

Lab 9

Question 1

```
2:rap@cis106:~$ [TR] ~
rap@cis106:~$ echo "All files in my home directory" > file_report.txt
rap@cis106:~$ ls -A | tr '\n' ',' >> file_report.txt
rap@cis106:~$ cat file_report.txt
All files in my home directory
access.log,.bash_aliases,.bash_history,.bash_logout,.bashrc,.cache,cis106,code,colors,.config,data,Desktop,documents,Documents,.dotnet,Downloads,essentials.sh,essentials.sh.1,essentials.sh.2,.face,.face.icon,file_report.txt,.Fonts,games,.gitconfig,.gnupg,inClassActivity,la4.script3.sh,lab5files,lab5files.zip,lab5files.zip.1,lab6-challenge1,lab6-challenge2,.local,marstenHou
se,.mozilla,music,Music,organized,Pictures,.pki,practicels,practicels.tar.xz,.profile,Public,scripts,scrIPT.sh,snap,snapshots
,sorted_access_log_by_endpoint.log,sorted_access_log_by_uname.log,.ssh,student,.sudo_as_admin_successful,Templates,.vboxclient-clipboard-tty2-control.pid,.vboxclient-clipboard-tty2-service.pid,.vboxclient-draganddrop-tty2-control.pirap@cis106:~$ rap@ci
rap@cis106:~$
```

Question 2

```
2: rap@cis106:~${TR} ~  
rap@cis106:~$ echo "Total number of files in my home directory" >> file_report.txt  
rap@cis106:~$ ls -lA | grep '^-' | wc -l >> file_report.txt  
rap@cis106:~$ ls -lA | grep '^-' | wc -l >> file_report.txt  
rap@cis106:~$ echo "Total number of directories in my home directory" >> file_report.txt  
rap@cis106:~$ ls -lA | grep '^d' | wc -l >> file_report.txt  
rap@cis106:~$ tail -n 10 file_report.txt  
Total number of files in my home directory  
0  
30  
Total number of directories in my home directory  
39  
Total number of files in my home directory  
0  
30  
Total number of directories in my home directory  
39  
rap@cis106:~$ [ ]
```

```
1: rap@cis106:~${TR} ~  
rap@cis106:~$ echo "Total number of files in my home directory" >> file_report.txt  
rap@cis106:~$ ls -lA | grep '^-' | wc -l >> file_report.txt    # <- if you want to include a space after the '-'  
in pattern, but see note below  
rap@cis106:~$ # Better (correct) grep:  
rap@cis106:~$ ls -lA | grep '^-' | wc -l >> file_report.txt  
rap@cis106:~$  
rap@cis106:~$ echo "Total number of directories in my home directory" >> file_report.txt  
rap@cis106:~$ ls -lA | grep '^d' | wc -l >> file_report.txt  
rap@cis106:~$  
rap@cis106:~$ tail -n 10 file_report.txt  
All files in my home directory  
access.log,.bash_aliases,.bash_history,.bash_logout,.bashrc,.cache,cis106,code,colors,.config,data,Desktop,docume  
nts,Documents,.dotnet,Downloads,essentials.sh,essentials.sh.1,essentials.sh.2,.face,.face.icon,file_report.txt,.F  
onts,games,.gitconfig,.gnupg,inClassActivity,la4.script3.sh,lab5files,lab5files.zip,lab5files.zip.1,lab6-challeng  
e1,lab6-challenge2,.local,marstenHouse,.mozilla,music,Music,organized,Pictures,.pki,practices,practices.tar.xz  
.profile,Public,scripts,scrIPT.sh,snap,snapshots,sorted_access_log_by_endpoint.log,sorted_access_log_by_uname.log  
.ssh,student,.sudo_as_admin_successful,Templates,.vboxclient-clipboard-tty2-control.pid,.vboxclient-clipboard-tt  
y2-service.pid,.vboxclient-draganddrop-tty2-control.pid,.vboxclient-hostversion-tty2-control.pid,.vboxclient-seam  
less-tty2-control.pid,.vboxclient-vmsvga-session-tty2-control.pid,.vboxclient-vmsvga-session-tty2-service.pid,Vid  
eos,.vscode,vscode.sh,website,website_ch1_lab7,.wget-hsts,wildcardpractice,wildcards-in-class-activity-instructio  
ns.html,Total number of files in my home directory  
Total number of files in my home directory  
Total number of files in my home directory  
0  
30  
Total number of directories in my home directory  
39  
rap@cis106:~$ [ ]
```

