x:108:112:RealtimeKit:/proc:/usr/sbin/nologin$
35 colord:x:109:113:colord colour management daemon:/var/lib/colord:/usr/sbin/nologin$
36 Debian-gdm:x:110:114:Gnome Display Manager:/var/lib/gdm3:/bin/false$
37 map:x:1000:1000:Miguel Ponce,,,:/home/map:/bin/bash$
38 _flatpak:x:111:115:Flatpak system-wide installation helper:/nonexistent:/usr/sbin/nolog
in$
39 vboxadd:x:997:1::/var/run/vboxadd:/bin/false$
map@cis106:~$ head -n 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
map@cis106:~$ _

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1/1 + [ ] [ ] Tilix: map@cis106: ~
1: map@cis106: ~
17 _apt:x:42:65534::/nonexistent:/usr/sbin/nologin$
18 nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin$
19 systemd-network:x:998:998:systemd Network Management:/:usr/sbin/nologin$
20 dhcpcd:x:100:65534:DHCP Client Daemon:/usr/lib/dhcpcd:/bin/false$
21 tss:x:101:103:TPM software stack:/var/lib/tpm:/bin/false$
22 systemd-timesync:x:991:991:systemd Time Synchronization:/:usr/sbin/nologin$
23 messagebus:x:990:990:System Message Bus:/nonexistent:/usr/sbin/nologin$
24 dnsmasq:x:999:65534:dnsmasq:/var/lib/misc:/usr/sbin/nologin$
25 avahi:x:102:107:Avahi mDNS daemon:/run/avahi-daemon:/usr/sbin/nologin$
26 speech-dispatcher:x:103:29:Speech Dispatcher:/run/speech-dispatcher:/bin/false$
27 usbmux:x:104:46:usbmux daemon:/var/lib/usbmux:/usr/sbin/nologin$
28 cups-pk-helper:x:105:108:user for cups-pk-helper service:/nonexistent:/usr/sbin/nologin$
$
29 fwupd-refresh:x:989:989:Firmware update daemon:/var/lib/fwupd:/usr/sbin/nologin$
30 geoclue:x:106:110::/var/lib/geoclue:/usr/sbin/nologin$
31 gnome-remote-desktop:x:988:988:GNOME Remote Desktop:/var/lib/gnome-remote-desktop:/usr/
sbin/nologin$
32 saned:x:107:111::/var/lib/saned:/usr/sbin/nologin$
33 polkitd:x:987:987:User for polkitd:/:usr/sbin/nologin$
34 rtkit:x:108:112:RealtimeKit:/proc:/usr/sbin/nologin$
35 colord:x:109:113:colord colour management daemon:/var/lib/colord:/usr/sbin/nologin$
36 Debian-gdm:x:110:114:Gnome Display Manager:/var/lib/gdm3:/bin/false$
37 map:x:1000:1000:Miguel Ponce,,,:/home/map:/bin/bash$
38 _flatpak:x:111:115:Flatpak system-wide installation helper:/nonexistent:/usr/sbin/nolog
in$
39 vboxadd:x:997:1::/var/run/vboxadd:/bin/false$
map@cis106:~$ head -n 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
map@cis106:~$ tail -n 5 /etc/passwd
colord:x:109:113:colord colour management daemon:/var/lib/colord:/usr/sbin/nologin
Debian-gdm:x:110:114:Gnome Display Manager:/var/lib/gdm3:/bin/false
map:x:1000:1000:Miguel Ponce,,,:/home/map:/bin/bash
_flatpak:x:111:115:Flatpak system-wide installation helper:/nonexistent:/usr/sbin/nologin
vboxadd:x:997:1::/var/run/vboxadd:/bin/false
map@cis106:~$ _

