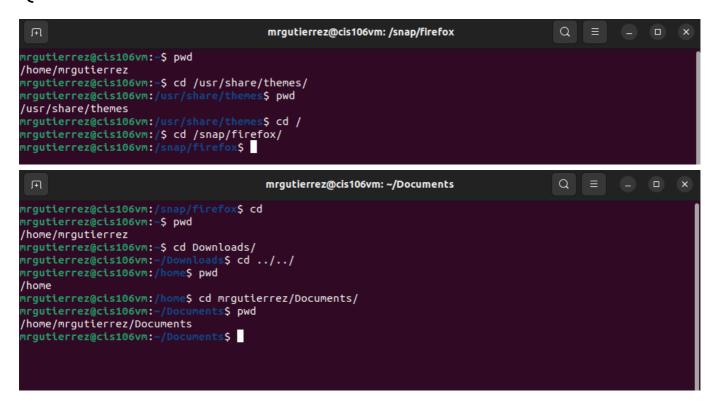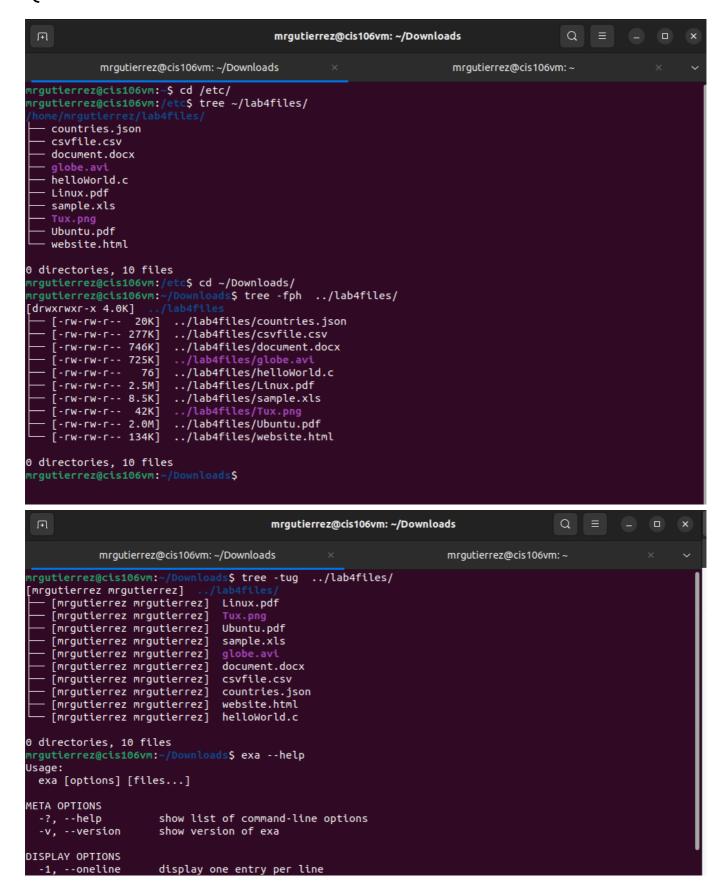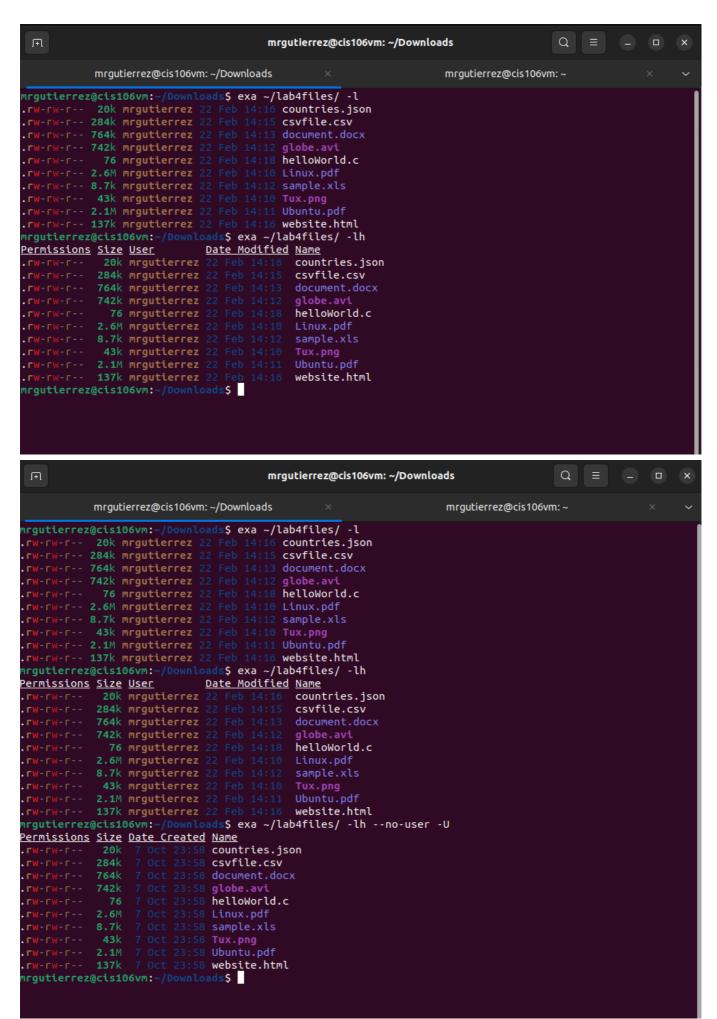# Lab 4 Submission

Question 1

Question 2

```
/home/mrgutierrez/Documents
mrgutierrez@cis106vm:~/Documents$ cd /usr/share/
mrgutierrez@cis106vm:/usr/share$ ls /home/mrgutierrez/lab4files/
countries.json  document.docx  helloWorld.c  sample.xls  Ubuntu.pdf
csvfile.csv     globe.avi       Linux.pdf     Tux.png     website.html
mrgutierrez@cis106vm:/usr/share$ cd  /home/mrgutierrez/lab4files/
mrgutierrez@cis106vm:~/lab4files$ ls -l
total 6580
-rw-rw-r-- 1 mrgutierrez mrgutierrez   20471 Feb 22  2022 countries.json
-rw-rw-r-- 1 mrgutierrez mrgutierrez  284042 Feb 22  2022 csvfile.csv
-rw-rw-r-- 1 mrgutierrez mrgutierrez  764176 Feb 22  2022 document.docx
-rw-rw-r-- 1 mrgutierrez mrgutierrez  742478 Feb 22  2022 globe.avi
-rw-rw-r-- 1 mrgutierrez mrgutierrez      76 Feb 22  2022 helloWorld.c
-rw-rw-r-- 1 mrgutierrez mrgutierrez 2600138 Feb 22  2022 Linux.pdf
-rw-rw-r-- 1 mrgutierrez mrgutierrez    8704 Feb 22  2022 sample.xls
-rw-rw-r-- 1 mrgutierrez mrgutierrez   42777 Feb 22  2022 Tux.png
-rw-rw-r-- 1 mrgutierrez mrgutierrez 2114053 Feb 22  2022 Ubuntu.pdf
-rw-rw-r-- 1 mrgutierrez mrgutierrez  137453 Feb 22  2022 website.html
mrgutierrez@cis106vm:~/lab4files$
```

mrgutierrez@cis106vm: ~/lab4files

```
mrgutierrez@cis106vm:~/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 mrgutierrez mrgutierrez  20K Feb 22  2022 countries.json
-rw-rw-r-- 1 mrgutierrez mrgutierrez 278K Feb 22  2022 csvfile.csv
-rw-rw-r-- 1 mrgutierrez mrgutierrez 747K Feb 22  2022 document.docx
-rw-rw-r-- 1 mrgutierrez mrgutierrez 726K Feb 22  2022 globe.avi
-rw-rw-r-- 1 mrgutierrez mrgutierrez   76 Feb 22  2022 helloWorld.c
-rw-rw-r-- 1 mrgutierrez mrgutierrez 2.5M Feb 22  2022 Linux.pdf
