

# Question 1

---

```

amlarsen@CIS106:~$ ls lab6
25Games.lst          file_00.sh           luatex.log
88_Application-log.log file_01.sh           mf.log
alternatives.log      file_02.sh           pdfetex.log
apache01-error.log    file_03.sh           pdftex.log
apache03.err          file_04.sh           term.log
apache22.log          file_05.sh           tex.log
apport.log            fontconfig.log       trip22-info.doc
auth.log              gpu-manager.log      ubuntu-advantage.log
bootstrap.log         history.log          ubuntu-advantage-timer.log
casper.log            http404.log          unattended-upgrades-dpkg.log
Document.doc          kern.log             unattended-upgrades.log
dpkg.log              last.txt             unattended-upgrades-shutdown.log
dviluatex.log         list.txt             updmap.log
etex.log              lost.txt
Expenses.xls          luahtex.log

amlarsen@CIS106:~$ ls ?.log
ls: cannot access '?.log': No such file or directory
amlarsen@CIS106:~$ ls lab6/*.log
lab6/88_Application-log.log  lab6/kern.log
lab6/alternatives.log       lab6/luahtex.log
lab6/apache01-error.log     lab6/luatex.log
lab6/apache22.log           lab6/mf.log
lab6/apport.log             lab6/pdfetex.log
lab6/auth.log               lab6/pdftex.log
lab6/bootstrap.log          lab6/term.log
lab6/casper.log             lab6/tex.log
lab6/dpkg.log               lab6/ubuntu-advantage.log
lab6/dviluatex.log          lab6/ubuntu-advantage-timer.log
lab6/etex.log               lab6/unattended-upgrades-dpkg.log
lab6/fontconfig.log         lab6/unattended-upgrades.log
lab6/gpu-manager.log        lab6/unattended-upgrades-shutdown.log
lab6/history.log            lab6/updmap.log
lab6/http404.log

amlarsen@CIS106:~$ mkdir lab6/log-files
amlarsen@CIS106:~$ mv lab6/*.log lab6/log-files/
amlarsen@CIS106:~$ ls lab6/log-files/
88_Application-log.log  etex.log           pdftex.log
alternatives.log       fontconfig.log     term.log
apache01-error.log     gpu-manager.log    tex.log
apache22.log           history.log        ubuntu-advantage.log
apport.log             http404.log        ubuntu-advantage-timer.log
auth.log               kern.log           unattended-upgrades-dpkg.log
bootstrap.log          luahtex.log        unattended-upgrades.log
casper.log             luatex.log         unattended-upgrades-shutdown.log
dpkg.log               mf.log            updmap.log
dviluatex.log          pdfetex.log

amlarsen@CIS106:~$ ls /etc/*.conf
/etc/adduser.conf      /etc/host.conf      /etc/pnm2ppa.conf
/etc/apg.conf          /etc/inxi.conf      /etc/resolv.conf
/etc/appstream.conf    /etc/kernel-img.conf /etc/rsyslog.conf
/etc/brltty.conf       /etc/kerneloops.conf /etc/rygel.conf
/etc/ca-certificates.conf /etc/ld.so.conf      /etc/sensors3.conf
/etc/debconf.conf      /etc/libao.conf      /etc/sudo.conf
/etc/deluser.conf      /etc/libaudit.conf   /etc/sudo_logsrvd.conf
/etc/dmcc.conf          /etc/libltdl.conf    /etc/udev.conf
/etc/dmcc.conf          /etc/libltdl.conf    /etc/udev.conf
/etc/dmcc.conf          /etc/libltdl.conf    /etc/udev.conf

```

```
/etc/e2scrub.conf      /etc/logrotate.conf  /etc/sysctl.conf
/etc/fprintd.conf     /etc/mke2fs.conf     /etc/ucf.conf
/etc/fuse.conf         /etc/nftables.conf   /etc/usb_modeswitch.conf
/etc/gai.conf          /etc/nsswitch.conf    /etc/xattr.conf
/etc/hdparm.conf       /etc/pam.conf
amlarsen@CIS106:~$ ls -lSgGh --time-style=+%D /etc/h*.conf /etc/p*.conf
-rw-r--r-- 1 7.5K 08/09/22 /etc/pnm2ppa.conf
-rw-r--r-- 1 4.4K 12/15/20 /etc/hdparm.conf
-rw-r--r-- 1 552 08/11/20 /etc/pam.conf
-rw-r--r-- 1 92 10/15/21 /etc/host.conf
```