Question 3


```
1: rap@cis106:~${TR} ~  
rap@cis106:~$ 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  
tss  
systemd-timesync  
messagebus  
dnsmasq  
avahi  
speech-dispatcher  
usbmux  
cups-pk-helper  
fwupd-refresh  
geoclue  
gnome-remote-desktop  
saned  
polkitd  
rtkit
```

```
_flatpak  
rap@cis106:~$ 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  
dhcpcd /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
...
ratpac /usr/sbin/nologin
rap@cis106:~$ awk -F: '{print $1, $7, $6}' /etc/passwd
root /bin/bash /root
daemon /usr/sbin/nologin /usr/sbin
bin /usr/sbin/nologin /bin
sys /usr/sbin/nologin /dev
sync /bin/sync /bin
games /usr/sbin/nologin /usr/games
man /usr/sbin/nologin /var/cache/man
lp /usr/sbin/nologin /var/spool/lpd
mail /usr/sbin/nologin /var/mail
news /usr/sbin/nologin /var/spool/news
uucp /usr/sbin/nologin /var/spool/uucp
proxy /usr/sbin/nologin /bin
www-data /usr/sbin/nologin /var/www
backup /usr/sbin/nologin /var/backups
list /usr/sbin/nologin /var/list
irc /usr/sbin/nologin /run/ircd
_apt /usr/sbin/nologin /nonexistent
nobody /usr/sbin/nologin /nonexistent
systemd-network /usr/sbin/nologin /
dhpcd /bin/false /usr/lib/dhpcd
tss /bin/false /var/lib/tpm
systemd-timesync /usr/sbin/nologin /
messagebus /usr/sbin/nologin /nonexistent
dnsmasq /usr/sbin/nologin /var/lib/misc
avahi /usr/sbin/nologin /run/avahi-daemon
speech-dispatcher /bin/false /run/speech-dispatcher
usbmux /usr/sbin/nologin /var/lib/usbmux
cups-pk-helper /usr/sbin/nologin /nonexistent
fwupd-refresh /usr/sbin/nologin /var/lib/fwupd
geoclue /usr/sbin/nologin /var/lib/geoclue
gnome-remote-desktop /usr/sbin/nologin /var/lib/gnome-remote-desktop
saned /usr/sbin/nologin /var/lib/saned
polkitd /usr/sbin/nologin /
rkit /usr/sbin/nologin /proc
```

```

${student}: rap@cis106:~rap@cis106:~$ 
1:rap@cis106:~$[TR] ~
vboxadd /bin/false /var/run/vboxadd
_flatpak /usr/sbin/nologin /nonexistent
rap@cis106:~$ awk -F: '{print "The user:", $1, "logs in with:", $7, "and is home dir is:", $6}' /etc/passwd
The user: root logs in with: /bin/bash and is home dir is: /root
The user: daemon logs in with: /usr/sbin/nologin and is home dir is: /usr/sbin
The user: bin logs in with: /usr/sbin/nologin and is home dir is: /bin
The user: sys logs in with: /usr/sbin/nologin and is home dir is: /dev
The user: sync logs in with: /bin/sync and is home dir is: /bin
The user: games logs in with: /usr/sbin/nologin and is home dir is: /usr/games
The user: man logs in with: /usr/sbin/nologin and is home dir is: /var/cache/man
The user: lp logs in with: /usr/sbin/nologin and is home dir is: /var/spool/lpd
The user: mail logs in with: /usr/sbin/nologin and is home dir is: /var/mail
The user: news logs in with: /usr/sbin/nologin and is home dir is: /var/spool/news
The user: uucp logs in with: /usr/sbin/nologin and is home dir is: /var/spool/uucp
The user: proxy logs in with: /usr/sbin/nologin and is home dir is: /bin
The user: www-data logs in with: /usr/sbin/nologin and is home dir is: /var/www
The user: backup logs in with: /usr/sbin/nologin and is home dir is: /var/backups
The user: list logs in with: /usr/sbin/nologin and is home dir is: /var/list
The user: irc logs in with: /usr/sbin/nologin and is home dir is: /run/ircd
The user: _apt logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
The user: nobody logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
