
Sydney Gilmore Class: CIS 106Lab 4

Question 1

```
sgilmore@cis106:~$ pwd
/home/sgilmore
sgilmore@cis106:~$ cd /usr/share/themes/
sgilmore@cis106:/usr/share/themes$ pwd
/usr/share/themes
sgilmore@cis106:/usr/share/themes$ cd ../../../../
sgilmore@cis106:/$ cd /snap/firefox/
sgilmore@cis106:/snap/firefox$
```

```
sgilmore@cis106:/snap/firefox$ cd
sgilmore@cis106:~$ cd ~/Downloads/
sgilmore@cis106:~/Downloads$ cd ../../
sgilmore@cis106:/home$ pwd
/home
sgilmore@cis106:/home$ cd ~/Documents/
sgilmore@cis106:~/Documents$
```

Question 2

```
sgilmore@cis106:~$ cd /usr/share/
sgilmore@cis106:/usr/share$ ls /home/sgilmore/lab4files
countries.json  document.docx  helloWorld.c  sample.xls  Ubuntu.pdf
csvfile.csv    globe.avi      Linux.pdf     Tux.png     website.html
sgilmore@cis106:~/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 sgilmore sgilmore 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 sgilmore sgilmore 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 sgilmore sgilmore 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 sgilmore sgilmore 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 sgilmore sgilmore 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 sgilmore sgilmore 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 sgilmore sgilmore 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 sgilmore sgilmore 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 sgilmore sgilmore 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 sgilmore sgilmore 135K Feb 22 2022 website.html
```

```
sgilmore@cis106:~/lab4files$ ls -lhS
total 6.5M
-rw-rw-r-- 1 sgilmore sgilmore 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 sgilmore sgilmore 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 sgilmore sgilmore 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 sgilmore sgilmore 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 sgilmore sgilmore 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 sgilmore sgilmore 135K Feb 22 2022 website.html
-rw-rw-r-- 1 sgilmore sgilmore 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 sgilmore sgilmore 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 sgilmore sgilmore 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 sgilmore sgilmore 76 Feb 22 2022 helloWorld.c
```

```
sgilmore@cis106:~/lab4files$ ls -lhSGgi
total 6.5M
2100128 -rw-rw-r-- 1 2.5M Feb 22 2022 Linux.pdf
2105183 -rw-rw-r-- 1 2.1M Feb 22 2022 Ubuntu.pdf
2105186 -rw-rw-r-- 1 747K Feb 22 2022 document.docx
2105187 -rw-rw-r-- 1 726K Feb 22 2022 globe.avi
2105185 -rw-rw-r-- 1 278K Feb 22 2022 csvfile.csv
2105190 -rw-rw-r-- 1 135K Feb 22 2022 website.html
2100129 -rw-rw-r-- 1 42K Feb 22 2022 Tux.png
2105184 -rw-rw-r-- 1 20K Feb 22 2022 countries.json
2105189 -rw-rw-r-- 1 8.5K Feb 22 2022 sample.xls
2105188 -rw-rw-r-- 1 76 Feb 22 2022 helloWorld.c
```

```
sgilmore@cis106:~/lab4files$ ls -Xr
sample.xls  Ubuntu.pdf  countries.json  document.docx  helloWorld.c
Tux.png    Linux.pdf   website.html    csvfile.csv    globe.avi
```

Question 3

```
sgilmore@cis106:~$ cd /etc/
sgilmore@cis106:/etc$ tree /home/sgilmore/lab4files
/home/sgilmore/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
sgilmore@cis106:/etc$
```

```
sgilmore@cis106:~/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
```

```
sgilmore@cis106:~/Downloads$ tree -tug ../lab4files
[sgilmore sgilmore]  ../lab4files
├── [sgilmore sgilmore]  Linux.pdf
├── [sgilmore sgilmore]  Tux.png
├── [sgilmore sgilmore]  Ubuntu.pdf
├── [sgilmore sgilmore]  sample.xls
├── [sgilmore sgilmore]  globe.avi
├── [sgilmore sgilmore]  document.docx
├── [sgilmore sgilmore]  csvfile.csv
├── [sgilmore sgilmore]  countries.json
├── [sgilmore sgilmore]  website.html
└── [sgilmore sgilmore]  helloWorld.c

0 directories, 10 files
```

```
sgilmore@cis106:~/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
  -l, --long          display extended file metadata as a table
  -G, --grid          display entries as a grid (default)
  -x, --across        sort the grid across, rather than downwards
  -R, --recurse       recurse into directories
  -T, --tree          recurse into directories as a tree
  -F, --classify      display type indicator by file names
  --colo[u]r=WHEN     when to use terminal colours (always, auto, never)
  --colo[u]r-scale    highlight levels of file sizes distinctly
  --icons             display icons
  --no-icons          don't display icons (always overrides --icons)

FILTERING AND SORTING OPTIONS
  -a, --all           show hidden and 'dot' files
  -d, --list-dirs     list directories as files; don't list their contents
  -L, --level DEPTH  limit the depth of recursion
  -r, --reverse       reverse the sort order
  -s, --sort SORT_FIELD which field to sort by
  --group-directories-first list directories before other files
  -D, --only-dirs     list only directories
  -I, --ignore-glob GLOBS glob patterns (pipe-separated) of files to ignore
  --git-ignore        ignore files mentioned in '.gitignore'
Valid sort fields:    name, Name, extension, Extension, size, type,
                     modified, accessed, created, inode, and none.
