Lab 6 Submission

Question 1 | Using the * Wildcard

```
mauricio@cis106vm:~$ curl https://cis106.com/assets/lab6/lab6.sh | bash
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   471  100   471    0     0   5387      0 --:--:-- --:--:-- --:--:--  5352
mauricio@cis106vm:~$ cd lab6/q1
mauricio@cis106vm:~/lab6/q1$ ls *.log
access.log  apache.log  error.log  ftp.log  ssh.log
mauricio@cis106vm:~/lab6/q1$ mkdir ../log-files
mauricio@cis106vm:~/lab6/q1$ ls
access.log  apache.log  app.cfg  error.log  ftp.log  fuse.conf  game.cfg  simple.cnf  ssh.log  sudo.conf  zebra.cnf
mauricio@cis106vm:~/lab6/q1$ mv *.log ../log-files
mauricio@cis106vm:~/lab6/q1$ ls
app.cfg  fuse.conf  game.cfg  simple.cnf  sudo.conf  zebra.cnf
mauricio@cis106vm:~/lab6/q1$ ls -l lab6/q1/*.c*
ls: cannot access 'lab6/q1/*.c*': No such file or directory
mauricio@cis106vm:~/lab6/q1$ ls -l *.c*
-rw-rw-r-- 1 mauricio mauricio 0 Apr  9 20:17 app.cfg
-rw-rw-r-- 1 mauricio mauricio 0 Apr  9 20:17 fuse.conf
-rw-rw-r-- 1 mauricio mauricio 0 Apr  9 20:17 game.cfg
-rw-rw-r-- 1 mauricio mauricio 0 Apr  9 20:17 simple.cnf
-rw-rw-r-- 1 mauricio mauricio 0 Apr  9 20:17 sudo.conf
-rw-rw-r-- 1 mauricio mauricio 0 Apr  9 20:17 zebra.cnf
mauricio@cis106vm:~/lab6/q1$ ls -lgGhS *.c*
-rw-rw-r-- 1 0 Apr  9 20:17 app.cfg
-rw-rw-r-- 1 0 Apr  9 20:17 fuse.conf
-rw-rw-r-- 1 0 Apr  9 20:17 game.cfg
-rw-rw-r-- 1 0 Apr  9 20:17 simple.cnf
-rw-rw-r-- 1 0 Apr  9 20:17 sudo.conf
-rw-rw-r-- 1 0 Apr  9 20:17 zebra.cnf
mauricio@cis106vm:~/lab6/q1$ ls -lgGhS --time-style=+%D *.c*
-rw-rw-r-- 1 0 04/09/25 app.cfg
-rw-rw-r-- 1 0 04/09/25 fuse.conf
-rw-rw-r-- 1 0 04/09/25 game.cfg
-rw-rw-r-- 1 0 04/09/25 simple.cnf
-rw-rw-r-- 1 0 04/09/25 sudo.conf
-rw-rw-r-- 1 0 04/09/25 zebra.cnf
mauricio@cis106vm:~/lab6/q1$
```

☐ Wildcard

```
mauricio@cis106vm:~$ mkdir lab6/hidden-files/
mauricio@cis106vm:~$ ls lab6/q2
code.go  last_0.txt  list_1.txt  lost_2.txt  rust_1.txt
code.js  last_1.txt  list_2.txt  lost_3.txt  Trip_doc.docx
code.py  last_2.txt  list_3.txt  rest_0.txt  Trip_doc.pptx
code.rb  last_3.txt  lost_0.txt  rest_1.txt  Trip_doc.vsdx
code.sh  list_0.txt  lost_1.txt  rust_0.txt  Trip_doc.xlsx
mauricio@cis106vm:~$ ls lab6/q2/.??*
lab6/q2/.code  lab6/q2/.helper  lab6/q2/.index  lab6/q2/.unit_test
mauricio@cis106vm:~$ cp lab6/q2/.??* lab6/hidden-files/
mauricio@cis106vm:~$ ls lab6/q2/*.??
lab6/q2/code.go  lab6/q2/code.js  lab6/q2/code.py  lab6/q2/code.rb  lab6/q2/code.sh
mauricio@cis106vm:~$ rm lab6/q2/*.??
mauricio@cis106vm:~$ ls lab6/q2/T*.????
lab6/q2/Trip_doc.docx  lab6/q2/Trip_doc.pptx  lab6/q2/Trip_doc.vsdx  lab6/q2/Trip_doc.xlsx
mauricio@cis106vm:~$ rm lab6/q2/T*.????
