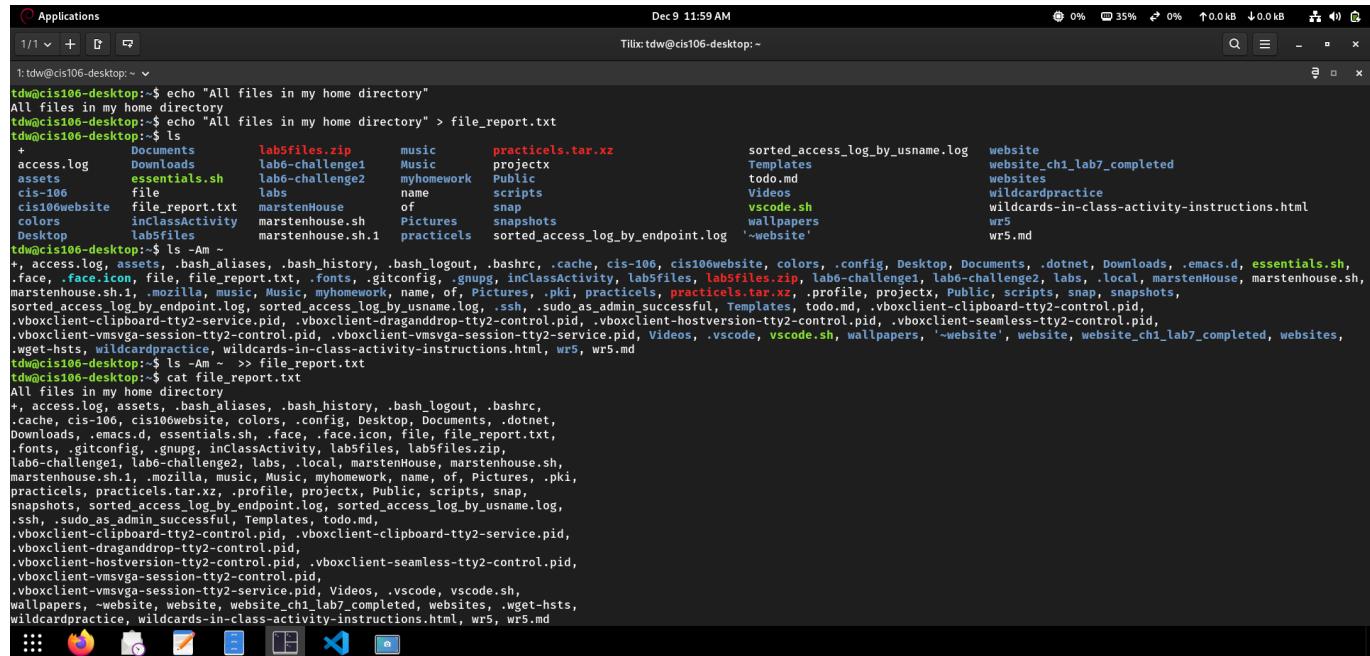


Lab9

Q1



```
1:tdw@cis106-desktop:~
```

```
tdw@cis106-desktop:~ echo "All files in my home directory"
```

```
All files in my home directory
```

```
tdw@cis106-desktop:~ echo "All files in my home directory" > file_report.txt
```

```
tdw@cis106-desktop:~ ls
```

```
+ Documents lab5files.zip music practicels.tar.xz sorted_access_log_by_usname.log website
access.log Downloads lab6-challenge1 Music projectx Templates website_ch1_lab7_completed
assets essentials.sh lab6-challenge2 myhomework Public todo.md websites
cis-106 file labs name scripts Videos wildcardpractice
cis106website file_report.txt marstenHouse of snap vscode.sh wildcards-in-class-activity-instructions.html
colors inClassActivity marstenhouse.sh Pictures snapshots wallpapers wr5
Desktop lab5files marstenhouse.sh.1 practicels sorted_access_log_by_endpoint.log '~website' wr5.md
```

```
tdw@cis106-desktop:~ ls ~
```

```
+ access.log assets .bash_aliases .bash_history .bash_logout .bashrc .cache cis-106 cis106website colors .config Desktop Documents .dotnet Downloads .emacs.d essentials.sh
.face .face.icon file file_report.txt .fonts .gitconfig .gnupg inClassActivity lab5files lab6-challenge1 lab6-challenge2 labs .local marstenHouse marstenhouse.sh,
marstenhouse.sh.1 .mozilla music Music myhomework name of Pictures .pki practicels practicels.tar.xz .profile projectx Public scripts snap snapshots,
sorted_access_log_by_endpoint.log sorted_access_log_by_usname.log .ssh .sudo_as_admin_successful Templates todo.md .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 website_ch1_lab7_completed websites,
wget-hsts wildcardpractice wildcards-in-class-activity-instructions.html wr5 wr5.md
```

```
tdw@cis106-desktop:~ ls -Am ~ >> file_report.txt
```

```
tdw@cis106-desktop:~ cat file_report.txt
```

```
All files in my home directory
```

```
+ access.log assets .bash_aliases .bash_history .bash_logout .bashrc,
.cache cis-106 cis106website colors .config Desktop Documents .dotnet,
Downloads .emacs.d essentials.sh .face .face.icon file file_report.txt,
.fonts .gitconfig .gnupg inClassActivity lab5files lab6-challenge1 lab6-challenge2 labs .local marstenHouse marstenhouse.sh,
marstenhouse.sh.1 .mozilla music Music myhomework name of Pictures .pki,
practicels practicels.tar.xz .profile projectx Public scripts snap,
snapshots sorted_access_log_by_endpoint.log sorted_access_log_by_usname.log,
.ssh .sudo_as_admin_successful Templates todo.md,
.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 website_ch1_lab7_completed websites,
wget-hsts wildcardpractice wildcards-in-class-activity-instructions.html wr5 wr5.md
```