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1/1  +  [ ]  [ ]  Tilix: map@cis106: ~  [ ]  [ ]  [ ]  [ ]
1: map@cis106: ~  [ ]  [ ]
19 systemd-network:x:998:998:systemd Network Management:/:usr/sbin/nologin$
20 dhcpcd:x:100:65534:DHCP Client Daemon:/usr/lib/dhcpcd:/bin/false$
21 tss:x:101:103:TPM software stack:/var/lib/tpm:/bin/false$
22 systemd-timesync:x:991:991:systemd Time Synchronization:/:usr/sbin/nologin$
23 messagebus:x:990:990:System Message Bus:/nonexistent:/usr/sbin/nologin$
24 dnsmasq:x:999:65534:dnsmasq:/var/lib/misc:/usr/sbin/nologin$
25 avahi:x:102:107:Avahi mDNS daemon:/run/avahi-daemon:/usr/sbin/nologin$
26 speech-dispatcher:x:103:29:Speech Dispatcher:/run/speech-dispatcher:/bin/false$
27 usbmux:x:104:46:usbmux daemon:/var/lib/usbmux:/usr/sbin/nologin$
28 cups-pk-helper:x:105:108:user for cups-pk-helper service:/nonexistent:/usr/sbin/nologin$
$
29 fwupd-refresh:x:989:989:Firmware update daemon:/var/lib/fwupd:/usr/sbin/nologin$
30 geoclue:x:106:110:/:var/lib/geoclue:/usr/sbin/nologin$
31 gnome-remote-desktop:x:988:988:GNOME Remote Desktop:/var/lib/gnome-remote-desktop:/usr/
sbin/nologin$
32 saned:x:107:111:/:var/lib/saned:/usr/sbin/nologin$
33 polkitd:x:987:987:User for polkitd:/:usr/sbin/nologin$
34 rtkit:x:108:112:RealtimeKit:/proc:/usr/sbin/nologin$
35 colord:x:109:113:colord colour management daemon:/var/lib/colord:/usr/sbin/nologin$
36 Debian-gdm:x:110:114:Gnome Display Manager:/var/lib/gdm3:/bin/false$
37 map:x:1000:1000:Miguel Ponce,,,:/home/map:/bin/bash$
38 _flatpak:x:111:115:Flatpak system-wide installation helper:/nonexistent:/usr/sbin/nolog
in$
39 vboxadd:x:997:1:/:var/run/vboxadd:/bin/false$
map@cis106:~$ head -n 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
map@cis106:~$ tail -n 5 /etc/passwd
colord:x:109:113:colord colour management daemon:/var/lib/colord:/usr/sbin/nologin
Debian-gdm:x:110:114:Gnome Display Manager:/var/lib/gdm3:/bin/false
map:x:1000:1000:Miguel Ponce,,,:/home/map:/bin/bash
_flatpak:x:111:115:Flatpak system-wide installation helper:/nonexistent:/usr/sbin/nologin
vboxadd:x:997:1:/:var/run/vboxadd:/bin/false
map@cis106:~$ tail -1 /etc/passwd
vboxadd:x:997:1:/:var/run/vboxadd:/bin/false
map@cis106:~$ _

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1/1 + [ ] [ ] Tilix: map@cis106: ~
1: map@cis106: ~
21 tss:x:101:103:TPM software stack:/var/lib/tpm:/bin/false$
22 systemd-timesync:x:991:991:systemd Time Synchronization:/:usr/sbin/nologin$
23 messagebus:x:990:990:System Message Bus:/nonexistent:/usr/sbin/nologin$
24 dnsmasq:x:999:65534:dnsmasq:/var/lib/misc:/usr/sbin/nologin$
25 avahi:x:102:107:Avahi mDNS daemon:/run/avahi-daemon:/usr/sbin/nologin$
26 speech-dispatcher:x:103:29:Speech Dispatcher:/run/speech-dispatcher:/bin/false$
27 usbmux:x:104:46:usbmux daemon:/var/lib/usbmux:/usr/sbin/nologin$
28 cups-pk-helper:x:105:108:user for cups-pk-helper service:/nonexistent:/usr/sbin/nologin$
$
29 fwupd-refresh:x:989:989:Firmware update daemon:/var/lib/fwupd:/usr/sbin/nologin$
30 geoclue:x:106:110:/:var/lib/geoclue:/usr/sbin/nologin$
31 gnome-remote-desktop:x:988:988:GNOME Remote Desktop:/var/lib/gnome-remote-desktop:/usr/
sbin/nologin$
32 saned:x:107:111:/:var/lib/saned:/usr/sbin/nologin$
33 polkitd:x:987:987:User for polkitd:/:usr/sbin/nologin$
34 rtkit:x:108:112:RealtimeKit:/proc:/usr/sbin/nologin$
35 colord:x:109:113:colord colour management daemon:/var/lib/colord:/usr/sbin/nologin$
36 Debian-gdm:x:110:114:Gnome Display Manager:/var/lib/gdm3:/bin/false$
37 map:x:1000:1000:Miguel Ponce,,,:/home/map:/bin/bash$
38 _flatpak:x:111:115:Flatpak system-wide installation helper:/nonexistent:/usr/sbin/nolog
in$
39 vboxadd:x:997:1:/:var/run/vboxadd:/bin/false$
map@cis106:~$ head -n 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
map@cis106:~$ tail -n 5 /etc/passwd
colord:x:109:113:colord colour management daemon:/var/lib/colord:/usr/sbin/nologin
Debian-gdm:x:110:114:Gnome Display Manager:/var/lib/gdm3:/bin/false
map:x:1000:1000:Miguel Ponce,,,:/home/map:/bin/bash
_flatpak:x:111:115:Flatpak system-wide installation helper:/nonexistent:/usr/sbin/nologin
vboxadd:x:997:1:/:var/run/vboxadd:/bin/false
map@cis106:~$ tail -1 /etc/passwd
vboxadd:x:997:1:/:var/run/vboxadd:/bin/false
map@cis106:~$ head -1 /etc/passwd
root:x:0:0:root:/root:/bin/bash
map@cis106:~$ _

```