-rw-rw-r-- 1 mrgutierrez mrgutierrez 8.5K Feb 22  2022 sample.xls
-rw-rw-r-- 1 mrgutierrez mrgutierrez  42K Feb 22  2022 Tux.png
-rw-rw-r-- 1 mrgutierrez mrgutierrez 2.1M Feb 22  2022 Ubuntu.pdf
-rw-rw-r-- 1 mrgutierrez mrgutierrez 135K Feb 22  2022 website.html
mrgutierrez@cis106vm:~/lab4files$ ls -lhS
total 6.5M
-rw-rw-r-- 1 mrgutierrez mrgutierrez 2.5M Feb 22  2022 Linux.pdf
-rw-rw-r-- 1 mrgutierrez mrgutierrez 2.1M Feb 22  2022 Ubuntu.pdf
-rw-rw-r-- 1 mrgutierrez mrgutierrez 747K Feb 22  2022 document.docx
-rw-rw-r-- 1 mrgutierrez mrgutierrez 726K Feb 22  2022 globe.avi
-rw-rw-r-- 1 mrgutierrez mrgutierrez 278K Feb 22  2022 csvfile.csv
-rw-rw-r-- 1 mrgutierrez mrgutierrez 135K Feb 22  2022 website.html
-rw-rw-r-- 1 mrgutierrez mrgutierrez  42K Feb 22  2022 Tux.png
-rw-rw-r-- 1 mrgutierrez mrgutierrez  20K Feb 22  2022 countries.json
-rw-rw-r-- 1 mrgutierrez mrgutierrez 8.5K Feb 22  2022 sample.xls
-rw-rw-r-- 1 mrgutierrez mrgutierrez   76 Feb 22  2022 helloWorld.c
mrgutierrez@cis106vm:~/lab4files$
```

mrgutierrez@cis106vm: ~/lab4files

```
mrgutierrez@cis106vm:~/lab4files$ ls -lhSgGi
total 6.5M
264156 -rw-rw-r-- 1 2.5M Feb 22  2022 Linux.pdf
264158 -rw-rw-r-- 1 2.1M Feb 22  2022 Ubuntu.pdf
264161 -rw-rw-r-- 1 747K Feb 22  2022 document.docx
264162 -rw-rw-r-- 1 726K Feb 22  2022 globe.avi
264160 -rw-rw-r-- 1 278K Feb 22  2022 csvfile.csv
264165 -rw-rw-r-- 1 135K Feb 22  2022 website.html
264157 -rw-rw-r-- 1  42K Feb 22  2022 Tux.png
264159 -rw-rw-r-- 1  20K Feb 22  2022 countries.json
264164 -rw-rw-r-- 1 8.5K Feb 22  2022 sample.xls
264163 -rw-rw-r-- 1   76 Feb 22  2022 helloWorld.c
mrgutierrez@cis106vm:~/lab4files$ ls -Xr
sample.xls  Ubuntu.pdf  countries.json  document.docx  helloWorld.c
Tux.png     Linux.pdf   website.html    csvfile.csv    globe.avi
mrgutierrez@cis106vm:~/lab4files$