Q2

```

Applications Dec 9 12:14 PM Tiltix: tdw@cis106-desktop:~ 21% 35% 0% 0.0 kB 0.0 kB
1/1 + - x
Applications Dec 9 12:14 PM Tiltix: tdw@cis106-desktop:~ 29% 36% 0% 0.0 kB 0.0 kB
1/1 + - x
Applications Dec 9 12:23 PM Tiltix: tdw@cis106-desktop:~ 10% 35% 0% 0.0 kB 0.0 kB
1/1 + - x

```

tdw@cis106-desktop:~ \$ echo "Total number of files in my home directory"
total number of files in my home directory
tdw@cis106-desktop:~ \$ echo "total number of files in my home directory" >> file_report.txt
tdw@cis106-desktop:~ \$ ls -Al
total 5992
-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:12 +
-rw-rw-r-- 1 tdw tdw 4061 Dec 2 19:06 access.log
drwxrwxr-x 4 tdw tdw 4096 Nov 18 19:16 assets
-rw-rw-r-- 1 tdw tdw 2731 Sep 24 18:57 .bash_aliases
-rw----- 1 tdw tdw 23096 Dec 9 12:06 .bash_history
-rw-r--r-- 1 tdw tdw 220 Sep 22 20:01 .bash_logout
-rw-r--r-- 1 tdw tdw 3678 Sep 24 18:57 .bashrc
drwx----- 18 tdw tdw 4096 Oct 14 22:04 .cache
drwxrwxr-x 9 tdw tdw 4096 Nov 18 13:42 cis-106
drwxrwxr-x 3 tdw tdw 4096 Nov 25 12:32 cis106website
drwxrwxr-x 3 tdw tdw 4096 Oct 30 18:03 colors
drwx----- 15 tdw tdw 4096 Nov 25 12:43 config
drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Desktop
drwxr-xr-x 5 tdw tdw 4096 Nov 25 14:09 Documents
drwxrwxr-x 3 tdw tdw 4096 Sep 25 19:25 dotnet
drwxr-xr-x 3 tdw tdw 4096 Nov 25 22:08 Downloads
drwx----- 4 tdw tdw 4096 Sep 23 12:35 emacs.d
-rw-rw-r--x 1 tdw tdw 7747 Sep 24 12:30 essentials.sh
-rw-r--r-- 1 tdw tdw 5290 Sep 22 20:01 .face
lrwxrwxrwx 1 tdw tdw 5 Sep 22 20:01 .face.icon -> .face
-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:12 file
-rw-rw-r-- 1 tdw tdw 1222 Dec 9 12:03 file_report.txt
drwxrwxr-x 2 tdw tdw 4096 Oct 8 19:20 .fonts
-rw-rw-r-- 1 tdw tdw 68 Sep 24 19:35 .gitconfig
drwx----- 2 tdw tdw 4096 Dec 2 13:54 .gnupg
drwxrwxr-x 5 tdw tdw 4096 Nov 13 18:54 inclassActivity
drwxrwxr-x 2 tdw tdw 4096 Feb 22 2022 lab5files
-rw-rw-r-- 1 tdw tdw 3570561 Oct 29 14:47 lab5files.zip
drwxrwxr-x 5 tdw tdw 4096 Nov 12 19:01 lab6-challenge1
drwxrwxr-x 3 tdw tdw 4096 Nov 18 12:29 lab6-challenge2
drwxrwxr-x 2 tdw tdw 4096 Nov 24 16:51 labs
drwx----- 4 tdw tdw 4096 Sep 22 20:03 .local
drwxrwxr-x 3 tdw tdw 4096 Oct 31 19:31 marstenHouse