```
Tilix: map@cis106: ~  
1: map@cis106: ~  
15808  
15809 While we cannot and do not solicit contributions from states where we  
15810 have not met the solicitation requirements, we know of no prohibition  
15811 against accepting unsolicited donations from donors in such states who  
15812 approach us with offers to donate.  
15813  
15814 International donations are gratefully accepted, but we cannot make  
15815 any statements concerning tax treatment of donations received from  
15816 outside the United States. U.S. laws alone swamp our small staff.  
15817  
15818 Please check the Project Gutenberg web pages for current donation  
15819 methods and addresses. Donations are accepted in a number of other  
15820 ways including checks, online payments and credit card donations. To  
15821 donate, please visit: www.gutenberg.org/donate.  
15822  
15823 Section 5. General Information About Project Gutenberg™ electronic works  
15824  
15825 Professor Michael S. Hart was the originator of the Project  
15826 Gutenberg™ concept of a library of electronic works that could be  
15827 freely shared with anyone. For forty years, he produced and  
15828 distributed Project Gutenberg™ eBooks with only a loose network of  
15829 volunteer support.  
15830  
15831 Project Gutenberg™ eBooks are often created from several printed  
15832 editions, all of which are confirmed as not protected by copyright in  
15833 the U.S. unless a copyright notice is included. Thus, we do not  
15834 necessarily keep eBooks in compliance with any particular paper  
15835 edition.  
15836  
15837 Most people start at our website which has the main PG search  
15838 facility: www.gutenberg.org.  
15839  
15840 This website includes information about Project Gutenberg™,  
15841 including how to make donations to the Project Gutenberg Literary  
15842 Archive Foundation, how to help produce our new eBooks, and how to  
15843 subscribe to our email newsletter to hear about new eBooks.  
15844  
15845  
map@cis106:~$ _
```

Practice 2

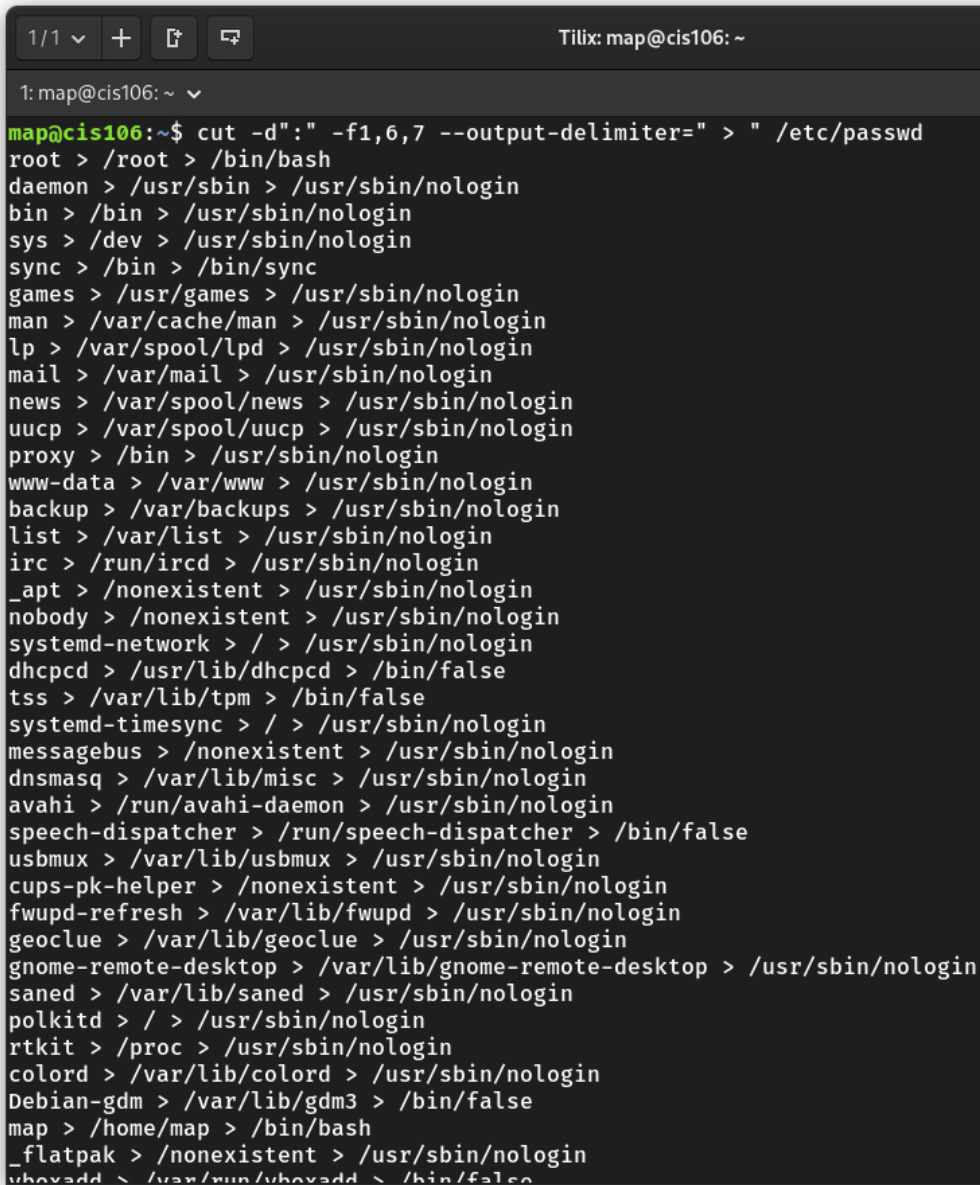