## Question 2

---

```

amlarsen@CIS106:~$ cd lab6
bash: cd: lab6: No such file or directory
amlarsen@CIS106:~$ cd Desktop
amlarsen@CIS106:~/Desktop$ cd /CIS106/
bash: cd: /CIS106/: No such file or directory
amlarsen@CIS106:~/Desktop$ cd CIS106/
amlarsen@CIS106:~/Desktop/CIS106$ cd Labs/
amlarsen@CIS106:~/Desktop/CIS106/Labs$ cd lab6
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ ls .??*
.appveyor.yml      .gitignore         .migrated
.bash_history       .gitkeep           .min-wd
.bash_logout        .gitmodules        .npmignore
.bashrc             .gsd-keyboard.settings-ported .nycrc
.changed            .hidden            .org.chromium.Chromium.03eH80
.cis106.png         .hidden1.doc       .org.chromium.Chromium.SC76cL
.claws_cache        .hidden1.py        .padding
.claws_mark         .hidden2.doc       .parentlock
.claws_tags         .hidden2.py        .prettierignore
.coveralls.yml      .hiddenFile.txt    .prettierrc.yaml
.dir-locals.el      .htaccess          .profile
.editorconfig       .jscs.json         .startup-incomplete
.envrc              .jscsrc            .sudo_as_admin_successful
.eslintignore       .jshintrc          .tern-project
.eslintrc           .keep              .tm_properties
.eslintrc.js        .last_revision     .tonic_example.js
.eslintrc.json      .lessshst          .travis.yml
.eslintrc.yml       .metadata-v2        .vsixmanifest
.gitattributes      .meta.isrunning
.gitconfig          .mh_sequences
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ ls .??*
.appveyor.yml      .eslintrc.js       .htaccess          .org.chromium.Chromium.SC76cL
.bash_history       .eslintrc.json     .jscs.json         .padding
.bash_logout        .eslintrc.yml      .jscsrc            .parentlock
.bashrc             .gitattributes     .jshintrc          .prettierignore
.changed            .gitconfig         .keep              .prettierrc.yaml
.cis106.png         .gitignore         .last_revision     .profile
.claws_cache        .gitkeep           .lessshst          .startup-incomplete
.claws_mark         .gitmodules        .metadata-v2       .sudo_as_admin_successful
.claws_tags         .gsd-keyboard.settings-ported .meta.isrunning   .tern-project
.coveralls.yml      .hidden            .mh_sequences      .tm_properties
.dir-locals.el      .hidden1.doc       .migrated          .tonic_example.js
.editorconfig       .hidden1.py        .min-wd            .travis.yml
.envrc              .hidden2.doc       .npmignore         .vsixmanifest
.eslintignore       .hidden2.py        .nycrc             .org.chromium.Chromium.03eH80
.eslintrc           .hiddenFile.txt    .org.chromium.Chromium.03eH80
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ ls -A *.*
file_00.sh file_01.sh file_02.sh file_03.sh file_04.sh file_05.sh
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ ls l?st*
last.txt list.txt lost.txt
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ ls *_??.*
file_00.sh file_01.sh file_02.sh file_03.sh file_04.sh file_05.sh
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ 

```

## Question 3

```
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ ls [A-Z]*
Document.doc  Expenses.xls  Q1P1.png  Q1P2.png  Q2P1.png  Q2P2.png
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ ls [A-Z0-9]*
25Games.lst  Document.doc  Expenses.xls  Q1P1.png  Q1P2.png  Q2P1.png  Q2P2.png
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ ls *[0-9]*
25Games.lst  file_00.sh  file_02.sh  file_04.sh  Q1P1.png  Q2P1.png  trip22-info.doc
apache03.err  file_01.sh  file_03.sh  file_05.sh  Q1P2.png  Q2P2.png
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ ls [a-z]*[0-9]*
apache03.err  file_00.sh  file_01.sh  file_02.sh  file_03.sh  file_04.sh  file_05.sh
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$
```

## Question 4

```
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ mkdir -p wallpapers/cars/{1080p,2k,4k}
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ tree wallpapers
wallpapers
├── cars
│   ├── 1080p
│   ├── 2k
│   └── 4k
4 directories, 0 files
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$
```

```
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ mkdir -p assets/{images,videos}/{large,small}
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ tree assets/
assets/
├── images
│   ├── large
│   └── small
└── videos
    ├── large
    └── small
6 directories, 0 files
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$
```

```
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ mkdir -p docs/books/{history,math}/{fall,spring}
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ touch -p docs/books/{history,math}/{fall,spring}/book.pdf
touch: invalid option -- 'p'
Try 'touch --help' for more information.
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ touch docs/books/{history,math}/{fall,spring}/book.pdf
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$ tree docs
docs
├── books
│   ├── history
│   │   ├── fall
│   │   │   └── book.pdf
│   │   └── spring
│   │       └── book.pdf
│   └── math
│       ├── fall
│       │   └── book.pdf
│       └── spring
│           └── book.pdf
7 directories, 4 files
amlarsen@CIS106:~/Desktop/CIS106/Labs/lab6$
```

```
amlarsen@CIS106:/usr/share$ mkdir ~/lab6-q5
amlarsen@CIS106:/usr/share$ cd /
amlarsen@CIS106:/$ touch ~/lab6-q5/{program.py,people.csv,data.xls}
amlarsen@CIS106:/$ cd /usr/share
amlarsen@CIS106:/usr/share$ mkdir ~/lab6-q5/movies
amlarsen@CIS106:/usr/share$ touch ~/lab6-q5/movies/{movies.lst,movie.txt,disney.doc}
amlarsen@CIS106:/usr/share$ rm ~/lab6-q5
rm: cannot remove '/home/amlarsen/lab6-q5': Is a directory
amlarsen@CIS106:/usr/share$ rm ~/lab6-q5/{program.py,people.csv,/movies/{disney.doc,movie.txt}}
amlarsen@CIS106:/usr/share$ tree ~/lab6-q5/
/home/amlarsen/lab6-q5/
├── data.xls
└── movies
    └── movies.lst
1 directory, 2 files
amlarsen@CIS106:/usr/share$
```