tdw@cis106-desktop:~ \$ ls -Al | grep '^.'

```

-rw-rw-r-- 1 tdw tdw 3407 Oct 29 14:47 marstenhouse.sh  

-rw-rw-r-- 1 tdw tdw 3407 Nov 12 13:30 marstenhouse.sh.1  

drwxrwxr-x 5 tdw tdw 4096 Sep 24 18:48 .mozilla  

drwxrwxr-x 4 tdw tdw 4096 Nov 18 14:44 music  

drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Music  

drwxrwxr-x 2 tdw tdw 4096 Nov 13 18:38 myhomework  

-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:12 name  

-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:12 of  

drwxr-xr-x 4 tdw tdw 4096 Oct 29 18:46 Pictures  

drwxr-xr-x 3 tdw tdw 4096 Sep 26 19:51 .pkd  

drwxrwxr-x 2 tdw tdw 4096 Feb 27 2022 practicals  

-rw-rw-r-- 1 tdw tdw 2229212 Nov 6 15:35 practicals.tar.xz  

-rw-r--r-- 1 tdw tdw 807 Sep 22 20:01 .profile  

-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:13 projectx  

drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Public  

drwxrwxr-x 2 tdw tdw 4096 Dec 5 19:50 scripts  

drwxrwxr-x 3 tdw tdw 4096 Oct 14 22:17 snap  

drwxrwxr-x 4 tdw tdw 4096 Oct 30 18:00 snapshots  

-rw-rw-r-- 1 tdw tdw 4061 Dec 2 19:47 sorted_access_log_by_endpoint.log  

-rw-rw-r-- 1 tdw tdw 4061 Dec 2 19:34 sorted_access_log_by_usname.log  

drwxrwxr-x 2 tdw tdw 4096 Sep 23 19:40 .ssh  

-rw-r--r-- 1 tdw tdw 0 Sep 23 12:39 .sudo_as_admin_successful  

drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Templates  

-rw-rw-r-- 1 tdw tdw 41 Oct 8 19:28 todo.md  

-rw-r----- 1 tdw tdw 6 Dec 9 11:32 .vboxclient-clipboard-tty2-control.pid  

-rw-r----- 1 tdw tdw 5 Dec 9 11:32 .vboxclient-clipboard-tty2-service.pid  

-rw-r----- 1 tdw tdw 6 Dec 9 11:32 .vboxclient-draganddrop-tty2-control.pid  

-rw-r----- 1 tdw tdw 6 Dec 9 11:32 .vboxclient-hostversion-tty2-control.pid  

-rw-r----- 1 tdw tdw 6 Dec 9 11:32 .vboxclient-seamless-tty2-control.pid  

-rw-r----- 1 tdw tdw 5 Dec 9 11:32 .vboxclient-vmsvga-session-tty2-control.pid  

drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Videos  

drwxrwxr-x 4 tdw tdw 4096 Sep 29 19:52 .vscode  

-rw-rw-r-- 1 tdw tdw 2501 Sep 25 15:05 vscode.sh  

drwxrwxr-x 3 tdw tdw 4096 Nov 18 19:12 wallpapers  

drwxrwxr-x 2 tdw tdw 4096 Nov 5 13:16 'website'  

drwxrwxr-x 4 tdw tdw 4096 Nov 5 13:17 website  

drwxrwxr-x 8 tdw tdw 4096 Dec 2 13:05 website ch1 lab7 completed
```