```

Question 3

```
mrgutierrez@cis106vm: ~/Downloads

 mrgutierrez@cis106vm: ~/Downloads          ×              mrgutierrez@cis106vm: ~                    ×        ⌄

mrgutierrez@cis106vm:~$ cd /etc/
mrgutierrez@cis106vm:/etc$ tree ~/lab4files/
/home/mrgutierrez/lab4files/
├── countries.json
├── csvfile.csv
├── document.docx
├── globe.avi
├── helloWorld.c
├── Linux.pdf
├── sample.xls
├── Tux.png
├── Ubuntu.pdf
└── website.html

0 directories, 10 files
mrgutierrez@cis106vm:/etc$ cd ~/Downloads/
mrgutierrez@cis106vm:~/Downloads$ tree -fph  ../lab4files/
[drwxrwxr-x 4.0K]  ../lab4files
├── [-rw-rw-r--  20K]  ../lab4files/countries.json
├── [-rw-rw-r-- 277K]  ../lab4files/csvfile.csv
├── [-rw-rw-r-- 746K]  ../lab4files/document.docx
├── [-rw-rw-r-- 725K]  ../lab4files/globe.avi
├── [-rw-rw-r--   76]  ../lab4files/helloWorld.c
├── [-rw-rw-r-- 2.5M]  ../lab4files/Linux.pdf
├── [-rw-rw-r-- 8.5K]  ../lab4files/sample.xls
├── [-rw-rw-r--  42K]  ../lab4files/Tux.png
├── [-rw-rw-r-- 2.0M]  ../lab4files/Ubuntu.pdf
└── [-rw-rw-r-- 134K]  ../lab4files/website.html

0 directories, 10 files
mrgutierrez@cis106vm:~/Downloads$
```

```
mrgutierrez@cis106vm: ~/Downloads

 mrgutierrez@cis106vm: ~/Downloads          ×              mrgutierrez@cis106vm: ~                    ×        ⌄

mrgutierrez@cis106vm:~/Downloads$ tree -tug  ../lab4files/
[mrgutierrez mrgutierrez]  ../lab4files/
├── [mrgutierrez mrgutierrez]  Linux.pdf
├── [mrgutierrez mrgutierrez]  Tux.png
├── [mrgutierrez mrgutierrez]  Ubuntu.pdf
├── [mrgutierrez mrgutierrez]  sample.xls
├── [mrgutierrez mrgutierrez]  globe.avi
├── [mrgutierrez mrgutierrez]  document.docx
├── [mrgutierrez mrgutierrez]  csvfile.csv
├── [mrgutierrez mrgutierrez]  countries.json
├── [mrgutierrez mrgutierrez]  website.html
└── [mrgutierrez mrgutierrez]  helloWorld.c