The user: systemd-network logs in with: /usr/sbin/nologin and is home dir is: /
The user: dhcpcd logs in with: /bin/false and is home dir is: /usr/lib/dhcpcd
The user: tss logs in with: /bin/false and is home dir is: /var/lib/tpm
The user: systemd-timesync logs in with: /usr/sbin/nologin and is home dir is: /
The user: messagebus logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
The user: dnsmasq logs in with: /usr/sbin/nologin and is home dir is: /var/lib/misc
The user: avahi logs in with: /usr/sbin/nologin and is home dir is: /run/avahi-daemon
The user: speech-dispatcher logs in with: /bin/false and is home dir is: /run/speech-dispatcher
The user: usbmux logs in with: /usr/sbin/nologin and is home dir is: /var/lib/usbmux
The user: cups-pk-helper logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
The user: fwupd-refresh logs in with: /usr/sbin/nologin and is home dir is: /var/lib/fwupd
The user: geoclue logs in with: /usr/sbin/nologin and is home dir is: /var/lib/geoclue
The user: gnome-remote-desktop logs in with: /usr/sbin/nologin and is home dir is: /var/lib/gnome-remote-desktop
The user: saned logs in with: /usr/sbin/nologin and is home dir is: /var/lib/saned
The user: polkitd logs in with: /usr/sbin/nologin and is home dir is: /
${student}: rap@cis106:~rap@cis106:~$ 
1:rap@cis106:~$[TR] ~
The user: _flatpak logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
rap@cis106:~$ awk -F: '{print "The user:", $1, "logs in with:", $7, "and is home dir is:", $6}' /etc/passwd > report_users.txt
rap@cis106:~$ cat report_users.txt
root:x:0:0:root:/root:/bin/bash
rap:x:1000:1000:Tahera Rahman,,,:/home/rap:/bin/bash
rap@cis106:~$ grep "/bin/bash" /etc/passwd | awk -F: '{print $1 " = " $7}' >> report_users.txt
rap@cis106:~$ cat report_users.txt
The user: root logs in with: /bin/bash and is home dir is: /root
The user: daemon logs in with: /usr/sbin/nologin and is home dir is: /usr/sbin
The user: bin logs in with: /usr/sbin/nologin and is home dir is: /bin
The user: sys logs in with: /usr/sbin/nologin and is home dir is: /dev
The user: sync logs in with: /bin/sync and is home dir is: /bin
The user: games logs in with: /usr/sbin/nologin and is home dir is: /usr/games
The user: man logs in with: /usr/sbin/nologin and is home dir is: /var/cache/man
The user: lp logs in with: /usr/sbin/nologin and is home dir is: /var/spool/lpd
The user: mail logs in with: /usr/sbin/nologin and is home dir is: /var/mail
The user: news logs in with: /usr/sbin/nologin and is home dir is: /var/spool/news
The user: uucp logs in with: /usr/sbin/nologin and is home dir is: /var/spool/uucp
The user: proxy logs in with: /usr/sbin/nologin and is home dir is: /bin
The user: www-data logs in with: /usr/sbin/nologin and is home dir is: /var/www
The user: backup logs in with: /usr/sbin/nologin and is home dir is: /var/backups
The user: list logs in with: /usr/sbin/nologin and is home dir is: /var/list
The user: irc logs in with: /usr/sbin/nologin and is home dir is: /run/ircd
The user: _apt logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
The user: nobody logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
The user: systemd-network logs in with: /usr/sbin/nologin and is home dir is: /
The user: dhcpcd logs in with: /bin/false and is home dir is: /usr/lib/dhcpcd