tdw@cis106-desktop:~ \$ ls -Al | grep '^.'

```

-rw-rw-r-- 1 tdw tdw 0 Nov 2 15:05 wr5.md  

tdw@cis106-desktop:~ $ ls -Al | grep '^.'
-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:12 +  

-rw-rw-r-- 1 tdw tdw 4061 Dec 2 19:06 access.log  

-rw-rw-r-- 1 tdw tdw 2731 Sep 24 18:57 .bash_aliases  

-rw----- 1 tdw tdw 23109 Dec 9 12:13 .bash_history  

-rw-r--r-- 1 tdw tdw 220 Sep 22 20:01 .bash_logout  

-rw-r--r-- 1 tdw tdw 3678 Sep 24 18:57 .bashrc  

drwxrwxr-x 1 tdw tdw 7747 Sep 24 12:30 essentials.sh  

-rw-rw-r-- 1 tdw tdw 5290 Sep 22 20:01 .face  

-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:12 file  

-rw-rw-r-- 1 tdw tdw 1222 Dec 9 12:03 file_report.txt  

-rw-rw-r-- 1 tdw tdw 68 Sep 24 19:35 .gitconfig  

-rw-rw-r-- 1 tdw tdw 3570561 Oct 29 14:47 lab5files.zip  

-rw-rw-r-- 1 tdw tdw 3407 Oct 29 14:47 marstenhouse.sh  

-rw-rw-r-- 1 tdw tdw 3407 Nov 12 13:30 marstenhouse.sh.1  

-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:12 name  

-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:12 of  

-rw-rw-r-- 1 tdw tdw 2229212 Nov 6 15:35 practicals.tar.xz  

-rw-r--r-- 1 tdw tdw 807 Sep 22 20:01 .profile  

-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:13 projectx  

-rw-rw-r-- 1 tdw tdw 4061 Dec 2 19:47 sorted_access_log_by_endpoint.log  

-rw-rw-r-- 1 tdw tdw 4061 Dec 2 19:34 sorted_access_log_by_usname.log  

-rw-r--r-- 1 tdw tdw 0 Sep 23 12:39 .sudo_as_admin_successful  

-rw-rw-r-- 1 tdw tdw 41 Oct 8 19:28 todo.md  

-rw-r----- 1 tdw tdw 6 Dec 9 11:32 .vboxclient-clipboard-tty2-control.pid  

-rw-r----- 1 tdw tdw 5 Dec 9 11:32 .vboxclient-clipboard-tty2-service.pid  

-rw-r----- 1 tdw tdw 6 Dec 9 11:32 .vboxclient-draganddrop-tty2-control.pid  

-rw-r----- 1 tdw tdw 6 Dec 9 11:32 .vboxclient-hostversion-tty2-control.pid  

-rw-r----- 1 tdw tdw 6 Dec 9 11:32 .vboxclient-seamless-tty2-control.pid  

-rw-r----- 1 tdw tdw 5 Dec 9 11:32 .vboxclient-vmsvga-session-tty2-control.pid  

drwxrwxr-x 1 tdw tdw 2501 Sep 25 15:05 vscode.sh  

-rw-rw-r-- 1 tdw tdw 262 Nov 19 18:44 wget-hsts  

-rw-rw-r-- 1 tdw tdw 25198 Nov 13 17:58 wildcards-in-class-activity-instructions.html  

-rw-rw-r-- 1 tdw tdw 0 Nov 2 15:05 wr5.md
```

```

Applications Dec 9 12:34 PM Tiltix: tdw@cis106-desktop:~ 38% 36% 0% 0.0 kB 0.0 kB
1/1 + D x
1:tdw@cis106-desktop:~ 
-rw-r--r-- 1 tdw tdw 20130 Nov 13 17:00 wificards-in-class-activity-instructions.html
-rw-rw-r-- 1 tdw tdw 0 Nov 2 15:05 wr5.md
tdw@cis106-desktop:$ ls -Al | grep '^~' | wc -l
34
tdw@cis106-desktop:$ ls -Al | grep '^~' | wc -l > file_report.txt
tdw@cis106-desktop:$ echo "Total number of directories in my home directory" >> file_report.txt
Total number of directories in my home directory
tdw@cis106-desktop:$ echo "Total number of directories in my home directory" >> file_report.txt
tdw@cis106-desktop:$ ls -lA ~
total 5992
-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:12 +
-rw-rw-r-- 1 tdw tdw 4061 Dec 2 19:06 access.log
drwxrwxr-x 4 tdw tdw 4096 Nov 18 19:16 assets
-rw-rw-r-- 1 tdw tdw 2731 Sep 24 18:57 bash_aliases
-rw-rw-r-- 1 tdw tdw 23109 Dec 9 12:13 bash_history
-rw-r--r-- 1 tdw tdw 220 Sep 22 20:01 bash_logout
-rw-r--r-- 1 tdw tdw 3678 Sep 24 18:57 bashrc
drwxrwxr-x 18 tdw tdw 4096 Oct 14 22:04 cache
drwxrwxr-x 9 tdw tdw 4096 Nov 18 13:42 cis-106
drwxrwxr-x 3 tdw tdw 4096 Nov 25 12:32 cis106website
drwxrwxr-x 3 tdw tdw 4096 Oct 30 18:03 colors
drwxr-- 15 tdw tdw 4096 Nov 25 12:43 config
drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Desktop
drwxr-xr-x 5 tdw tdw 4096 Sep 25 14:09 Documents
drwxrwxr-x 3 tdw tdw 4096 Sep 26 19:25 dotnet
drwxr-xr-x 3 tdw tdw 4096 Nov 25 22:08 Downloads
drwxr-xr-x 4 tdw tdw 4096 Sep 23 12:35 emacs.d
-rw-rwxr-x 1 tdw tdw 7747 Sep 24 12:30 essentials.sh
-rw-r--r-- 1 tdw tdw 5290 Sep 22 20:01 .face
lrwxrwxrwx 1 tdw tdw 5 Sep 22 20:01 .face.icon -> .face
