

Lab9

Question 1

The screenshot shows a terminal window with two sessions of command-line interaction:

```
1: map@cis106: ~/lab9
map@cis106:~$ mkdir lab9
map@cis106:~$ cd lab9
map@cis106:~/lab9$ echo "All files in my home directory" > file_report.txt
map@cis106:~/lab9$ ls -Am ~ >> file_report.txt
map@cis106:~/lab9$ cat file_report.txt
All files in my home directory
access.log, app, assets, .bash_aliases, .bash_history, .bash_logout, .bashrc,
.cache, cis106, clear, colors, components, .config, config, data, deploy,
Desktop, Documents, .dotnet, Downloads, essentials.sh, example, .face,
.face.icon, .fonts, .gitconfig, git config global user.txt, .gnupg,
inClassActivity, lab6-challenge1, lab6-challenge2, lab9, .local, marstenHouse,
marstenhouse.sh, movies_from_80s, .mozilla, music, Music, pages, Pictures, .pki,
portfolio, practicels, .profile, Public, scripts, snap, snapshots,
sorted_access_log_by_endpoint.log, sorted_access_log_by_uname.log, .ssh,
.sudo_as_admin_successful, Templates, .vboxclient-clipboard-tty2-control.pid,
.vboxclient-clipboard-tty2-service.pid,
.vboxclient-draganddrop-tty2-control.pid,
.vboxclient-hostversion-tty2-control.pid, .vboxclient-seamless-tty2-control.pid,
.vboxclient-vmsvga-session-tty2-control.pid,
.vboxclient-vmsvga-session-tty2-service.pid, Videos, .vscode, vscode.sh,
wallpapers, website, website_ch1_lab7, .wget-hsts, wildcardpractice,
wildcards-in-class-activity-instructions.html
map@cis106:~/lab9$ 

2: map@cis106:~ 
-A, --almost-all
      print the allocated size of each file, in blocks
-X      sort alphabetically by entry extension
Written by Richard M. Stallman and David MacKenzie.
or available locally via: info '(coreutils) ls invocation'
map@cis106:~$ man ls | grep "comma"
      across,horizontal (-x), commas (-m), long (-l), single-column (-1), verbose
-H, --dereference-command-line
      follow symbolic links listed on the command line
--dereference-command-line-symlink-to-dir
      follow each command line symbolic link that points to a directory
-m      fill width with a comma separated list of entries
Use the dircolors(1) command to set it.
2       if serious trouble (e.g., cannot access command-line argument).
map@cis106:~$ _
```

Question 2

The screenshot shows a terminal window titled "Tilix: map@cis106: ~/lab9". The window has a dark theme with light-colored text. At the top, there are icons for navigating between tabs, zooming, and closing the window. The main area of the terminal displays the following command-line session:

```
1: map@cis106: ~/lab9 ~
map@cis106:~/lab9$ echo "Total number of files in my home directory" >> file_report.txt
map@cis106:~/lab9$ ls -lA ~ | grep "^-" | wc -l
24
map@cis106:~/lab9$ ls -lA ~ | grep "^-" | wc -l >> file_report.txt
map@cis106:~/lab9$ echo "Total number of directories in my home directory" >> file_report.txt
map@cis106:~/lab9$ ls -lA ~ | grep "^d" | wc -l >> file_report.txt
map@cis106:~/lab9$ tail file_report.txt
.vboxclient-draganddrop-tty2-control.pid,
.vboxclient-hostversion-tty2-control.pid, .vboxclient-seamless-tty2-control.pid,
.vboxclient-vmsvga-session-tty2-control.pid,
.vboxclient-vmsvga-session-tty2-service.pid, Videos, .vscode, vscode.sh,
wallpapers, website, website_ch1_lab7, .wget-hsts, wildcardpractice,
wildcards-in-class-activity-instructions.html
Total number of files in my home directory
24
Total number of directories in my home directory
45
map@cis106:~/lab9$ _
```

Below this, another terminal session is visible with the title "2: map@cis106: ~". It shows the prompt "map@cis106:~\$ _".