```
1/1 v + [ ] [ ] Tilix: map@cis106: ~
1: map@cis106: ~ v
map@cis106:~$ cut -d":" -f1 /etc/passwd
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
list
irc
_apt
nobody
systemd-network
dhcpcd
tss
systemd-timesync
messagebus
dnsmasq
avahi
speech-dispatcher
usbmux
cups-pk-helper
fwupd-refresh
geoclue
gnome-remote-desktop
saned
polkitd
rtkit
colord
Debian-gdm
map
_flatpak
vboxadd
```

```
1/1 v + [ ] [ ] Tilix: map@cis106: ~
1: map@cis106: ~ v
_flatpak
vboxadd
map@cis106:~$ cut -d":" -f1,6 /etc/passwd
root:/root
daemon:/usr/sbin
bin:/bin
sys:/dev
sync:/bin
games:/usr/games
man:/var/cache/man
lp:/var/spool/lpd
mail:/var/mail
news:/var/spool/news
uucp:/var/spool/uucp
proxy:/bin
www-data:/var/www
backup:/var/backups
list:/var/list
irc:/run/ircd
_apt:/nonexistent
nobody:/nonexistent
systemd-network:/
dhcpcd:/usr/lib/dhcpcd
tss:/var/lib/tpm
systemd-timesync:/
```

```

systemd-timesync:/
messagebus:/nonexistent
dnsmasq:/var/lib/misc
avahi:/run/avahi-daemon
speech-dispatcher:/run/speech-dispatcher
usbmux:/var/lib/usbmux
cups-pk-helper:/nonexistent
fwupd-refresh:/var/lib/fwupd
geoclue:/var/lib/geoclue
gnome-remote-desktop:/var/lib/gnome-remote-desktop
saned:/var/lib/saned
polkitd:/
rtkit:/proc
colord:/var/lib/colord
Debian-gdm:/var/lib/gdm3
man:/home/man

```



