

Final Exam Submission

Q1

```
diegoph@diegoph-VirtualBox:~/midtermfiles3/question1$ ls -lgHs --time-style=+%D *.docx
-rw-rw-r-- 1 11K 05/17/22 macos.docx
-rw-rw-r-- 1 10K 05/17/22 windows.docx
-rw-rw-r-- 1 10K 05/17/22 linux.docx
diegoph@diegoph-VirtualBox:~/midtermfiles3/question1$ ls -lgHs --time-style=+%D *.html
-rw-rw-r-- 1 512 05/17/22 about.html
-rw-rw-r-- 1 512 05/17/22 contact.html
-rw-rw-r-- 1 512 05/17/22 index.html
```

```
diegoph@diegoph-VirtualBox:~/midtermfiles3/question1$ ls -lgHs --time-style=+%D *.pdf
-rw-rw-r-- 1 19K 05/17/22 macos.pdf
-rw-rw-r-- 1 17K 05/17/22 windows.pdf
-rw-rw-r-- 1 16K 05/17/22 linux.pdf
```

```
diegoph@diegoph-VirtualBox:~$ cd cis106/FInalexam/
diegoph@diegoph-VirtualBox:~/cis106/FInalexam$ cat organizedReport.md
diegoph@diegoph-VirtualBox:~/cis106/FInalexam$ cat organizedReport.md
# All Files Organized
## Documents
-rw-rw-r-- 1 11K 05/17/22 macos.docx
-rw-rw-r-- 1 10K 05/17/22 windows.docx
-rw-rw-r-- 1 10K 05/17/22 linux.docx
## Web Sites
-rw-rw-r-- 1 512 05/17/22 about.html
-rw-rw-r-- 1 512 05/17/22 contact.html
-rw-rw-r-- 1 512 05/17/22 index.html
## PDFs
-rw-rw-r-- 1 19K 05/17/22 macos.pdf
-rw-rw-r-- 1 17K 05/17/22 windows.pdf
-rw-rw-r-- 1 16K 05/17/22 linux.pdf
diegoph@diegoph-VirtualBox:~/cis106/FInalexam$ □
```

Q2

```

diegoph@diegoph-VirtualBox:~$ cat -b -e /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:/var/run/ircd:/usr/sbin/nologin$
17 gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin$
18 nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin$
19 systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin$
20 systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin$
21 systemd-timesync:x:102:104:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin$
22 messagebus:x:103:106:/:/nonexistent:/usr/sbin/nologin$
23 syslog:x:104:110:/:/home/syslog:/usr/sbin/nologin$
24 _apt:x:105:65534:/:/nonexistent:/usr/sbin/nologin$
25 tss:x:106:111:TPM software stack,,,:/var/lib/tpm:/bin/false$
26 uuidd:x:107:114:/:/run/uuidd:/usr/sbin/nologin$
27 tcpdump:x:108:115:/:/nonexistent:/usr/sbin/nologin$
28 avahi-autoipd:x:109:116:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/nologin$
29 usbmux:x:110:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin$
30 rtkit:x:111:117:RealtimeKit,,,:/proc:/usr/sbin/nologin$
31 dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin$
32 cups-pk-helper:x:113:120:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/no
logi$
33 speech-dispatcher:x:114:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false$
34 avahi:x:115:121:Avahi mDNS daemon,,,:/var/run/avahi-daemon:/usr/sbin/nologin$
35 kernoops:x:116:65534:Kernel Oops Tracking Daemon,,,:/usr/sbin/nologin$
36 saned:x:117:123:/:/var/lib/saned:/usr/sbin/nologin$
37 nm-openvpn:x:118:124:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin$
38 hplip:x:119:7:HPLIP system user,,,:/run/hplip:/bin/false$
39 whoopsie:x:120:125:/:/nonexistent:/bin/false$
40 colord:x:121:126:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin$
41 geoclue:x:122:127:/:/var/lib/geoclue:/usr/sbin/nologin$
42 pulse:x:123:128:PulseAudio daemon,,,:/var/run/pulse:/usr/sbin/nologin$
43 gnome-initial-setup:x:124:65534:/:/run/gnome-initial-setup:/bin/false$
44 gdm:x:125:130:Gnome Display Manager:/var/lib/gdm3:/bin/false$
45 sssd:x:126:131:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin$
46 diegoph:x:1000:1000:Diego Pajares Herrera,,,:/home/diegoph:/bin/bash$

diegoph@diegoph-VirtualBox:~$ grep -n "/bin/bash" /etc/passwd | wc -l
2
diegoph@diegoph-VirtualBox:~$ free
      total        used        free      shared  buff/cache   available
Mem:      2025204      1335584      139776      107004       549844      427628
Swap:      2097148       1588644       508504

diegoph@diegoph-VirtualBox:~$ uname -a
Linux diegoph-VirtualBox 5.13.0-37-generic #42~20.04.1-Ubuntu SMP Tue Mar 15 15:44:28 UTC 2022 x86_64
x86_64 x86_64 GNU/Linux
diegoph@diegoph-VirtualBox:~$ 