0 directories, 10 files
mrgutierrez@cis106vm:~/Downloads$ exa --help
Usage:
  exa [options] [files...]

META OPTIONS
  -?, --help         show list of command-line options
  -v, --version      show version of exa

DISPLAY OPTIONS
  -1, --oneline      display one entry per line
```

```
mrgutierrez@cis106vm: ~/Downloads

  mrgutierrez@cis106vm: ~/Downloads       ×        mrgutierrez@cis106vm: ~

mrgutierrez@cis106vm:~/Downloads$ exa ~/lab4files/ -l
.rw-rw-r--   20k mrgutierrez 22 Feb 14:16 countries.json
.rw-rw-r--  284k mrgutierrez 22 Feb 14:15 csvfile.csv
.rw-rw-r--  764k mrgutierrez 22 Feb 14:13 document.docx
.rw-rw-r--  742k mrgutierrez 22 Feb 14:12 globe.avi
.rw-rw-r--    76 mrgutierrez 22 Feb 14:18 helloWorld.c
.rw-rw-r--  2.6M mrgutierrez 22 Feb 14:10 Linux.pdf
.rw-rw-r--  8.7k mrgutierrez 22 Feb 14:12 sample.xls
.rw-rw-r--   43k mrgutierrez 22 Feb 14:10 Tux.png
.rw-rw-r--  2.1M mrgutierrez 22 Feb 14:11 Ubuntu.pdf
.rw-rw-r--  137k mrgutierrez 22 Feb 14:16 website.html
mrgutierrez@cis106vm:~/Downloads$ exa ~/lab4files/ -lh
Permissions Size User        Date Modified Name
.rw-rw-r--   20k mrgutierrez 22 Feb 14:16  countries.json
.rw-rw-r--  284k mrgutierrez 22 Feb 14:15  csvfile.csv
.rw-rw-r--  764k mrgutierrez 22 Feb 14:13  document.docx
.rw-rw-r--  742k mrgutierrez 22 Feb 14:12  globe.avi
.rw-rw-r--    76 mrgutierrez 22 Feb 14:18  helloWorld.c
.rw-rw-r--  2.6M mrgutierrez 22 Feb 14:10  Linux.pdf
.rw-rw-r--  8.7k mrgutierrez 22 Feb 14:12  sample.xls
.rw-rw-r--   43k mrgutierrez 22 Feb 14:10  Tux.png
.rw-rw-r--  2.1M mrgutierrez 22 Feb 14:11  Ubuntu.pdf
.rw-rw-r--  137k mrgutierrez 22 Feb 14:16  website.html
mrgutierrez@cis106vm:~/Downloads$
```

```
mrgutierrez@cis106vm: ~/Downloads

  mrgutierrez@cis106vm: ~/Downloads       ×        mrgutierrez@cis106vm: ~