-rw-rw-r-- 1 tdw tdw 0 Oct 30 18:12 file
-rw-rw-r-- 1 tdw tdw 1274 Dec 9 12:31 file_report.txt
drwxrwxr-x 2 tdw tdw 4096 Oct 8 19:20 fonts
-rw-rw-r-- 1 tdw tdw 68 Sep 29 19:35 gitconfig
drwxr-- 2 tdw tdw 4096 Dec 2 13:54 gnupg
drwxrwxr-x 5 tdw tdw 4096 Nov 13 18:54 inClassActivity
drwxrwxr-x 2 tdw tdw 4096 Feb 22 2022 lab5files
-rw-rw-r-- 1 tdw tdw 3570561 Oct 29 14:47 lab5files.zip
drwxrwxr-x 2 tdw tdw 4096 Sep 26 10:52 vscode

Applications Dec 9 12:37 PM Tiltix: tdw@cis106-desktop:~ 10% 36% 0% 0.0 kB 0.0 kB
1/1 + D x
1:tdw@cis106-desktop:~ 
drwxrwxr-x 2 tdw tdw 4096 Nov 2 15:02 wr5
-rw-rw-r-- 1 tdw tdw 0 Nov 2 15:05 wr5.md
tdw@cis106-desktop:$ ls -lA ~ | grep '^d'
drwxrwxr-x 4 tdw tdw 4096 Nov 18 19:16 assets
drwxr-- 18 tdw tdw 4096 Oct 14 22:04 cache
drwxrwxr-x 9 tdw tdw 4096 Nov 18 13:42 cis-106
drwxrwxr-x 3 tdw tdw 4096 Nov 25 12:32 cis106website
drwxrwxr-x 3 tdw tdw 4096 Oct 30 18:03 colors
drwxr-- 15 tdw tdw 4096 Nov 25 12:43 config
drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Desktop
drwxr-xr-x 5 tdw tdw 4096 Nov 25 14:09 Documents
drwxrwxr-x 3 tdw tdw 4096 Nov 25 22:08 Downloads
drwxr-xr-x 4 tdw tdw 4096 Sep 23 12:35 emacs.d
drwxrwxr-x 2 tdw tdw 4096 Oct 8 19:20 fonts
drwxr-- 2 tdw tdw 4096 Dec 2 13:54 gnupg
drwxrwxr-x 5 tdw tdw 4096 Nov 13 18:54 inClassActivity
drwxrwxr-x 2 tdw tdw 4096 Feb 22 2022 lab5files
drwxrwxr-x 5 tdw tdw 4096 Nov 12 19:01 labb-challenge1
drwxrwxr-x 3 tdw tdw 4096 Nov 12 12:29 labb-challenge2
drwxrwxr-x 2 tdw tdw 4096 Nov 24 16:51 labs
drwxr-- 4 tdw tdw 4096 Sep 22 20:03 local
drwxrwxr-x 3 tdw tdw 4096 Oct 31 19:31 marstenHouse
drwxrwxr-x 5 tdw tdw 4096 Sep 24 18:48 mozilla
drwxrwxr-x 4 tdw tdw 4096 Nov 18 14:44 music
drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Music
drwxrwxr-x 2 tdw tdw 4096 Nov 13 18:38 myhomework
drwxr-xr-x 4 tdw tdw 4096 Oct 22 18:46 Pictures
drwxr-- 3 tdw tdw 4096 Sep 29 19:51 pkix
drwxrwxr-x 2 tdw tdw 4096 Feb 27 2022 practicels
drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Public
drwxrwxr-x 2 tdw tdw 4096 Dec 5 19:50 scripts
drwxr-- 3 tdw tdw 4096 Oct 14 22:17 snap
drwxrwxr-x 4 tdw tdw 4096 Oct 30 18:00 snapshots
drwxr-- 2 tdw tdw 4096 Sep 26 19:40 ssh
drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Templates
drwxrwxr-x 2 tdw tdw 4096 Sep 26 10:52 vscode

Applications Dec 9 12:42 PM Tiltix: tdw@cis106-desktop:~ 18% 36% 0% 0.0 kB 0.0 kB
1/1 + D x
1:tdw@cis106-desktop:~ 
drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Music
drwxrwxr-x 2 tdw tdw 4096 Nov 13 18:38 myhomework
drwxr-xr-x 4 tdw tdw 4096 Oct 22 18:46 Pictures
drwxr-- 3 tdw tdw 4096 Sep 26 19:51 pkix
drwxrwxr-x 2 tdw tdw 4096 Feb 27 2022 practicels
drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Public
drwxrwxr-x 2 tdw tdw 4096 Dec 5 19:50 scripts
drwxr-- 3 tdw tdw 4096 Oct 14 22:17 snap
drwxrwxr-x 4 tdw tdw 4096 Oct 30 18:00 snapshots
drwxr-- 2 tdw tdw 4096 Sep 29 19:40 ssh
drwxr-xr-x 2 tdw tdw 4096 Sep 22 20:03 Templates
drwxrwxr-x 4 tdw tdw 4096 Sep 28 19:52 vscode
drwxrwxr-x 3 tdw tdw 4096 Nov 18 19:12 wallpapers
drwxrwxr-x 2 tdw tdw 4096 Nov 5 13:16 website
drwxrwxr-x 4 tdw tdw 4096 Nov 5 13:17 websites
drwxrwxr-x 8 tdw tdw 4096 Dec 2 13:05 website_chi_lab7_completed
drwxrwxr-x 3 tdw tdw 4096 Nov 4 21:41 websites
drwxrwxr-x 2 tdw tdw 4096 Nov 17 12:50 wildcardpractice
drwxrwxr-x 2 tdw tdw 4096 Nov 2 15:02 wr5
tdw@cis106-desktop:$ ls -lA ~ | grep '^d' | wc -l
42
tdw@cis106-desktop:$ ls -lA ~ | grep '^d' | wc -l >> file_report.txt
tdw@cis106-desktop:$ tail
^C
tdw@cis106-desktop:$ 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, website_chi_lab7_completed, websites, wget-hsts,
wildcardpractice, wildcards-in-class-activity-instructions.html, wr5, wr5.md
Total number of files in my home directory
34
Total number of directories in my home directory
42
tdw@cis106-desktop:$