```

```
diegoph@diegoph-VirtualBox:~$ cat cis106/FInalexam/basicInfo.txt
# ----- #
Basic Information about the System
# ----- #
Total number of users is
48
-----
Total number of users that can log in is
2
-----
Memory information
      total      used      free    shared  buff/cache   available
Mem:      2025204    1335584    139776    107004      549844      427628
Swap:      2097148    1588644     508504
-----
Linux diegoph-VirtualBox 5.13.0-37-generic #42~20.04.1-Ubuntu SMP Tue Mar 15 15:44:28 UTC 2022 x86_64
x86_64 x86_64 GNU/Linux
```

Q3

```

diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ ls
comp2syllabus.pdf  linuxhmw.pdf      networkingbook.pdf  networkingnotes.pdf
Linuxbook.pdf      linuxnotes.pdf    networkinghamw.pdf
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ mkdir -p spring22/{cis106/{hmw,notes,material/{
book}},cs126/{hmw,notes,material/{books}},en112/{hmw,notes,material/{books}}}/
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ tree spring22/
spring22/
├── cis106
│   ├── hmw
│   ├── material
│   │   └── {book}
│   └── notes
├── cs126
│   ├── hmw
│   ├── material
│   │   └── {books}
│   └── notes
└── en112
    ├── hmw
    ├── material
    │   └── {books}
    └── notes

15 directories, 0 files
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ mv comp2syllabus.pdf ~/midtermfiles3/question3/
spring22/en112/material/
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ mv linuxhmw.pdf ~/midtermfiles3/question3/sprin
g22/cis106/hmw/
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ mv linuxnotes.pdf ~/midtermfiles3/question3/spr
ing22/cis106/notes/
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ mv Linuxbook.pdf ~/midtermfiles3/question3/spr
ing22/cis106/material/{book}/
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ mv networkingbook.pdf ~/midtermfiles3/question3
/spring22/cs126/material/{books}/
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ mv networkinghamw.pdf ~/midtermfiles3/question3/
spring22/cs126/hmw/
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ mv networkingnotes.pdf ~/midtermfiles3/question
3/spring22/cs126/notes/
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ tree spring22/
spring22/
├── cis106
│   ├── hmw
│   │   └── linuxhmw.pdf
│   ├── material
│   │   ├── {book}
│   │   └── Linuxbook.pdf
│   └── notes
│       └── linuxnotes.pdf
├── cs126
│   ├── hmw
│   │   └── networkinghamw.pdf
│   ├── material
│   │   ├── {books}
│   │   └── networkingbook.pdf
│   └── notes
│       └── networkingnotes.pdf
└── en112
    ├── hmw
    ├── material
    │   ├── {books}
    │   └── comp2syllabus.pdf
    └── notes

```

```
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ tree --charset spring22/
```

```

-- spring22
|-- cis106
|   |-- hmw
|   |   |-- linuxhmw.pdf
|   |-- material
|   |   |-- {book}
|   |   |-- Linuxbook.pdf
|   |-- notes
|   |   |-- linuxnotes.pdf
|-- cs126
|   |-- hmw
|   |   |-- networkinghamw.pdf
|   |-- material
|   |   |-- {books}
|   |   |-- networkingbook.pdf
|   |-- notes
|   |   |-- networkingnotes.pdf
|-- en112
|   |-- hmw
|   |-- material
|   |   |-- {books}
|   |   |-- comp2syllabus.pdf
|   |-- notes