                     date, time, old, and new all refer to modified.
```

```
sgilmore@cis106:~/Downloads$ exa -l ../lab4files
.rw-rw-r-- 20k sgilmore 22 Feb 14:16 countries.json
.rw-rw-r-- 284k sgilmore 22 Feb 14:15 csvfile.csv
.rw-rw-r-- 764k sgilmore 22 Feb 14:13 document.docx
.rw-rw-r-- 742k sgilmore 22 Feb 14:12 globe.avi
.rw-rw-r-- 76 sgilmore 22 Feb 14:18 helloWorld.c
.rw-rw-r-- 2.6M sgilmore 22 Feb 14:10 Linux.pdf
.rw-rw-r-- 8.7k sgilmore 22 Feb 14:12 sample.xls
.rw-rw-r-- 43k sgilmore 22 Feb 14:10 Tux.png
.rw-rw-r-- 2.1M sgilmore 22 Feb 14:11 Ubuntu.pdf
.rw-rw-r-- 137k sgilmore 22 Feb 14:16 website.html
sgilmore@cis106:~/Downloads$
```

```
sgilmore@cis106:~/Downloads$ exa -lh ../lab4files
Permissions Size User      Date Modified Name
.rw-rw-r--  20k sgilmore 22 Feb 14:16 countries.json
.rw-rw-r-- 284k sgilmore 22 Feb 14:15 csvfile.csv
.rw-rw-r-- 764k sgilmore 22 Feb 14:13 document.docx
.rw-rw-r-- 742k sgilmore 22 Feb 14:12 globe.avi
.rw-rw-r--  76 sgilmore 22 Feb 14:18 helloWorld.c
.rw-rw-r-- 2.6M sgilmore 22 Feb 14:10 Linux.pdf
.rw-rw-r-- 8.7k sgilmore 22 Feb 14:12 sample.xls
.rw-rw-r-- 43k sgilmore 22 Feb 14:10 Tux.png
.rw-rw-r-- 2.1M sgilmore 22 Feb 14:11 Ubuntu.pdf
.rw-rw-r-- 137k sgilmore 22 Feb 14:16 website.html
sgilmore@cis106:~/Downloads$
```

```
sgilmore@cis106:~/Downloads$ exa ~/lab4files/ -lh --no-user -U
Permissions Size Date Created Name
.rw-rw-r--  20k 11 Oct 14:52 countries.json
.rw-rw-r-- 284k 11 Oct 14:52 csvfile.csv
.rw-rw-r-- 764k 11 Oct 14:52 document.docx
.rw-rw-r-- 742k 11 Oct 14:52 globe.avi
.rw-rw-r--  76 11 Oct 14:52 helloWorld.c
.rw-rw-r-- 2.6M 11 Oct 14:52 Linux.pdf
.rw-rw-r-- 8.7k 11 Oct 14:52 sample.xls
.rw-rw-r-- 43k 11 Oct 14:52 Tux.png
.rw-rw-r-- 2.1M 11 Oct 14:52 Ubuntu.pdf
.rw-rw-r-- 137k 11 Oct 14:52 website.html
sgilmore@cis106:~/Downloads$
```

Question 4

```
sgilmore@cis106:~$ pwd
/home/sgilmore
sgilmore@cis106:~$ cd /usr/share/icons/default/
sgilmore@cis106:/usr/share/icons/default$ cd /proc/sys/net/ipv4
sgilmore@cis106:/proc/sys/net/ipv4$ cd -
/usr/share/icons/default
sgilmore@cis106:/usr/share/icons/default$ ls /usr/share/backgrounds/
Blue_flower_by_Elena_Stravoravdi.jpg
canvas_by_roytanck.jpg
Cherry_Tree_in_Lakones_by_elenastravoravdi.jpg
contest
DSC2943_by_kcpru.jpg
Jammy-Jellyfish_WP_4096x2304_Grey.png
jj_dark_by_Hiking93.jpg
jj_light_by_Hiking93.jpg
Mirror_by_Uday_Nakade.jpg
Optical_Fibers_in_Dark_by_Elena_Stravoravdi.jpg