```

Q3

The image shows a Linux desktop environment with two terminal windows open. Both terminals are running the Tilda (Tilix) window manager.

Terminal 1 (Top):

```
1:tdw@cis106-desktop:~ $ 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
colord
Debian-gdm
tdw
```

Terminal 2 (Bottom):

```
1:tdw@cis106-desktop:~ $ 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
rtkit = /usr/sbin/nologin
colord = /usr/sbin/nologin
Debian-gdm = /bin/false
```

```
Applications Dec 9 1:11 PM
Tilix: tdw@cis106-desktop:~$ awk -F: '{print "The user: " $1" logs in with " ,"$NF,$6}' /etc/passwd
The user: root logs in with /bin/bash /root
The user: daemon logs in with /usr/sbin/nologin /usr/sbin
The user: bin logs in with /usr/sbin/nologin /bin
The user: sys logs in with /usr/sbin/nologin /dev
The user: sync logs in with /bin/sync /bin
The user: games logs in with /usr/sbin/nologin /usr/games
The user: mail logs in with /usr/sbin/nologin /var/mail
The user: news logs in with /usr/sbin/nologin /var/spool/news
The user: uucp logs in with /usr/sbin/nologin /var/spool/uucp
The user: proxy logs in with /usr/sbin/nologin /bin
The user: www-data logs in with /usr/sbin/nologin /var/www
The user: backup logs in with /usr/sbin/nologin /var/backups
The user: list logs in with /usr/sbin/nologin /var/list
The user: irc logs in with /usr/sbin/nologin /run/ircd
The user: _apt logs in with /usr/sbin/nologin /nonexistent
The user: nobody logs in with /usr/sbin/nologin /nonexistent
The user: systemd-network logs in with /usr/sbin/nologin /
The user: dhcpcd logs in with /bin/false /usr/lib/dhcpcd
The user: tss logs in with /bin/false /var/lib/tpm
The user: systemd-timesync logs in with /usr/sbin/nologin /
The user: messagebus logs in with /usr/sbin/nologin /nonexistent
The user: dnsmasq logs in with /usr/sbin/nologin /var/lib/misc
The user: avahi logs in with /usr/sbin/nologin /run/avahi-daemon
The user: speech-dispatcher logs in with /bin/false /run/speech-dispatcher
The user: usbmux logs in with /usr/sbin/nologin /var/lib/usbmux
The user: cups-pk-helper logs in with /usr/sbin/nologin /nonexistent
The user: fwupd-refresh logs in with /usr/sbin/nologin /var/lib/fwupd
The user: geoclue logs in with /usr/sbin/nologin /var/lib/geoclue
The user: gnome-remote-desktop logs in with /usr/sbin/nologin /var/lib/gnome-remote-desktop
The user: sanded logs in with /usr/sbin/nologin /var/lib/sanded
The user: polkitd logs in with /usr/sbin/nologin /
The user: rtkit logs in with /usr/sbin/nologin /proc
The user: colord logs in with /usr/sbin/nologin /var/lib/colord
```