```

16 directories, 7 files

```
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ ls -lA ~ < katrina.html
```

```
bash: katrina.html: No such file or directory
```

```
diegoph@diegoph-VirtualBox:~/midtermfiles3/question3$ ls -lA ~ > katrina.html
```

```
total 232 -rw-rw-r-- 1 diegoph diegoph 41 May 16 21:27 .bash_aliases -rw-rw-r-- 1 diegoph diegoph 21250 May 17 18:55 .bash_history -rw-rw-r-- 1 diegoph diegoph 220 Feb 20 15:27 .bash_logout -rw-rw-r-- 1 diegoph diegoph 3771 Feb 20 15:27 .bashrc -rw-rw-r-- 1 diegoph diegoph 4182 Feb 28 01:44 .blocks-log -rw-rw-r-- 1 diegoph diegoph 4 Feb 28 01:44 .blocks-progress drwxrwxrwx 20 diegoph diegoph 4096 May 15 17:37 .cache drwxrwxr-x 5 diegoph diegoph 4096 Apr 7 23:54 challenge-Lab6 drwxrwxrwx 8 diegoph diegoph 4096 May 17 17:42 cis106 -rw-rw-r-- 1 diegoph diegoph 3520 Feb 28 00:28 .cis106.png drwxrwxrwx 23 diegoph diegoph 4096 May 17 19:29 .config drwxrwxrwx 2 diegoph diegoph 4096 Feb 28 00:27 Desktop drwxrwxrwx 5 diegoph diegoph 4096 May 16 21:29 Documents drwxrwxrwx 2 diegoph diegoph 4096 May 17 17:42 Downloads -rw-rw-r-- 1 diegoph diegoph 60 May 17 01:54 .gitconfig drwxrwxrwx 3 diegoph diegoph 4096 Feb 28 21:40 .gnupg drwxrwxrwx 4 diegoph diegoph 4096 Feb 28 00:57 .icons drwxrwxrwx 2 diegoph diegoph 4096 Feb 22 14:18 lab4files drwxrwxrwx 2 diegoph diegoph 4096 Mar 30 22:50 lab-5 drwxrwxrwx 2 diegoph diegoph 4096 Mar 30 22:41 lab5-audio drwxrwxrwx 3 diegoph diegoph 4096 Mar 30 23:32 lab5ChallengeQuestion drwxrwxrwx 2 diegoph diegoph 4096 Mar 30 22:48 lab5-docs drwxrwxrwx 2 diegoph diegoph 4096 Mar 30 22:49 lab5-imgs drwxrwxrwx 2 diegoph diegoph 4096 Mar 30 22:46 lab5-video drwxrwxrwx 6 diegoph diegoph 4096 Apr 7 22:23 lab6 drwxrwxr-x 3 diegoph diegoph 4096 Apr 7 22:32 lab6-q5 drwxrwxrwx 4 diegoph diegoph 4096 Feb 20 21:25 .local drwxrwxr-x 5 diegoph diegoph 4096 May 17 18:01 midtermfiles3 drwxrwxrwx 4 diegoph diegoph 4096 Feb 20 15:47 .mozilla drwxrwxrwx 2 diegoph diegoph 4096 Feb 20 15:30 Music drwxrwxr-x 2 diegoph diegoph 4096 Apr 7 23:23 mv drwxrwxrwx 4 diegoph diegoph 4096 Mar 30 23:02 Pictures drwxrwxrwx 3 diegoph diegoph 4096 Feb 20 15:58 .pki -rw-rw-r-- 1 diegoph diegoph 807 Feb 20 15:27 .profile drwxrwxrwx 2 diegoph diegoph 4096 Feb 20 15:30 Public -rw-rw-r-- 1 diegoph diegoph 42 May 17 00:15 shopping.md drwx----- 4 diegoph diegoph 4096 Feb 20 15:58 snap drwx----- 2 diegoph diegoph 4096 Feb 20 20:24 .ssh -rw-rw-r-- 1 diegoph diegoph 0 Feb 20 15:34 .sudo_as_admin_successful -rw-rw-r-- 1 diegoph diegoph 54 May 17 00:16 tasks.md drwxrwxrwx 2 diegoph diegoph 4096 Feb 20 15:30 Templates -rwxrwxr-- 1 diegoph diegoph 7398 May 16 21:27 .textFiles drwxrwxrwx 3 diegoph diegoph 4096 Feb 28 00:58 .themes drwxrwxrwx 6 diegoph diegoph 4096 Feb 28 21:41 .thunderbird -rw-rw-r-- 1 diegoph diegoph 5 May 17 14:30 .vboxclient-clipboard.pid -rw-rw-r-- 1 diegoph diegoph 5 May 17 14:30 .vboxclient-display-svga-x11.pid -rw-rw-r-- 1 diegoph diegoph 5 May 17 14:30 .vboxclient-draganddrop.pid -rw-rw-r-- 1 diegoph diegoph 5 May 17 14:30 .vboxclient-seamless.pid drwxrwxrwx 2 diegoph diegoph 4096 Feb 20 15:30 Videos -rw-rw-r-- 1 diegoph diegoph 532 May 17 18:55 .viminfo drwxrwxrwx 3 diegoph diegoph 4096 Feb 20 15:58 .vscode
```