The user: tss logs in with: /bin/false and is home dir is: /var/lib/tpm
The user: systemd-timesync logs in with: /usr/sbin/nologin and is home dir is: /
The user: messagebus logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
The user: dnsmasq logs in with: /usr/sbin/nologin and is home dir is: /var/lib/misc
The user: avahi logs in with: /usr/sbin/nologin and is home dir is: /run/avahi-daemon
The user: speech-dispatcher logs in with: /bin/false and is home dir is: /run/speech-dispatcher
The user: usbmux logs in with: /usr/sbin/nologin and is home dir is: /var/lib/usbmux
The user: cups-pk-helper logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
${student}: rap@cis106:~rap@cis106:~$ 
1:rap@cis106:~$[TR] ~
The user: lp logs in with: /usr/sbin/nologin and is home dir is: /var/spool/lpd
The user: mail logs in with: /usr/sbin/nologin and is home dir is: /var/mail
The user: news logs in with: /usr/sbin/nologin and is home dir is: /var/spool/news
The user: uucp logs in with: /usr/sbin/nologin and is home dir is: /var/spool/uucp
The user: proxy logs in with: /usr/sbin/nologin and is home dir is: /bin
The user: www-data logs in with: /usr/sbin/nologin and is home dir is: /var/www
The user: backup logs in with: /usr/sbin/nologin and is home dir is: /var/backups
The user: list logs in with: /usr/sbin/nologin and is home dir is: /var/list
The user: irc logs in with: /usr/sbin/nologin and is home dir is: /run/ircd
The user: _apt logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
The user: nobody logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
The user: systemd-network logs in with: /usr/sbin/nologin and is home dir is: /
The user: dhcpcd logs in with: /bin/false and is home dir is: /usr/lib/dhcpcd
The user: tss logs in with: /bin/false and is home dir is: /var/lib/tpm
The user: systemd-timesync logs in with: /usr/sbin/nologin and is home dir is: /
The user: messagebus logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
The user: dnsmasq logs in with: /usr/sbin/nologin and is home dir is: /var/lib/misc
The user: avahi logs in with: /usr/sbin/nologin and is home dir is: /run/avahi-daemon
The user: speech-dispatcher logs in with: /bin/false and is home dir is: /run/speech-dispatcher
The user: usbmux logs in with: /usr/sbin/nologin and is home dir is: /var/lib/usbmux
The user: cups-pk-helper logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
The user: fwupd-refresh logs in with: /usr/sbin/nologin and is home dir is: /var/lib/fwupd
The user: geoclue logs in with: /usr/sbin/nologin and is home dir is: /var/lib/geoclue
The user: gnome-remote-desktop logs in with: /usr/sbin/nologin and is home dir is: /var/lib/gnome-remote-desktop
The user: saned logs in with: /usr/sbin/nologin and is home dir is: /var/lib/saned
The user: polkitd logs in with: /usr/sbin/nologin and is home dir is: /
The user: rtkit logs in with: /usr/sbin/nologin and is home dir is: /proc
The user: colord logs in with: /usr/sbin/nologin and is home dir is: /var/lib/colord
The user: Debian-gdm logs in with: /bin/false and is home dir is: /var/lib/gdm3
The user: rap logs in with: /bin/bash and is home dir is: /home/rap
The user: vboxadd logs in with: /bin/false and is home dir is: /var/run/vboxadd
The user: _flatpak logs in with: /usr/sbin/nologin and is home dir is: /nonexistent
root = /bin/bash
rap = /bin/bash
rap@cis106:~$ 