## Challenge Question

---



```
amlarsen@CIS106:~$ mkdir challenge-Lab6
amlarsen@CIS106:~$ mkdir challenge-Lab6/{audio,docs,images}/
amlarsen@CIS106:~$ tree challenge-Lab6
challenge-Lab6
├── audio
├── docs
└── images
```

3 directories, 0 files

```
amlarsen@CIS106:~$ mkdir challenge-Lab6/audio/{aac,mp3}/
amlarsen@CIS106:~$ tree challenge-Lab6
```

```
challenge-Lab6
├── audio
│   ├── aac
│   └── mp3
├── docs
└── images
```

5 directories, 0 files

```
amlarsen@CIS106:~$ mkdir challenge-Lab6/docs/{docx,pdf,xls}/
amlarsen@CIS106:~$ tree challenge-Lab6
```

```
challenge-Lab6
├── audio
│   ├── aac
│   └── mp3
├── docs
│   ├── docx
│   ├── pdf
│   └── xls
└── images
```

```
amlarsen@CIS106:~$ mkdir challenge-Lab6/docs/{docx,pdf,xls}/
amlarsen@CIS106:~$ tree challenge-Lab6
```

```
challenge-Lab6
├── audio
│   ├── aac
│   └── mp3
├── docs
│   ├── docx
│   ├── pdf
│   └── xls
└── images
```

8 directories, 0 files

```
amlarsen@CIS106:~$ mkdir challenge-Lab6/images/{jpg,png}/
amlarsen@CIS106:~$ tree challenge-Lab6
```

```
challenge-Lab6
├── audio
│   ├── aac
│   └── mp3
├── docs
└── images
```



```
├── pdf
├── xls
└── images
    ├── jpg
    └── png

10 directories, 0 files
amlarsen@CIS106:~$ mkdir challenge-Lab6/audio/aac/all-aac-files-here
amlarsen@CIS106:~$ mkdir challenge-Lab6/audio/mp3/all-mp3-files-here
amlarsen@CIS106:~$ tree challenge-Lab6
challenge-Lab6
├── audio
│   ├── aac
│   │   └── all-aac-files-here
│   └── mp3
│       └── all-mp3-files-here
├── docs
│   ├── docx
│   ├── pdf
│   └── xls
├── images
│   ├── jpg
│   └── png
└──
```

12 directories, 0 files

```
12 directories, 0 files
amlarsen@CIS106:~$ mkdir challenge-Lab6/docs/docx/all0docs-files-here
amlarsen@CIS106:~$ mkdir challenge-Lab6/docs/pdf/all-pdf-files-here
amlarsen@CIS106:~$ mkdir challenge-Lab6/docs/xls/all-xls-files-here
amlarsen@CIS106:~$ tree challenge-Lab6/
challenge-Lab6/
├── audio
│   ├── aac
│   │   └── all-aac-files-here
│   └── mp3
│       └── all-mp3-files-here
├── docs
│   ├── docx
│   │   └── all0docs-files-here
│   ├── pdf
│   │   └── all-pdf-files-here
│   └── xls
│       └── all-xls-files-here
└── images
    ├── jpg
    └── png

15 directories, 0 files
amlarsen@CIS106:~$ mkdir challenge-Lab6/images/jpg/all-jpg-files-here
amlarsen@CIS106:~$ mkdir challenge-Lab6/images/png/all-png-files-here
amlarsen@CIS106:~$ tree challenge-Lab6
challenge-Lab6
├── audio
│   ├── aac
│   │   └── all-aac-files-here
│   └── mp3
│       └── all-mp3-files-here
├── docs
│   ├── docx
│   │   └── all-docs-files-here
│   ├── pdf
│   │   └── all-pdf-files-here
│   └── xls
│       └── all-xls-files-here
└── images
    ├── jpg
    │   └── all-jpg-files-here
    └── png
        └── all-png-files-here

17 directories, 0 files
amlarsen@CIS106:~$
```