mauricio@cis106vm:~$ ls lab6/q2/[lr][aeiou]*[0-9].*
lab6/q2/last_0.txt  lab6/q2/last_3.txt  lab6/q2/list_2.txt  lab6/q2/lost_1.txt  lab6/q2/rest_0.txt  lab6/q2/rust_1.txt
lab6/q2/last_1.txt  lab6/q2/list_0.txt  lab6/q2/list_3.txt  lab6/q2/lost_2.txt  lab6/q2/rest_1.txt  lab6/q2/rust_0.txt
lab6/q2/last_2.txt  lab6/q2/list_1.txt  lab6/q2/lost_0.txt  lab6/q2/lost_3.txt
mauricio@cis106vm:~$ mkdir lab6/random
mauricio@cis106vm:~$ mv lab6/q2/[lr][aeiou]*[0-9].* lab6/random/
mauricio@cis106vm:~$
```

Question 3 | Using the brace expansion

```
mauricio@cis106vm:~$ mkdir -vp lab6/docs/books/history/{fall,spring}/book.pdf lab6/docs/math/{2024,2025}/book.pdf
mkdir: created directory 'lab6/docs'
mkdir: created directory 'lab6/docs/books'
mkdir: created directory 'lab6/docs/books/history'
mkdir: created directory 'lab6/docs/books/history/fall'
mkdir: created directory 'lab6/docs/books/history/fall/book.pdf'
mkdir: created directory 'lab6/docs/books/history/spring'
mkdir: created directory 'lab6/docs/books/history/spring/book.pdf'
mkdir: created directory 'lab6/docs/math'
mkdir: created directory 'lab6/docs/math/2024'
mkdir: created directory 'lab6/docs/math/2024/book.pdf'
mkdir: created directory 'lab6/docs/math/2025'
mkdir: created directory 'lab6/docs/math/2025/book.pdf'
mauricio@cis106vm:~$ tree lab6/docs/
lab6/docs/
├── books
│   └── history
│       ├── fall
│       │   └── book.pdf
│       └── spring
│           └── book.pdf
└── math
    ├── 2024
    │   └── book.pdf
    └── 2025
        └── book.pdf

12 directories, 0 files
mauricio@cis106vm:~$
```

```
mauricio@cis106vm:~$ touch ~/lab6/q3/program.py/people.csv/data.xls
touch: cannot touch '/home/mauricio/lab6/q3/program.py/people.csv/data.xls': Not a directory
mauricio@cis106vm:~$ touch ~/lab6/q3/{program.py,people.csv,data.xls}
mauricio@cis106vm:~$ tree lab6/q3
lab6/q3
├── data.xls
├── file0.old
├── file1.old
├── file2.old
├── people.csv
└── program.py

1 directory, 6 files
mauricio@cis106vm:~$ rm -r ~/lab6/q3/{*.old}
rm: cannot remove '/home/mauricio/lab6/q3/{*.old}': No such file or directory
mauricio@cis106vm:~$ rm -r /lab6/q3/{*.old}
rm: cannot remove '/lab6/q3/{*.old}': No such file or directory
mauricio@cis106vm:~$ rm -r /lab6/q3/*.old
rm: cannot remove '/lab6/q3/*.old': No such file or directory
mauricio@cis106vm:~$ rm -r /lab6/q3/ *.old
rm: cannot remove '/lab6/q3/': No such file or directory
rm: cannot remove '*.old': No such file or directory
mauricio@cis106vm:~$ rm -r /lab6/q3/*.old
rm: cannot remove '/lab6/q3/*.old': No such file or directory
mauricio@cis106vm:~$ rm -r ~/lab6/q3/*.old
mauricio@cis106vm:~$ tree lab6/q3
lab6/q3
├── data.xls
├── people.csv
└── program.py

1 directory, 3 files
mauricio@cis106vm:~$
```

Question 4 | Challenge Question

```
mauricio@cis106vm:~$ curl https://cis106.com/assets/lab6/lab6cq.sh | bash
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
    0     0    0     0    0     0      0 --:--:-- --:--:-- --:--:--     0    0    0     0    0     0      0 --:--:-- --:--:-- --:--:--   100
   430  100   430    0     0   1292      0 --:--:-- --:--:-- --:--:--  1291
--2025-04-14 21:09:31--  https://raw.githubusercontent.com/ra559/cis106/refs/heads/main/assets/lab6/lab6ChallengeFiles.tar.xz
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 185.199.109.133, 185.199.110.133, 185.199.111.133, ...