```

Question 4

```

rap@cis106:~/Documents/sample_files/Csv$ head -n 1 cars.csv > honda1.csv
rap@cis106:~/Documents/sample_files/Csv$ cat honda1.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
rap@cis106:~/Documents/sample_files/Csv$ grep "Honda" cars.csv >> honda1.csv
rap@cis106:~/Documents/sample_files/Csv$ cat honda1.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
rap@cis106:~/Documents/sample_files/Csv$ sed 's/;/,/g' honda1.csv > honda2.csv
rap@cis106:~/Documents/sample_files/Csv$ cat honda2.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

Honda Civic (auto),32.0,4,91.00,67.00,1965.,15.7,82,Japan
rap@cis106:~/Documents/sample_files/Csv$ echo "model,cylinders,hp" > Honda3.csv
rap@cis106:~/Documents/sample_files/Csv$ awk -F, 'NR>1 {print $1 "," "$3"," "$5}' honda2.csv \
> | sed 's/ , ,/ /g' \
> | sed 's/Honda /Honda _/g' >> Honda3.csv
rap@cis106:~/Documents/sample_files/Csv$ cat Honda3.csv
model,cylinders,hp
Honda_Civic,4,97.00
Honda_Civic CVCC,4,53.00
Honda_Civic,4,53.00
Honda_Accord CVCC,4,68.00
Honda_Civic CVCC,4,60.00
Honda_Accord LX,4,68.00
Honda_Civic 1500 gl,4,67.00
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
rap@cis106:~/Documents/sample_files/Csv$ sudo apt install bat
[sudo] password for rap:
Installing:
  bat

Installing dependencies:
  libgit2-1.9  libhttp-parser2.9  libmbedTLS21  libmbedX509-7

Summary:
  Upgrading: 0, Installing: 5, Removing: 0, Not Upgrading: 140
  Download size: 3,308 kB
  Space needed: 7,812 kB / 24.6 GB available

Continue? [Y/n] y
Get:1 http://deb.debian.org/debian trixie/main amd64 libhttp-parser2.9 amd64 2.9.4-6+b2 [21.2 kB]

```

```

Continue? [Y/n] y
Get:1 http://deb.debian.org/debian trixie/main amd64 libhttp-parser2.9 amd64 2.9.4-6+b2 [21.2 kB]
Get:2 http://deb.debian.org/debian trixie/main amd64 libmbedx509-7 amd64 3.6.4-2 [151 kB]
Get:3 http://deb.debian.org/debian trixie/main amd64 libmbedtls21 amd64 3.6.4-2 [242 kB]
Get:4 http://deb.debian.org/debian trixie/main amd64 libgit2-1.9 amd64 1.9.0+ds-2 [555 kB]
Get:5 http://deb.debian.org/debian trixie/main amd64 bat amd64 0.25.0-2+b2 [2,339 kB]
Fetched 3,308 kB in 0s (9,916 kB/s)
Selecting previously unselected package libhttp-parser2.9:amd64.
(Reading database ... 204384 files and directories currently installed.)
Preparing to unpack .../libhttp-parser2.9_2.9.4-6+b2_amd64.deb ...
Unpacking libhttp-parser2.9:amd64 (2.9.4-6+b2) ...
Selecting previously unselected package libmbedx509-7:amd64.
Preparing to unpack .../libmbedx509-7_3.6.4-2_amd64.deb ...
Unpacking libmbedx509-7:amd64 (3.6.4-2) ...
Selecting previously unselected package libmbedtls21:amd64.
Preparing to unpack .../libmbedtls21_3.6.4-2_amd64.deb ...
Unpacking libmbedtls21:amd64 (3.6.4-2) ...
Selecting previously unselected package libgit2-1.9:amd64.
Preparing to unpack .../libgit2-1.9_1.9.0+ds-2_amd64.deb ...
Unpacking libgit2-1.9:amd64 (1.9.0+ds-2) ...
Selecting previously unselected package bat.
Preparing to unpack .../bat_0.25.0-2+b2_amd64.deb ...
Unpacking bat (0.25.0-2+b2) ...
Setting up libmbedx509-7:amd64 (3.6.4-2) ...
Setting up libmbedtls21:amd64 (3.6.4-2) ...
Setting up libhttp-parser2.9:amd64 (2.9.4-6+b2) ...
Setting up libgit2-1.9:amd64 (1.9.0+ds-2) ...
Setting up bat (0.25.0-2+b2) ...
Processing triggers for man-db (2.13.1-1) ...
Processing triggers for libc-bin (2.41-12) ...
rap@cis106:~/Documents/sample_files/Csv$ batcat --version
bat 0.25.0
rap@cis106:~/Documents/sample_files/Csv$ batcat Honda3.csv