Question 3

1: map@cis106: ~/lab9 ~
map@cis106:~/lab9\$ awk -F":" '{print \$1}' /etc/passwd
awk: cannot open "/etc/passwd" (No such file or directory)
map@cis106:~/lab9\$ awk -F":" '{print \$1}' /etc/passwd
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
list
irc
_apt
nobody
systemd-network
dhcpcd

2: map@cis106: ~ ~
map@cis106:~\$ _

1: map@cis106: ~/lab9 ~
map
_flatpak
vboxadd
map@cis106:~/lab9\$ awk -F":" '{print \$1,\$NF}' /etc/passwd
root /bin/bash
daemon /usr/sbin/nologin
bin /usr/sbin/nologin
sys /usr/sbin/nologin
sync /bin/sync
games /usr/sbin/nologin
man /usr/sbin/nologin
lp /usr/sbin/nologin
mail /usr/sbin/nologin
news /usr/sbin/nologin
uucp /usr/sbin/nologin
proxy /usr/sbin/nologin
www-data /usr/sbin/nologin
backup /usr/sbin/nologin
list /usr/sbin/nologin
irc /usr/sbin/nologin
_apt /usr/sbin/nologin
nobody /usr/sbin/nologin
systemd-network /usr/sbin/nologin

2: map@cis106: ~ ~



```
map@cis106:~$ _  
  
1: map@cis106:~/lab9 ~  
systemd-network /usr/sbin/nologin  
dhpcd /bin/false  
tss /bin/false  
systemd-timesync /usr/sbin/nologin  
messagebus /usr/sbin/nologin  
dnsmasq /usr/sbin/nologin  
avahi /usr/sbin/nologin  
speech-dispatcher /bin/false  
usbmux /usr/sbin/nologin  
cups-pk-helper /usr/sbin/nologin  
fwupd-refresh /usr/sbin/nologin  
geoclue /usr/sbin/nologin  
gnome-remote-desktop /usr/sbin/nologin  
saned /usr/sbin/nologin  
polkitd /usr/sbin/nologin  
rtkit /usr/sbin/nologin  
colord /usr/sbin/nologin  
Debian-gdm /bin/false  
map /bin/bash  
_flatpak /usr/sbin/nologin  
vboxadd /bin/false  
map@cis106:~/lab9$ _  
  
2: map@cis106:~ ~  
map@cis106:~$ _
```

The screenshot shows a terminal window titled "Tilix: map@cis106: ~/lab9". The window has two tabs: tab 1 and tab 2.

Tab 1 content:

```
1: map@cis106: ~/lab9
The user tss logs in with: /bin/false and its home dir is: /var/lib/tpm
The user systemd-timesync logs in with: /usr/sbin/nologin and its home dir is: /
The user messagebus logs in with: /usr/sbin/nologin and its home dir is: /nonexistent
The user dnsmasq logs in with: /usr/sbin/nologin and its home dir is: /var/lib/misc
The user avahi logs in with: /usr/sbin/nologin and its home dir is: /run/avahi-daemon
The user speech-dispatcher logs in with: /bin/false and its home dir is: /run/speech-dispatcher
The user usbmux logs in with: /usr/sbin/nologin and its home dir is: /var/lib/usbmux
The user cups-pk-helper logs in with: /usr/sbin/nologin and its home dir is: /nonexistent
The user fwupd-refresh logs in with: /usr/sbin/nologin and its home dir is: /var/lib/fwupd
The user geoclue logs in with: /usr/sbin/nologin and its home dir is: /var/lib/geoclue
The user gnome-remote-desktop logs in with: /usr/sbin/nologin and its home dir is: /var/lib/gnome-remote-desktop
The user saned logs in with: /usr/sbin/nologin and its home dir is: /var/lib/saned
The user polkitd logs in with: /usr/sbin/nologin and its home dir is: /
The user rtkit logs in with: /usr/sbin/nologin and its home dir is: /proc
The user colord logs in with: /usr/sbin/nologin and its home dir is: /var/lib/colord
The user Debian-gdm logs in with: /bin/false and its home dir is: /var/lib/gdm3
The user map logs in with: /bin/bash and its home dir is: /home/map
The user _flatpak logs in with: /usr/sbin/nologin and its home dir is: /nonexistent
The user vboxadd logs in with: /bin/false and its home dir is: /var/run/vboxadd
map@cis106:~/lab9$ awk -F":" '{print "The user "$1,"logs in with: "$NF,"and its home dir is: "$6}' /etc/passwd_
```