ubuntu2_by_arman1992.jpg
ubuntu_by_arman1992.jpg
ubuntu-default-greyscale-wallpaper.png
warty-final-ubuntu.png
sgilmore@cis106:/usr/share/icons/default$
```

```
sgilmore@cis106:/usr/share/icons/default$ cd
sgilmore@cis106:~$ ls ~/cis106/
lab1
sgilmore@cis106:~$ ls ~/cis106/
'Cheat Sheets'  finalproject  labs  weeklyreports
sgilmore@cis106:~$ pwd
/home/sgilmore
sgilmore@cis106:~$ ls ~/Downloads/
devhints-io-markdown.pdf
'Linux Workshop Ubuntu Software installation cheat sheet.png'
Noto_Sans_Mono
Noto_Sans_Mono.zip
practicels
practicels.tar.xz
SWTM-2088_Atlassian-Git-Cheatsheet.pdf
Titillium_Web
Titillium_Web.zip
sgilmore@cis106:~$ cd /dev/disk/by-id/
sgilmore@cis106:/dev/disk/by-id$ ls -la
total 0
drwxr-xr-x 2 root root 140 Oct 11 14:39 .
drwxr-xr-x 7 root root 140 Oct 11 14:39 ..
lrwxrwxrwx 1 root root  9 Oct 11 14:39 ata-VBOX_CD-ROM_VB1-1a2b3c4d -> ../../sr0
lrwxrwxrwx 1 root root  9 Oct 11 14:39 ata-VBOX_HARDDISK_VB17214ef0-f191398e -> ../../sda
lrwxrwxrwx 1 root root 10 Oct 11 14:39 ata-VBOX_HARDDISK_VB17214ef0-f191398e-part1 -> ../../sda1
lrwxrwxrwx 1 root root 10 Oct 11 14:39 ata-VBOX_HARDDISK_VB17214ef0-f191398e-part2 -> ../../sda2
lrwxrwxrwx 1 root root 10 Oct 11 14:39 ata-VBOX_HARDDISK_VB17214ef0-f191398e-part3 -> ../../sda3
sgilmore@cis106:/dev/disk/by-id$
```



```
sgilmore@cis106:/dev/disk/by-id$ ls -t /usr/share/themes/  
Yaru          Yaru-hdpi          Yaru-purple-dark   Default  
Yaru-bark     Yaru-magenta       Yaru-red           Emacs  
Yaru-bark-dark Yaru-magenta-dark  Yaru-red-dark      Raleigh  
Yaru-blue     Yaru-olive         Yaru-sage          Adwaita  
Yaru-blue-dark Yaru-olive-dark    Yaru-sage-dark     Adwaita-dark  
Yaru-dark     Yaru-prussiangreen Yaru-viridian      HighContrast  
Yaru-dark-hdpi Yaru-prussiangreen-dark Yaru-viridian-dark  
Yaru-dark-xdpi Yaru-purple        Yaru-xdpi  
sgilmore@cis106:/dev/disk/by-id$ ls -X /usr/share/  
accountsservice      libgnomekbd  
aclocal              libgweather  
acpi-support         libgweather-4  
adduser              libinput  
aisleriot            liblangtag  
alacarte             liblouis  
alsa                 liblouisutdm1  
alsa-base            libmysofa  
alsa-card-profile    libreoffice  
appdata              libvenge  
app-info             libthai  
applications         libwacom  
apport              lightdm  
apps                 lintian  
apturl              linux-sound-base  
aspell              locale
```