```

```

Selecting previously unselected package libgit2-1.9:amd64.
Preparing to unpack .../libgit2-1.9_1.9.0+ds-2_amd64.deb ...
Unpacking libgit2-1.9:amd64 (1.9.0+ds-2) ...
Selecting previously unselected package bat.
Preparing to unpack .../bat_0.25.0-2+b2_amd64.deb ...
Unpacking bat (0.25.0-2+b2) ...
Setting up libmbedx509-7:amd64 (3.6.4-2) ...
Setting up libmbedtls21:amd64 (3.6.4-2) ...
Setting up libhttp-parser2.9:amd64 (2.9.4-6+b2) ...
Setting up libgit2-1.9:amd64 (1.9.0+ds-2) ...
Setting up bat (0.25.0-2+b2) ...
Processing triggers for man-db (2.13.1-1) ...
Processing triggers for libc-bin (2.41-12) ...
rap@cis106:~/Documents/sample_files/Csv$ batcat --version
bat 0.25.0
rap@cis106:~/Documents/sample_files/Csv$ batcat Honda3.csv

```

	File: Honda3.csv
1	model,cylinders,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

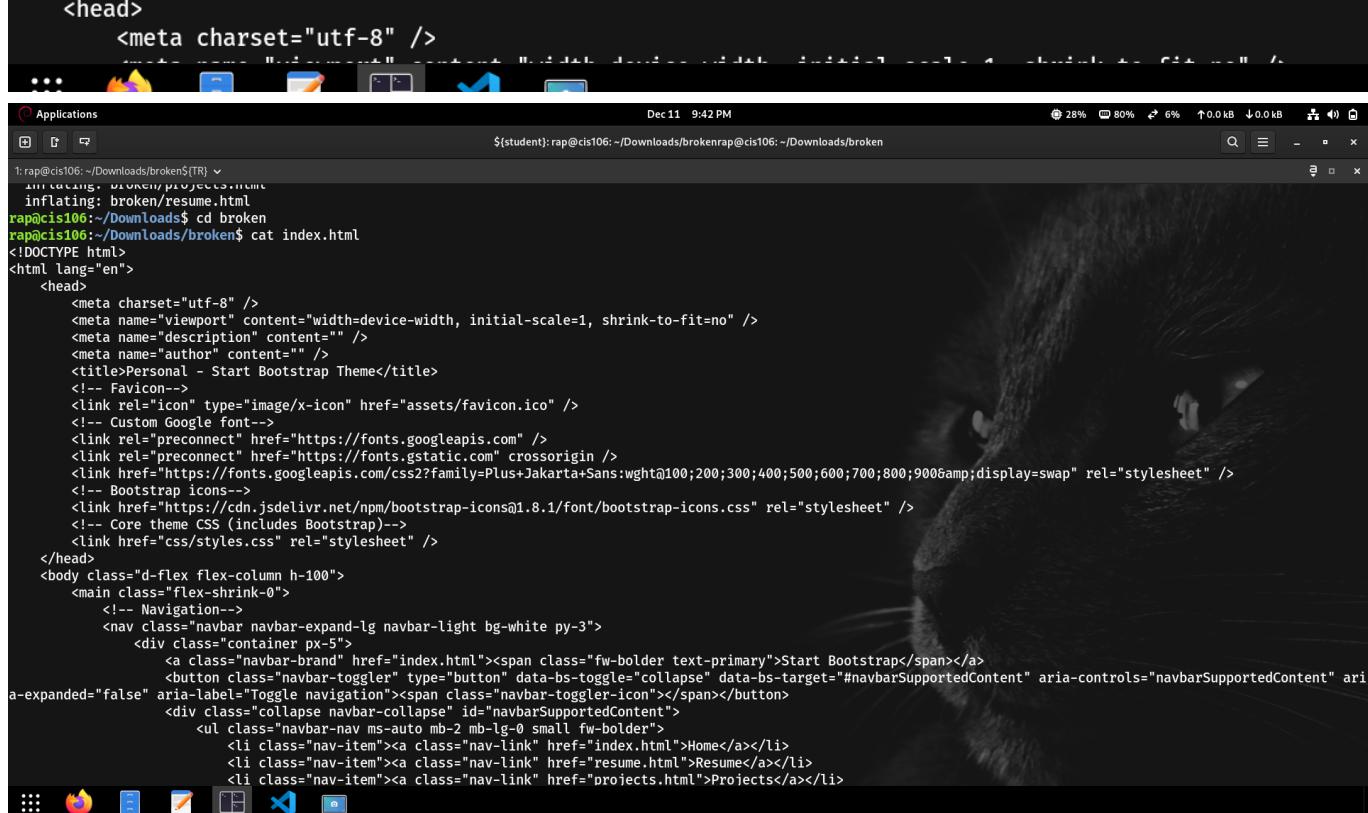
```

rap@cis106:~/Documents/sample_files/Csv$ █

```

Challenge Question 1

```
1: rap@cis106: ~/Downloads/broken$ {TR} ~
wildcardpractice
wildcards-in-class-activity-instructions.html
rap@cis106:~$ ls ~/Downloads
'broken(1).zip'
broken.zip
'challenge_lab4(1).sh'
'challenge_lab4(2).sh'
'challenge_lab4(3).sh'
'challenge_lab4(4).sh'
'challenge_lab4(5).sh'
challenge_lab4.sh
chat.png
'Final Exam Study Assignment.pdf'
games
handling-text-part-1-in-class-activity-instructions.pdf
honda1.csv
'managing-files-in-class-challenge-activities (1).pdf'
rap@cis106:~$ cd ~/Downloads
rap@cis106:~/Downloads$ unzip broken.zip
Archive: broken.zip
  creating: broken/
  inflating: broken/favicon.ico
  inflating: broken/profile.png
  inflating: broken/contact.html
  inflating: broken/styles.css
  inflating: broken/index.html
  inflating: broken/scripts.js
  inflating: broken/projects.html
  inflating: broken/resume.html
rap@cis106:~/Downloads$ cd broken
rap@cis106:~/Downloads/broken$ cat index.html
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
```