Q4

Applications Dec 9 1:57 PM Tiliix: tdw@cis106-desktop: ~/cis-106/labs/lab9

```
1: tdw@cis106-desktop: ~/cis-106/labs/lab9 ~
tdw@cis106-desktop: ~/cis-106/labs/lab9$ head -1 ~/Documents/sample_files/csv/cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
tdw@cis106-desktop: ~/cis-106/labs/lab9$ grep -i "honda" ~/Documents/sample_files/csv/cars.csv > honda1.csv
tdw@cis106-desktop: ~/cis-106/labs/lab9$ sed 's:////g' 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
tdw@cis106-desktop: ~/cis-106/labs/lab9$
```

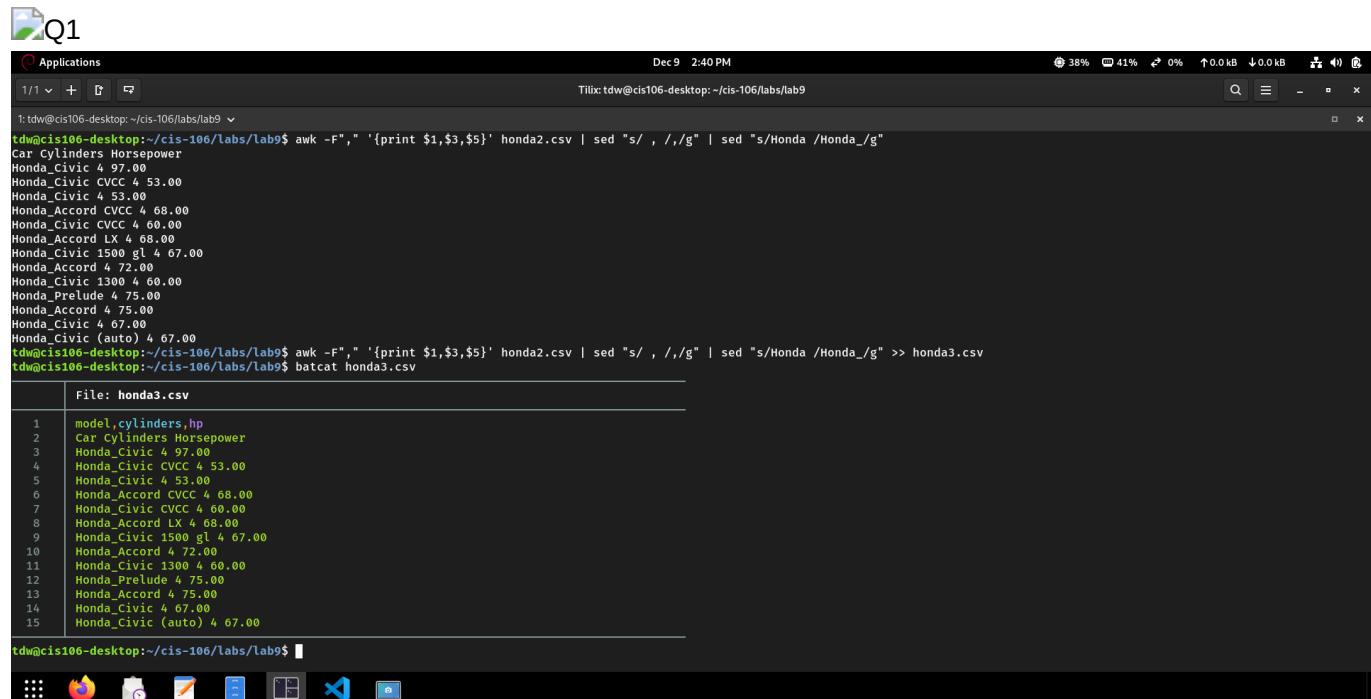
Applications Dec 9 1:34 PM Tiliix: tdw@cis106-desktop: ~

```
1: tdw@cis106-desktop: ~/cis-106/labs/lab9 ~
tdw@cis106-desktop: ~/cis-106/labs/lab9$ head -1 ~/Documents/sample_files/csv/cars.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
tdw@cis106-desktop: ~/cis-106/labs/lab9$ head -1 ~/Documents/sample_files/csv/cars.csv > honda1.csv
tdw@cis106-desktop: ~/cis-106/labs/lab9$
```