```

1/1  +  [?]  [x]  Tilix: map@cis106: ~
1: map@cis106: ~
map@cis106:~$ 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
_apt > /nonexistent > /usr/sbin/nologin
nobody > /nonexistent > /usr/sbin/nologin
systemd-network > / > /usr/sbin/nologin
dhcpcd > /usr/lib/dhcpcd > /bin/false
tss > /var/lib/tpm > /bin/false
systemd-timesync > / > /usr/sbin/nologin
messagebus > /nonexistent > /usr/sbin/nologin
dnsmasq > /var/lib/misc > /usr/sbin/nologin
avahi > /run/avahi-daemon > /usr/sbin/nologin
speech-dispatcher > /run/speech-dispatcher > /bin/false
usbmux > /var/lib/usbmux > /usr/sbin/nologin
cups-pk-helper > /nonexistent > /usr/sbin/nologin
fwupd-refresh > /var/lib/fwupd > /usr/sbin/nologin
geoclue > /var/lib/geoclue > /usr/sbin/nologin
gnome-remote-desktop > /var/lib/gnome-remote-desktop > /usr/sbin/nologin
saned > /var/lib/saned > /usr/sbin/nologin
polkitd > / > /usr/sbin/nologin
rtkit > /proc > /usr/sbin/nologin
colord > /var/lib/colord > /usr/sbin/nologin
Debian-gdm > /var/lib/gdm3 > /bin/false
map > /home/map > /bin/bash
_flatpak > /nonexistent > /usr/sbin/nologin
uboxadd > /var/run/uboxadd > /bin/false

```

```
Tilix: map@cis106: ~
1/1 v + [ ]
1: map@cis106: ~
map@cis106:~$ cut -d";" -f1 ~/Documents/sample_files/Csv/cereal.csv
name
String
100% Bran
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
```

```
Tilix: map@cis106: ~
1/1 v + [ ]
1: map@cis106: ~
map@cis106:~$ cut -d";" -f1,4 --output-delimiter=" calories = " ~/Documents/sample_files/Csv/cereal.csv
name calories = calories
String calories = Int
100% Bran calories = 70
100% Natural Bran calories = 120
All-Bran calories = 70
All-Bran with Extra Fiber calories = 50
Almond Delight calories = 110
Apple Cinnamon Cheerios calories = 110
Apple Jacks calories = 110
Basic 4 calories = 130
Bran Chex calories = 90
Bran Flakes calories = 90
Cap'n'Crunch calories = 120
Cheerios calories = 110
Cinnamon Toast Crunch calories = 120
Clusters calories = 110
Cocoa Puffs calories = 110
Corn Chex calories = 110
Corn Flakes calories = 100
Corn Pops calories = 110
Count Chocula calories = 110
Cracklin' Oat Bran calories = 110
Cream of Wheat (Quick) calories = 100
```

Practice 3

```
Tilix: map@cis106: ~/Documents/sample_files/Csv
1: map@cis106: ~/Documents/sample_files/Csv
map@cis106:~/Documents/sample_files/Csv$ sort cars.csv
AMC Ambassador Brougham;13.0;8;360.0;175.0;3821.;11.0;73;US
AMC Ambassador DPL;15.0;8;390.0;190.0;3850.;8.5;70;US
AMC Ambassador SST;17.0;8;304.0;150.0;3672.;11.5;72;US
AMC Concord;19.4;6;232.0;90.00;3210.;17.2;78;US
AMC Concord;24.3;4;151.0;90.00;3003.;20.1;80;US
AMC Concord d/l;18.1;6;258.0;120.0;3410.;15.1;78;US
AMC Concord DL;23.0;4;151.0;0;3035.;20.5;82;US
AMC Concord DL 6;20.2;6;232.0;90.00;3265.;18.2;79;US
AMC Gremlin;18.0;6;232.0;100.0;2789.;15.0;73;US
AMC Gremlin;19.0;6;232.0;100.0;2634.;13.0;71;US
AMC Gremlin;20.0;6;232.0;100.0;2914.;16.0;75;US
AMC Gremlin;21.0;6;199.0;90.00;2648.;15.0;70;US
AMC Hornet;18.0;6;199.0;97.00;2774.;15.5;70;US
AMC Hornet;18.0;6;232.0;100.0;2945.;16.0;73;US
AMC Hornet;19.0;6;232.0;100.0;2901.;16.0;74;US
AMC Hornet;22.5;6;232.0;90.00;3085.;17.6;76;US
AMC Hornet Sportabout (sw);18.0;6;258.0;110.0;2962.;13.5;71;US
AMC Matador;14.0;8;304.0;150.0;3672.;11.5;73;US
AMC Matador;15.0;6;258.0;110.0;3730.;19.0;75;US
AMC Matador;15.5;8;304.0;120.0;3962.;13.9;76;US
AMC Matador;16.0;6;258.0;110.0;3632.;18.0;74;US
AMC Matador;18.0;6;232.0;100.0;3288.;15.5;71;US
AMC Matador (sw);14.0;8;304.0;150.0;4257.;15.5;74;US
```