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|185.199.109.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 4794584 (4.6M) [application/octet-stream]
Saving to: 'lab6ChallengeFiles.tar.xz'

lab6ChallengeFiles 100%[==============>]   4.57M  15.1MB/s    in 0.3s

2025-04-14 21:09:32 (15.1 MB/s) - 'lab6ChallengeFiles.tar.xz' saved [4794584/4794584]

lab6ChallengeFiles/music.mp3
lab6ChallengeFiles/1ein.png
lab6ChallengeFiles/3ein.jpg
lab6ChallengeFiles/file-sample_150kB.pdf
lab6ChallengeFiles/2ein.gif
lab6ChallengeFiles/file-sample_1MB.doc
lab6ChallengeFiles/file-sample_100kB.odt
lab6ChallengeFiles/helloWorld.py
lab6ChallengeFiles/helloWorld.rb
lab6ChallengeFiles/helloWorld.sh
lab6ChallengeFiles/helloWorld.pl
lab6ChallengeFiles/Sonicwings2.mp4
lab6ChallengeFiles/Breakers1.mp4
lab6ChallengeFiles/track.wav
lab6ChallengeFiles/sound_track.ogg

The /home/mauricio/challenge-Lab6 directory has been created
Files in /home/mauricio/challenge-Lab6

file-sample_1MB.doc
2ein.gif
```

```
The /home/mauricio/challenge-Lab6 directory has been created
Files in /home/mauricio/challenge-Lab6

file-sample_1MB.doc
2ein.gif
3ein.jpg
music.mp3
Breakers1.mp4
Sonicwings2.mp4
file-sample_100kB.odt
sound_track.ogg
file-sample_150kB.pdf
helloWorld.pl
1ein.png
helloWorld.py
helloWorld.rb
helloWorld.sh
track.wav
mauricio@cis106vm:~$ mkdir challenge-Lab6/docs
mauricio@cis106vm:~$ mkdir challenge-Lab6/docs/doc challenge-Lab6/docs/odt mkdir challenge-Lab6/docs/pdf
mauricio@cis106vm:~$ mv challenge-Lab6/*.pdf challenge-Lab6/docs/pdf
mauricio@cis106vm:~$ mv c
challenge-Lab6/ cis106/
mauricio@cis106vm:~$ mv challenge-Lab6/*.doc challenge-Lab6/docs/doc/
mauricio@cis106vm:~$ mv challenge-Lab6/*.odt challenge-Lab6/docs/odt/
mauricio@cis106vm:~$ tree challenge-Lab6/
challenge-Lab6/
├── 1ein.png
├── 2ein.gif
├── 3ein.jpg
├── Breakers1.mp4
├── docs
│   ├── doc
│   │   └── file-sample_1MB.doc
│   ├── odt
│   │   └── file-sample_100kB.odt
│   ├── pdf
```

```
                    mauricio@cis106vm: ~
├── sound_track.ogg
└── track.wav

5 directories, 15 files
mauricio@cis106vm:~$ mkdir challenge-Lab6/audio
mauricio@cis106vm:~$ mkdir challenge-Lab6/audio/mp3 challenge-Lab6/audio/mp4 challenge-Lab6/audio/wav
mauricio@cis106vm:~$ mv challenge-Lab6/*.mp4 challenge-Lab6/audio/mp4
mauricio@cis106vm:~$ mv challenge-Lab6/*.mp3 challenge-Lab6/audio/mp3
mauricio@cis106vm:~$ mv challenge-Lab6/*.wav challenge-Lab6/audio/wav
mauricio@cis106vm:~$ tree challenge-Lab6/
challenge-Lab6/
├── 1ein.png
├── 2ein.gif
├── 3ein.jpg
├── audio
│   ├── mp3
│   │   └── music.mp3
│   ├── mp4
│   │   ├── Breakers1.mp4
│   │   └── Sonicwings2.mp4
│   └── wav
│       └── track.wav
├── docs
│   ├── doc
│   │   └── file-sample_1MB.doc
│   ├── odt
│   │   └── file-sample_100kB.odt
│   └── pdf
│       └── file-sample_150kB.pdf
├── helloWorld.pl
├── helloWorld.py
├── helloWorld.rb
├── helloWorld.sh
└── sound_track.ogg