tdw@cis106-desktop: ~ cat cis-106/labs/lab9/honda1.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
tdw@cis106-desktop: ~

Applications Dec 9 2:19 PM Tiliix: tdw@cis106-desktop: ~/Documents/sample_files/Csv

```
1: tdw@cis106-desktop: ~/cis-106/labs/lab9 ~
tdw@cis106-desktop: ~/cis-106/labs/lab9$ grep -i "honda" ~/Documents/sample_files/Csv/cars.csv > honda1.csv
tdw@cis106-desktop: ~/cis-106/labs/lab9$ head -1 ~/Documents/sample_files/Csv/cars.csv > honda1.csv
tdw@cis106-desktop: ~/cis-106/labs/lab9$ cat honda1.csv
Car;MPG;Cylinders;Displacement;Horsepower;Weight;Acceleration;Model;Origin
tdw@cis106-desktop: ~/cis-106/labs/lab9$ grep -i "honda" ~/Documents/sample_files/Csv/cars.csv >> honda1.csv
grep: /home/tdw/Documents/sample_files/Csv/cars.csv: No such file or directory
tdw@cis106-desktop: ~/cis-106/labs/lab9$ grep -i "honda" ~/Documents/sample_files/Csv/cars.csv > honda1.csv
tdw@cis106-desktop: ~/cis-106/labs/lab9$ sed 's:////g' 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
tdw@cis106-desktop: ~/Documents/sample_files/Csv$
```



The screenshot shows a terminal window titled "Q1" in the Applications dock. The terminal is displaying a command-line session for a script named "lab9". The script uses awk and sed commands to process a CSV file named "honda2.csv" and output a modified version named "honda3.csv". The output shows various Honda car models and their specifications, including cylinders and horsepower.

```
tdw@cis106-desktop:~/cis-106/labs/lab9$ awk -F"," '{print $1,$3,$5}' honda2.csv | sed "s/ , ,/g" | sed "s/Honda /Honda_/g"
Car Cylinders Horsepower
Honda_Civic 4 97.00
Honda_Civic CVCC 4 53.00
Honda_Civic 4 53.00
Honda_Accord CVCC 4 68.00
Honda_Civic CVCC 4 60.00
Honda_Accord LX 4 68.00
Honda_Civic 1500 gl 4 67.00
Honda_Accord 4 72.00
Honda_Civic 1300 4 60.00
Honda_Prelude 4 75.00
Honda_Accord 4 75.00
Honda_Civic 4 67.00
Honda_Civic (auto) 4 67.00
tdw@cis106-desktop:~/cis-106/labs/lab9$ awk -F"," '{print $1,$3,$5}' honda2.csv | sed "s/ , ,/g" | sed "s/Honda /Honda_/g" >> honda3.csv
tdw@cis106-desktop:~/cis-106/labs/lab9$ batcat honda3.csv
File: honda3.csv
1 model,cylinders,hp
2 Car Cylinders Horsepower
3 Honda_Civic 4 97.00
4 Honda_Civic CVCC 4 53.00
5 Honda_Civic 4 53.00
6 Honda_Accord CVCC 4 68.00
7 Honda_Civic CVCC 4 60.00
8 Honda_Accord LX 4 68.00
9 Honda_Civic 1500 gl 4 67.00
10 Honda_Accord 4 72.00
11 Honda_Civic 1300 4 60.00
12 Honda_Prelude 4 75.00
13 Honda_Accord 4 75.00
14 Honda_Civic 4 67.00
15 Honda_Civic (auto) 4 67.00
```