```
Tilix: map@cis106: ~/Documents/sample_files/Csv
1: map@cis106: ~/Documents/sample_files/Csv
Volkswagen Rabbit;41.5;4;98.00;76.00;2144.;14.7;80;Europe
Volkswagen Rabbit C (Diesel);44.3;4;90.00;48.00;2085.;21.7;80;Europe
Volkswagen Rabbit Custom;29.0;4;97.00;78.00;1940.;14.5;77;Europe
Volkswagen Rabbit Custom;31.9;4;89.00;71.00;1925.;14.0;79;Europe
Volkswagen Rabbit Custom Diesel;43.1;4;90.00;48.00;1985.;21.5;78;Europe
Volkswagen Rabbit l;36.0;4;105.0;74.00;1980.;15.3;82;Europe
Volkswagen Scirocco;31.5;4;89.00;71.00;1990.;14.9;78;Europe
Volkswagen Super Beetle 117;0;4;97.00;48.00;1978.;20.0;71;Europe
Volkswagen Super Beetle;26.0;4;97.00;46.00;1950.;21.0;73;Europe
Volkswagen Type 3;23.0;4;97.00;54.00;2254.;23.5;72;Europe
Volvo 144ea;19.0;4;121.0;112.0;2868.;15.5;73;Europe
Volvo 145e (sw);18.0;4;121.0;112.0;2933.;14.5;72;Europe
Volvo 244DL;22.0;4;121.0;98.00;2945.;14.5;75;Europe
Volvo 245;20.0;4;130.0;102.0;3150.;15.7;76;Europe
Volvo 264gl;17.0;6;163.0;125.0;3140.;13.6;78;Europe
Volvo Diesel;30.7;6;145.0;76.00;3160.;19.6;81;Europe
map@cis106:~/Documents/sample_files/Csv$ sort -o sorted_cars.csv cars.csv
map@cis106:~/Documents/sample_files/Csv$ ls
cars.csv cereal.csv contacts.csv country.csv fake_users.csv sorted_cars.csv users_and_ips.csv
map@cis106:~/Documents/sample_files/Csv$ wc -l sorted_cars.csv
408 sorted_cars.csv
map@cis106:~/Documents/sample_files/Csv$ wc -m sorted_cars.csv
22663 sorted_cars.csv
map@cis106:~/Documents/sample_files/Csv$ _
```

Q2