Tab 2 content:

```
2: map@cis106: ~
map@cis106:~$ _
```

The screenshot shows a terminal window titled "Tilix: map@cis106: ~/lab9". The window has a dark theme with light-colored text. It displays a command-line session with the following content:

```
1: map@cis106: ~/lab9 ~
avahi = /usr/sbin/nologin
speech-dispatcher = /bin/false
usbmux = /usr/sbin/nologin
cups-pk-helper = /usr/sbin/nologin
fwupd-refresh = /usr/sbin/nologin
geoclue = /usr/sbin/nologin
gnome-remote-desktop = /usr/sbin/nologin
saned = /usr/sbin/nologin
polkitd = /usr/sbin/nologin
rtkit = /usr/sbin/nologin
colord = /usr/sbin/nologin
Debian-gdm = /bin/false
map = /bin/bash
_flatpak = /usr/sbin/nologin
vboxadd = /bin/false
map@cis106:~/lab9$ awk -F":" '{print $1"="$NF}' /etc/passwd | grep "/bin/bash"
root = /bin/bash
map = /bin/bash
map@cis106:~/lab9$ awk -F":" '{print $1"="$NF}' /etc/passwd | grep "/bin/bash" >> report_user
s.txt
map@cis106:~/lab9$ _
```

Below this, another terminal session is visible with the title "2: map@cis106: ~ ~". It contains the command:

```
map@cis106:~$ _
```

The user systemd-timesync logs in with: /usr/sbin/nologin and its home dir is: /
The user messagebus logs in with: /usr/sbin/nologin and its home dir is: /nonexistent
The user dnsmasq logs in with: /usr/sbin/nologin and its home dir is: /var/lib/misc
The user avahi logs in with: /usr/sbin/nologin and its home dir is: /run/avahi-daemon
The user speech-dispatcher logs in with: /bin/false and its home dir is: /run/speech-dispatcher
The user usbmux logs in with: /usr/sbin/nologin and its home dir is: /var/lib/usbmux
The user cups-pk-helper logs in with: /usr/sbin/nologin and its home dir is: /nonexistent
The user fwupd-refresh logs in with: /usr/sbin/nologin and its home dir is: /var/lib/fwupd
The user geoclue logs in with: /usr/sbin/nologin and its home dir is: /var/lib/geoclue
The user gnome-remote-desktop logs in with: /usr/sbin/nologin and its home dir is: /var/lib/gnome-remote-desktop
The user saned logs in with: /usr/sbin/nologin and its home dir is: /var/lib/saned
The user polkitd logs in with: /usr/sbin/nologin and its home dir is: /
The user rtkit logs in with: /usr/sbin/nologin and its home dir is: /proc
The user colord logs in with: /usr/sbin/nologin and its home dir is: /var/lib/colord
The user Debian-gdm logs in with: /bin/false and its home dir is: /var/lib/gdm3
The user map logs in with: /bin/bash and its home dir is: /home/map
The user _flatpak logs in with: /usr/sbin/nologin and its home dir is: /nonexistent
The user vboxadd logs in with: /bin/false and its home dir is: /var/run/vboxadd
root = /bin/bash
map = /bin/bash
map@cis106:~/lab9\$ cat report_users.txt_