9 directories, 15 files
mauricio@cis106vm:~$ mkdir challenge-Lab6/audio/ogg
```

```
                    mauricio@cis106vm: ~
├── helloWorld.sh
└── sound_track.ogg

9 directories, 15 files
mauricio@cis106vm:~$ mkdir challenge-Lab6/audio/ogg
mauricio@cis106vm:~$ mv challenge-Lab6/*.ogg challenge-Lab6/audio/ogg/
mauricio@cis106vm:~$ tree challenge-Lab6/
challenge-Lab6/
├── 1ein.png
├── 2ein.gif
├── 3ein.jpg
├── audio
│   ├── mp3
│   │   └── music.mp3
│   ├── mp4
│   │   ├── Breakers1.mp4
│   │   └── Sonicwings2.mp4
│   ├── ogg
│   │   └── sound_track.ogg
│   └── wav
│       └── track.wav
├── docs
│   ├── doc
│   │   └── file-sample_1MB.doc
│   ├── odt
│   │   └── file-sample_100kB.odt
│   └── pdf
│       └── file-sample_150kB.pdf
├── helloWorld.pl
├── helloWorld.py
├── helloWorld.rb
└── helloWorld.sh

10 directories, 15 files
mauricio@cis106vm:~$ mv challenge-Lab6/audio challenge-Lab6/multimedia
mauricio@cis106vm:~$ tree challenge-Lab6/
challenge-Lab6/
```

```
                 └── track.wav

10 directories, 15 files
mauricio@cis106vm:~$ mkdir c
challenge-Lab6/ cis106/
mauricio@cis106vm:~$ mkdir challenge-Lab6/images
mauricio@cis106vm:~$ mkdir challenge-Lab6/images/png challenge-Lab6/images/gif challenge-Lab6/images/jpg
mauricio@cis106vm:~$ mv challenge-Lab6/*.png challenge-Lab6/images/png
mauricio@cis106vm:~$ mv challenge-Lab6/*.gif challenge-Lab6/images/gif
mauricio@cis106vm:~$ mv challenge-Lab6/*.jpg challenge-Lab6/images/jpg
mauricio@cis106vm:~$ tree challenge-Lab6/
challenge-Lab6/
├── docs
│   ├── doc
│   │   └── file-sample_1MB.doc
│   ├── odt
│   │   └── file-sample_100kB.odt
│   └── pdf
│       └── file-sample_150kB.pdf
├── helloWorld.pl
├── helloWorld.py
├── helloWorld.rb
├── helloWorld.sh
├── images
│   ├── gif
│   │   └── 2ein.gif
│   ├── jpg
│   │   └── 3ein.jpg
│   └── png
│       └── 1ein.png
├── multimedia
│   ├── mp3
│   │   └── music.mp3
│   ├── mp4
│   │   ├── Breakers1.mp4
│   │   ├── Sonicwings2.mp4
│   ├── ogg
```

```
14 directories, 15 files
mauricio@cis106vm:~$ mkdir challenge-Lab6/scripts_codes
mauricio@cis106vm:~$ mv challenge-Lab6/*.p* challenge-Lab6/scripts_codes/ mauricio@cis106vm:~$ mv challenge-Lab6/*.sh challenge-Lab6/scripts_codes/
mauricio@cis106vm:~$ mv challenge-Lab6/*.rb challenge-Lab6/scripts_codes/
mauricio@cis106vm:~$ tree challenge-Lab6/
challenge-Lab6/
├── docs
│   ├── doc
│   │   └── file-sample_1MB.doc
│   ├── odt
│   │   └── file-sample_100kB.odt
│   └── pdf
│       └── file-sample_150kB.pdf
├── images
│   ├── gif
│   │   └── 2ein.gif
│   ├── jpg
│   │   └── 3ein.jpg
│   └── png
│       └── 1ein.png
├── multimedia
│   ├── mp3
│   │   └── music.mp3
│   ├── mp4
│   │   ├── Breakers1.mp4
│   │   ├── Sonicwings2.mp4
│   ├── ogg
│   │   └── sound_track.ogg
│   └── wav
│       └── track.wav
└── scripts_codes
    ├── helloWorld.pl
    ├── helloWorld.py
    ├── helloWorld.rb
    └── helloWorld.sh

15 directories, 15 files
```