```
Tilix: map@cis106: ~  
1:map@cis106: ~  
map@cis106:~$ curl -s https://cis106.com/assets/scripts/cha18.sh | bash  
[INFO] Generating 100 log entries in access.log...  
[SUCCESS] Access.log created successfully. Location: /home/map/access.log  
map@cis106:~$ wc -l access.log  
100 access.log  
map@cis106:~$ head -n 1 access.log  
2025-09-09 07:46:12 Julia /upload FAIL  
map@cis106:~$ tail -n 1 access.log  
2025-07-05 06:35:32 Jet /download SUCCESS  
map@cis106:~$ head -n 15 -v access.log  
=> access.log <=>  
2025-09-09 07:46:12 Julia /upload FAIL  
2025-08-19 01:08:17 Faye /dashboard DENIED  
2025-05-10 17:51:35 Julia /settings FAIL  
2025-10-07 11:03:45 Julia /download FAIL  
2025-09-19 00:05:07 Annie /reset DENIED  
2025-12-12 13:16:16 Spike /logout FAIL  
2025-02-28 16:13:13 Eren /logout SUCCESS  
2025-06-07 21:04:35 Rize /dashboard DENIED  
2025-12-08 00:40:12 Ken /settings SUCCESS  
2025-08-26 19:48:48 Eren /upload FAIL  
2025-11-04 14:14:10 Seras /dashboard FAIL  
2025-01-16 01:09:04 Ein /upload DENIED  
2025-01-09 02:46:28 Kei /download DENIED  
2025-07-14 08:36:03 Ein /settings SUCCESS  
2025-04-19 17:04:40 Ken /dashboard DENIED  
map@cis106:~$ tail -n 15 -v access.log  
=> access.log <=>  
2025-01-06 21:31:40 Kei /settings DENIED  
2025-06-20 15:35:44 Julia /login SUCCESS  
2025-09-13 00:30:23 Touka /admin FAIL  
2025-01-18 19:57:49 Arisu /upload DENIED  
2025-04-20 06:07:29 Eren /download FAIL  
2025-02-26 16:00:37 Seras /dashboard SUCCESS  
2025-09-25 06:17:41 Eren /upload FAIL  
2025-04-07 19:00:31 Rei /settings DENIED  
2025-04-05 19:17:05 Ein /dashboard SUCCESS  
2025-06-28 18:31:57 Seras /dashboard FAIL  
2025-10-06 14:52:33 Faye /404 FAIL  
2025-06-05 10:33:40 Jet /admin SUCCESS  
2025-06-05 10:33:40 Jet /admin SUCCESS  
2025-10-08 04:19:23 Touka /upload DENIED  
2025-07-09 10:10:03 Eren /reset FAIL  
2025-07-05 06:35:32 Jet /download SUCCESS  
map@cis106:~$ cut -f3 access.log  
2025-09-09 07:46:12 Julia /upload FAIL  
2025-08-19 01:08:17 Faye /dashboard DENIED  
2025-05-10 17:51:35 Julia /settings FAIL  
2025-10-07 11:03:45 Julia /download FAIL  
2025-09-19 00:05:07 Annie /reset DENIED  
2025-12-12 13:16:16 Spike /logout FAIL  
2025-02-28 16:13:13 Eren /logout SUCCESS  
2025-06-07 21:04:35 Rize /dashboard DENIED  
2025-12-08 00:40:12 Ken /settings SUCCESS  
2025-08-26 19:48:48 Eren /upload FAIL  
2025-11-04 14:14:10 Seras /dashboard FAIL  
2025-01-16 01:09:04 Ein /upload DENIED  
2025-01-09 02:46:28 Kei /download DENIED  
2025-07-14 08:36:03 Ein /settings SUCCESS  
2025-04-19 17:04:40 Ken /dashboard DENIED  
2025-08-25 16:51:12 Seras /reset FAIL  
2025-02-03 02:02:37 Ein /upload DENIED  
2025-06-17 09:58:52 Spike /download DENIED  
2025-05-08 03:57:06 Touka /dashboard FAIL  
2025-12-10 18:34:15 Seras /admin FAIL  
2025-01-14 03:21:35 Edward /login FAIL  
2025-03-28 21:30:26 Edward /settings FAIL  
2025-07-09 15:10:49 Asimov /settings FAIL  
2025-10-20 07:07:57 Jet /dashboard FAIL  
2025-04-01 02:57:39 Ken /admin DENIED  
2025-06-13 09:54:01 Rei /login DENIED  
2025-05-22 20:24:59 Seras /reset SUCCESS  
2025-04-24 20:57:15 Jet /admin FAIL  
2025-09-27 19:18:57 Ein /settings DENIED  
2025-02-26 20:40:40 Kei /download FAIL  
2025-09-25 07:05:50 Rei /login SUCCESS  
2025-08-19 05:20:40 Edward /login SUCCESS  
2025-11-27 20:52:32 Haruka /404 DENIED  
2025-08-10 21:19:39 Rei /logout FAIL
```