2: map@cis106: ~

map@cis106:~\$ _

Question 4

```
Tilix: map@cis106: ~/lab9
1:map@cis106:~/lab9$ grep -i "honda" ~/Documents/sample_files/Csv/cars.csv > honda1.csv
map@cis106:~/lab9$ head -1 ~/Documents/sample_files/Csv/cars.csv > honda1.csv
map@cis106:~/lab9$ cat honda1.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
map@cis106:~/lab9$ grep -i "honda" ~/Documents/sample_files/Csv/cars.csv >> honda1.csv
map@cis106:~/lab9$ sed 's/;/,/g' honda1.csv
Car,Cylinders,Displacement,Horsepower,Weight,Acceleration,Model,Origin
Honda Civic,24,0,4,120.0,97.00,2489.,15.0,74,Japan
Honda Civic,33,0,4,91.00,53.00,1795.,17.5,75,Japan
Honda Civic,33,0,4,91.00,53.00,1795.,17.4,76,Japan
Honda Accord,CVCC,31.5,4,98.00,68.00,2045.,18.5,77,Japan
Honda Civic,CVCC,31.5,4,98.00,68.00,2045.,18.4,78,Japan
Honda Accord,LX,29.5,4,98.00,68.00,2135.,16.6,78,Japan
Honda Civic,1500 gl,44.6,4,91.00,67.00,1850.,13.8,80,Japan
Honda Accord,32,4,4,107.0,72.00,2290.,17.0,80,Japan
Honda Civic,1300,35,1,4,81.00,60.00,1760.,16.1,81,Japan
Honda Prelude,33.7,4,107.0,75.00,2210.,14.4,81,Japan
Honda Accord,36,0,4,107.0,75.00,2205.,14.5,82,Japan
Honda Civic,38,0,4,91.00,67.00,1965.,15.0,82,Japan
Honda Civic (auto),32,0,4,91.00,67.00,1965.,15.7,82,Japan
map@cis106:~/lab9$ sed 's/;/,/g' honda1.csv > honda2.csv
map@cis106:~/lab9$ _

2:map@cis106:~/Documents/sample_files/Csv <
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
Honda Civic;24,0;4;120.0;97.00;2489.;15.0;74;Japan
Honda Civic,CVCC;33,0;4;91.00;53.00;1795.;17.5;75;Japan
Honda Civic;33,0;4;91.00;53.00;1795.;17.4;76;Japan
Honda Accord,CVCC;31.5;4;98.00;68.00;2045.;18.5;77;Japan
Honda Civic,CVCC;36,1;4;91.00;60.00;1800.;16.4;78;Japan
Honda Accord,LX;29.5;4;98.00;68.00;2135.;16.6;78;Japan
Honda Civic,1500 gl;44.6;4;91.00;67.00;1850.;13.8;80;Japan
Honda Accord;32,4;4;107.0;72.00;2290.;17.0;80;Japan
Honda Civic,1300;35,1;4;81.00;60.00;1760.;16.1;81;Japan
Honda Prelude;33.7;4;107.0;75.00;2210.;14.4;81;Japan
Honda Accord;36,0;4;107.0;75.00;2205.;14.5;82;Japan
Honda Civic;38,0;4;91.00;67.00;1965.;15.0;82;Japan
Honda Civic (auto);32,0;4;91.00;67.00;1965.;15.7;82;Japan
map@cis106:~/Documents/sample_files/Csv$ _

Tilix: map@cis106: ~/lab9
1:map@cis106:~/lab9$ 
2:map@cis106:~/Documents/sample_files/Csv <
Honda_Accord,4,72,00
Honda_Civic_1300,4,60,00
Honda_Prelude,4,75,00
Honda_Accord,4,75,00
Honda_Civic,4,67,00
Honda_Civic_(auto),4,67,00
map@cis106:~/lab9$ awk -F"," 'NR > 1 {print $1,",$3,",$5}' honda2.csv | sed 's/ , ,/g' | sed 's/Honda /Honda_/g' >> honda3.csv
map@cis106:~/lab9$ batcat honda3.csv
File: honda3.csv
1 model,cylinder,hp
2 Honda_Civic,4,97.00
3 Honda_Civic,CVCC,4,53.00
4 Honda_Civic,4,53.00
5 Honda_Accord,CVCC,4,68.00
6 Honda_Civic,CVCC,4,60.00
7 Honda_Accord,LX,4,68.00
8 Honda_Civic,1500 gl,4,67.00
9 Honda_Accord,4,72.00
10 Honda_Civic,1300,4,60.00
11 Honda_Prelude,4,75.00
12 Honda_Accord,4,75.00
13 Honda_Civic,4,67.00
14 Honda_Civic_(auto),4,67.00
map@cis106:~/lab9$ _

2:map@cis106:~/Documents/sample_files/Csv <
map@cis106:~/Documents/sample_files/Csv$ _
```