The screenshot shows a Linux desktop environment with a terminal window and a browser window. The terminal window at the top displays the command-line session from the previous text block. Below it, a browser window shows the contents of the 'index.html' file. The browser's address bar also displays the path 'student: rap@cis106: ~/Downloads/broken'. The desktop background is dark, and the taskbar at the bottom shows various application icons.

```
1: rap@cis106: ~/Downloads/broken$ {TR} ~
  inflating: broken/projects.html
  inflating: broken/resume.html
rap@cis106:~/Downloads$ cd broken
rap@cis106:~/Downloads/broken$ cat index.html
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no" />
    <meta name="description" content="" />
    <meta name="author" content="" />
    <title>Personal - Start Bootstrap Theme</title>
    <!-- Favicon-->
    <link rel="icon" type="image/x-icon" href="assets/favicon.ico" />
    <!-- Custom Google font-->
    <link rel="preconnect" href="https://fonts.googleapis.com" />
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin />
    <link href="https://fonts.googleapis.com/css2?family=Plus+Jakarta+Sans:wght@100;200;300;400;500;600;700;800;900&amp;display=swap" rel="stylesheet" />
    <!-- Bootstrap icons-->
    <link href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.8.1/font/bootstrap-icons.css" rel="stylesheet" />
    <!-- Core theme CSS (includes Bootstrap)-->
    <link href="css/styles.css" rel="stylesheet" />
  </head>
  <body class="d-flex flex-column h-100">
    <main class="flex-shrink-0">
      <!-- Navigation-->
      <nav class="navbar navbar-expand-lg navbar-light bg-white py-3">
        <div class="container px-5">
          <a class="navbar-brand" href="index.html"><span class="fw-bolder text-primary">Start Bootstrap</span></a>
          <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle navigation"><span class="navbar-toggler-icon"></span></button>
          <div class="collapse navbar-collapse" id="navbarSupportedContent">
            <ul class="navbar-nav ms-auto mb-2 mb-lg-0 small fw-bolder">
              <li class="nav-item"><a class="nav-link" href="index.html">Home</a></li>
              <li class="nav-item"><a class="nav-link" href="resume.html">Resume</a></li>
              <li class="nav-item"><a class="nav-link" href="projects.html">Projects</a></li>
            </ul>
          </div>
        </div>
      </nav>
    </main>
  </body>

```

```
Applications Dec 11 9:42 PM 19% 80% 6% 10.0KB 0.0KB
${student}: rap@cis106: ~/Downloads/brokenrap@cis106: ~/Downloads/broken

1: rap@cis106: ~/Downloads/broken$ (TR) 
    <-- bootstrap core JS-->
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/js/bootstrap.bundle.min.js"></script>
    <!-- Core theme JS-->
    <script src="js/scripts.js"></script>
</body>
</html>
rap@cis106:~/Downloads/broken$ mkdir css
rap@cis106:~/Downloads/broken$ mkdir js
rap@cis106:~/Downloads/broken$ mkdir images
rap@cis106:~/Downloads/broken$ mv styles.css css/
rap@cis106:~/Downloads/broken$ mv scripts.js js/
rap@cis106:~/Downloads/broken$ mv profile.png images/
rap@cis106:~/Downloads/broken$ mv favicon.ico images/
rap@cis106:~/Downloads/broken$ firefox index.html
rap@cis106:~/Downloads/broken$ cat index.html
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no" />
    <meta name="description" content="" />
    <meta name="author" content="" />
    <title>Personal - Start Bootstrap Theme</title>
    <!-- Favicons-->
    <link rel="icon" type="image/x-icon" href="assets/favicon.ico" />
    <!-- Custom Google font-->
    <link rel="preconnect" href="https://fonts.googleapis.com" />
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin />
    <link href="https://fonts.googleapis.com/css2?family=Plus+Jakarta+Sans:wght@100;200;300;400;500;600;700;800;900&display=swap" rel="stylesheet" />
    <!-- Bootstrap icons-->
    <link href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.8.1/font/bootstrap-icons.css" rel="stylesheet" />
    <!-- Core theme CSS (includes Bootstrap)-->
    <link href="css/styles.css" rel="stylesheet" />
  </head>
  <body class="d-flex flex-column h-100">
    <main class="flex-shrink-0">
```

Challenge Question 2