```
1/1 v + [ ] [ ] Tili: map@cis106: ~  
t.map@cis106: ~  
2025-03-01 15:06:59 Eren /admin DENIED  
2025-10-05 06:48:10 Haruka /upload DENIED  
2025-03-18 01:21:52 Julia /dashboard DENIED  
2025-11-11 09:20:34 Edward /download DENIED  
2025-06-25 20:24:28 Jet /admin FAIL  
2025-12-14 05:01:55 Edward /404 SUCCESS  
2025-04-10 15:24:41 Eren /login SUCCESS  
2025-07-26 12:33:40 Haruka /upload SUCCESS  
2025-06-28 15:32:05 Eren /settings FAIL  
2025-09-16 01:55:04 Walter /reset FAIL  
2025-04-21 03:16:17 Walter /login FAIL  
2025-06-04 18:42:59 Rei /admin FAIL  
2025-05-05 08:34:20 Kei /admin FAIL  
2025-03-05 02:37:14 Touka /logout FAIL  
2025-02-17 21:24:50 Seras /logout SUCCESS  
2025-12-28 05:32:30 Julia /404 DENIED  
2025-11-23 17:49:32 Seras /upload SUCCESS  
2025-11-22 13:35:44 Julia /reset FAIL  
2025-01-01 08:55:27 Edward /logout DENIED  
2025-03-19 03:36:04 Edward /settings SUCCESS  
2025-09-25 23:12:46 Annie /404 FAIL  
2025-08-09 20:55:44 Spike /404 FAIL  
2025-02-10 15:35:56 Asimov /dashboard SUCCESS  
2025-05-26 11:47:31 Walter /login FAIL  
2025-05-02 00:06:56 Edward /dashboard FAIL  
2025-08-14 12:16:26 Rize /dashboard DENIED  
2025-07-13 22:44:10 Haruka /reset DENIED  
2025-06-07 14:53:13 Jet /dashboard SUCCESS  
2025-10-05 13:01:13 Touka /reset SUCCESS  
2025-11-13 02:33:43 Shinji /logout DENIED  
2025-11-27 02:23:12 Edward /admin FAIL  
2025-05-20 13:46:40 Honami /login FAIL  
2025-05-21 20:12:29 Ken /dashboard SUCCESS  
2025-02-28 06:17:26 Asimov /dashboard FAIL  
2025-10-28 14:45:44 Haruka /reset DENIED  
2025-06-21 04:56:31 Rize /dashboard SUCCESS  
2025-01-18 23:30:23 Rize /download DENIED  
2025-07-09 01:11:08 Eren /dashboard SUCCESS  
2025-08-20 18:53:48 Julia /admin FAIL  
2025-05-26 18:42:23 Walter /reset FAIL  
2025-06-06 12:04:37 Honami /reset FAIL  
2025-12-07 14:11:43 Ein /login DENIED  
2025-08-22 14:15:48 Julia /settings FAIL  
2025-11-24 15:38:10 Eren /upload SUCCESS  
2025-09-27 03:42:22 Jet /upload DENIED  
2025-07-21 06:52:22 Touka /upload DENIED  
2025-07-28 10:23:28 Annie /admin DENIED  
2025-09-02 11:57:18 Spike /settings FAIL  
2025-09-07 19:39:13 Edward /download FAIL  
2025-10-19 11:11:29 Jet /settings DENIED  
2025-06-15 06:46:23 Spike /404 FAIL  
2025-02-24 22:57:08 Jet /logout FAIL  
2025-01-06 21:31:40 Kei /settings DENIED  
2025-06-20 15:35:44 Julia /login SUCCESS  
2025-09-13 00:36:23 Touka /admin FAIL  
2025-01-18 19:57:49 Arisu /upload DENIED  
2025-04-20 06:07:29 Eren /download FAIL  
2025-02-26 16:00:37 Seras /dashboard SUCCESS  
2025-09-25 06:17:41 Eren /upload FAIL  
2025-04-07 19:09:31 Rei /settings DENIED  
2025-04-05 19:17:05 Ein /dashboard SUCCESS  
2025-06-28 18:31:57 Seras /dashboard FAIL  
2025-10-06 14:52:33 Faye /404 FAIL  
2025-06-05 10:33:40 Jet /admin SUCCESS  
2025-10-08 04:19:23 Touka /upload DENIED  
2025-07-09 10:10:03 Eren /reset FAIL  
2025-07-05 06:35:32 Jet /download SUCCESS  
map@cis106:~$ sort -k3,3 access.log -o sorted_access_log_by_uname.log  
map@cis106:~$ sort -k4,4 access.log -o sorted_access_log_by_endpoint.log  
map@cis106:~$ cut -f3,4 --output-delimiter=' ' access.log  
2025-09-09 07:46:12 Julia /upload FAIL  
2025-08-19 01:08:17 Faye /dashboard DENIED  
2025-05-10 17:51:35 Julia /settings FAIL  
2025-10-07 11:03:45 Julia /download FAIL  
2025-09-19 00:05:07 Annie /reset DENIED  
2025-12-12 13:16:16 Spike /logout FAIL  
2025-02-28 16:13:13 Eren /logout SUCCESS  
2025-06-07 21:04:35 Rize /dashboard DENIED  
2025-12-08 00:40:12 Ken /settings SUCCESS  
2025-08-26 18:42:10 Walter /reset FAIL
```