mrgutierrez@cis106vm:~/Downloads$ exa ~/lab4files/ -l
.rw-rw-r--   20k mrgutierrez 22 Feb 14:16 countries.json
.rw-rw-r--  284k mrgutierrez 22 Feb 14:15 csvfile.csv
.rw-rw-r--  764k mrgutierrez 22 Feb 14:13 document.docx
.rw-rw-r--  742k mrgutierrez 22 Feb 14:12 globe.avi
.rw-rw-r--    76 mrgutierrez 22 Feb 14:18 helloWorld.c
.rw-rw-r--  2.6M mrgutierrez 22 Feb 14:10 Linux.pdf
.rw-rw-r--  8.7k mrgutierrez 22 Feb 14:12 sample.xls
.rw-rw-r--   43k mrgutierrez 22 Feb 14:10 Tux.png
.rw-rw-r--  2.1M mrgutierrez 22 Feb 14:11 Ubuntu.pdf
.rw-rw-r--  137k mrgutierrez 22 Feb 14:16 website.html
mrgutierrez@cis106vm:~/Downloads$ exa ~/lab4files/ -lh
Permissions Size User        Date Modified Name
.rw-rw-r--   20k mrgutierrez 22 Feb 14:16  countries.json
.rw-rw-r--  284k mrgutierrez 22 Feb 14:15  csvfile.csv
.rw-rw-r--  764k mrgutierrez 22 Feb 14:13  document.docx
.rw-rw-r--  742k mrgutierrez 22 Feb 14:12  globe.avi
.rw-rw-r--    76 mrgutierrez 22 Feb 14:18  helloWorld.c
.rw-rw-r--  2.6M mrgutierrez 22 Feb 14:10  Linux.pdf
.rw-rw-r--  8.7k mrgutierrez 22 Feb 14:12  sample.xls
.rw-rw-r--   43k mrgutierrez 22 Feb 14:10  Tux.png
.rw-rw-r--  2.1M mrgutierrez 22 Feb 14:11  Ubuntu.pdf
.rw-rw-r--  137k mrgutierrez 22 Feb 14:16  website.html
mrgutierrez@cis106vm:~/Downloads$ exa ~/lab4files/ -lh --no-user -U
Permissions Size Date Created Name
.rw-rw-r--   20k  7 Oct 23:58 countries.json
.rw-rw-r--  284k  7 Oct 23:58 csvfile.csv
.rw-rw-r--  764k  7 Oct 23:58 document.docx
.rw-rw-r--  742k  7 Oct 23:58 globe.avi
.rw-rw-r--    76  7 Oct 23:58 helloWorld.c
.rw-rw-r--  2.6M  7 Oct 23:58 Linux.pdf
.rw-rw-r--  8.7k  7 Oct 23:58 sample.xls
.rw-rw-r--   43k  7 Oct 23:58 Tux.png
.rw-rw-r--  2.1M  7 Oct 23:58 Ubuntu.pdf
.rw-rw-r--  137k  7 Oct 23:58 website.html
mrgutierrez@cis106vm:~/Downloads$
```

Question 4 Challenge Questions