Q4


```
diegoph@diegoph-VirtualBox:~/midtermfiles3/question1$ ls
about.html    hello.py      linux.docx    MacOS_logo.svg  users-data.ods  windows.txt
accounts.ods  hello.rb      linux.pdf     macos.pdf       windows.docx
basicInfo.txt hello.sh      linux.txt     macos.txt       Windows_logo.svg
contact.html  index.html   macos.docx    Ubuntu-logo.svg  windows.pdf
diegoph@diegoph-VirtualBox:~/midtermfiles3/question1$ readlink -f MacOS_logo.svg
/home/diegoph/midtermfiles3/question1/MacOS_logo.svg
diegoph@diegoph-VirtualBox:~/midtermfiles3/question1$ ls -il MacOS_logo.svg
2242951 -rw-rw-r-- 1 diegoph diegoph 3997 May 17 18:01 MacOS_logo.svg
diegoph@diegoph-VirtualBox:~/midtermfiles3/question1$ sudo mv MacOS_logo.svg /usr/share/backgrounds/
k.svg
[sudo] password for diegoph:
Sorry, try again.
[sudo] password for diegoph:
diegoph@diegoph-VirtualBox:~/midtermfiles3/question1$ ls /usr/share/backgrounds/
brad-huchtenan-stone-mountain.jpg  matt-mcnulty-nyc-2nd-ave.jpg
contest                             ok.svg
Focal-Fossa_WP_4096x2304_GREY.png  ryan-stone-skykomish-river.jpg
hardy_wallpaper_uhd.png           ubuntu-default-greyscale-wallpaper.png
joshua-coleman-something-yellow.jpg  warty-final-ubuntu.png
diegoph@diegoph-VirtualBox:~/midtermfiles3/question1$ █

diegoph@diegoph-VirtualBox:~/midtermfiles3/question1$ ls -l *.svg
-rw-rw-r-- 1 diegoph diegoph 699 May 17 18:01 Ubuntu-logo.svg
-rw-rw-r-- 1 diegoph diegoph 486 May 17 18:01 Windows_logo.svg
diegoph@diegoph-VirtualBox:~/midtermfiles3/question1$ ls -al
total 192
drwxrwxr-x 2 diegoph diegoph 4096 May 17 18:24 .
drwxrwxr-x 5 diegoph diegoph 4096 May 17 18:01 ..
-rw-rw-r-- 1 diegoph diegoph 512 May 17 18:01 about.html
-rw-rw-r-- 1 diegoph diegoph 20746 May 17 18:01 accounts.ods
-rw-rw-r-- 1 diegoph diegoph 551 May 17 18:01 basicInfo.txt
-rw-rw-r-- 1 diegoph diegoph 512 May 17 18:01 contact.html
-rw-rw-r-- 1 diegoph diegoph 41 May 17 18:01 hello.py
-rw-rw-r-- 1 diegoph diegoph 36 May 17 18:01 hello.rb
-rw-rw-r-- 1 diegoph diegoph 32 May 17 18:01 hello.sh
-rw-rw-r-- 1 diegoph diegoph 512 May 17 18:01 index.html
-rw-rw-r-- 1 diegoph diegoph 10139 May 17 18:01 linux.docx
-rw-rw-r-- 1 diegoph diegoph 16067 May 17 18:01 linux.pdf
-rw-rw-r-- 1 diegoph diegoph 609 May 17 18:01 linux.txt
-rw-rw-r-- 1 diegoph diegoph 10319 May 17 18:01 macos.docx
-rw-rw-r-- 1 diegoph diegoph 18931 May 17 18:01 macos.pdf
-rw-rw-r-- 1 diegoph diegoph 978 May 17 18:01 macos.txt
-rw-rw-r-- 1 diegoph diegoph 699 May 17 18:01 Ubuntu-logo.svg
-rw-rw-r-- 1 diegoph diegoph 20143 May 17 18:01 users-data.ods
-rw-rw-r-- 1 diegoph diegoph 10203 May 17 18:01 windows.docx
-rw-rw-r-- 1 diegoph diegoph 486 May 17 18:01 Windows_logo.svg
-rw-rw-r-- 1 diegoph diegoph 17199 May 17 18:01 windows.pdf
-rw-rw-r-- 1 diegoph diegoph 866 May 17 18:01 windows.txt
```