


Lab 4 The Linux fs

Question 1

Table 1

Table 2

Question 2



The image contains two terminal window screenshots. The first terminal window has a title bar 'student@cis106: /etc/firefox' and shows the following commands and output: `student@cis106:~$ pwd` returns `/home/student`; `student@cis106:~$ cd /usr/share/themes/` changes the directory; `student@cis106:/usr/share/themes$ pwd` returns `/usr/share/themes`; `student@cis106:/usr/share/themes$ cd /` changes to the root; `student@cis106:/$ cd /etc/firefox/` changes to `/etc/firefox/`; and `student@cis106:/etc/firefox$` with a cursor. The second terminal window has a title bar 'student@cis106: ~/Documents' and shows: `student@cis106:/etc/firefox$ cd` returns to `~`; `student@cis106:~$ cd Downloads/` changes to `~/Downloads`; `student@cis106:~/Downloads$ cd ../../` returns to `~`; `student@cis106:/home$ pwd` returns `/home`; `student@cis106:/home$ cd student/Documents/` changes to `~/Documents`; and `student@cis106:~/Documents$` with a cursor.

```
student@cis106:~$ pwd
/home/student
student@cis106:~$ cd /usr/share/themes/
student@cis106:/usr/share/themes$ pwd
/usr/share/themes
student@cis106:/usr/share/themes$ cd /
student@cis106:/$ cd /etc/firefox/
student@cis106:/etc/firefox$

student@cis106:/etc/firefox$ cd
student@cis106:~$ cd Downloads/
student@cis106:~/Downloads$ cd ../../
student@cis106:/home$ pwd
/home
student@cis106:/home$ cd student/Documents/
student@cis106:~/Documents$
```

Question 3

```

student@cis106: ~/lab4files
student@cis106: ~/lab4files
student@cis106:/usr/share$ ls /home/student/lab4files/
countries.json  globe.avi  sample.xls  website.html
csvfile.csv    helloWorld.c  Tux.png
document.docx  Linux.pdf  Ubuntu.pdf
student@cis106:/usr/share$ cd ~/lab4files/
student@cis106:~/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 student student 20K Feb 22 14:16 countries.json
-rw-rw-r-- 1 student student 278K Feb 22 14:15 csvfile.csv
-rw-rw-r-- 1 student student 747K Feb 22 14:13 document.docx
-rw-rw-r-- 1 student student 726K Feb 22 14:12 globe.avi
-rw-rw-r-- 1 student student 76 Feb 22 14:18 helloWorld.c
-rw-rw-r-- 1 student student 2.5M Feb 22 14:10 Linux.pdf
-rw-rw-r-- 1 student student 8.5K Feb 22 14:12 sample.xls
-rw-rw-r-- 1 student student 42K Feb 22 14:10 Tux.png
-rw-rw-r-- 1 student student 2.1M Feb 22 14:11 Ubuntu.pdf
-rw-rw-r-- 1 student student 135K Feb 22 14:16 website.html
student@cis106:~/lab4files$ ls -lhs
total 6.5M
-rw-rw-r-- 1 student student 2.5M Feb 22 14:10 Linux.pdf
-rw-rw-r-- 1 student student 2.1M Feb 22 14:11 Ubuntu.pdf
-rw-rw-r-- 1 student student 747K Feb 22 14:13 document.docx
-rw-rw-r-- 1 student student 726K Feb 22 14:12 globe.avi
-rw-rw-r-- 1 student student 278K Feb 22 14:15 csvfile.csv
-rw-rw-r-- 1 student student 135K Feb 22 14:16 website.html
-rw-rw-r-- 1 student student 42K Feb 22 14:10 Tux.png
-rw-rw-r-- 1 student student 20K Feb 22 14:16 countries.json
-rw-rw-r-- 1 student student 8.5K Feb 22 14:12 sample.xls
-rw-rw-r-- 1 student student 76 Feb 22 14:18 helloWorld.c
student@cis106:~/lab4files$

```

```

Applications  Places
student@cis106: ~/lab4files
student@cis106: ~/lab4files
student@cis106:~/lab4files$ ls -lhSgGi
total 6.5M
2232378 -rw-rw-r-- 1 2.5M Feb 22 14:10 Linux.pdf
2237876 -rw-rw-r-- 1 2.1M Feb 22 14:11 Ubuntu.pdf
2238078 -rw-rw-r-- 1 747K Feb 22 14:13 document.docx
2238079 -rw-rw-r-- 1 726K Feb 22 14:12 globe.avi
2238077 -rw-rw-r-- 1 278K Feb 22 14:15 csvfile.csv
2238082 -rw-rw-r-- 1 135K Feb 22 14:16 website.html
2232379 -rw-rw-r-- 1 42K Feb 22 14:10 Tux.png

```

```
2238076 -rw-rw-r-- 1 20K Feb 22 14:16 countries.json
2238081 -rw-rw-r-- 1 8.5K Feb 22 14:12 sample.xls
2238080 -rw-rw-r-- 1 76 Feb 22 14:18 helloWorld.c
student@cis106:~/lab4files$ ls -Xr
sample.xls  Linux.pdf      document.docx  globe.avi
Tux.png     countries.json csvfile.csv
Ubuntu.pdf  website.html   helloWorld.c
student@cis106:~/lab4files$
```

Question 4

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

```
Lab 4 - The Linux Files... student@cis106: /etc

student@cis106: ~/Downloads
student@cis106: ~/lab4files

student@cis106:/etc$ cd ~/Downloads/
student@cis106:~/Downloads$ tree ../lab4files/ -fph
../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
student@cis106:~/Downloads$
```

Question 5


```

student@cis106: ~
student@cis106: ~ /lab4files

student@cis106:~$ 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.

LONG VIEW OPTIONS
  -b, --binary         list file sizes with binary prefixes
  -B, --bytes          list file sizes in bytes, without any prefixes
  -g, --group          list each file's group
  -h, --header         add a header row to each column
  -H, --links          list each file's number of hard links
  -i, --inode          list each file's inode number
  -m, --modified       use the modified timestamp field
  -n, --numeric        list numeric user and group IDs
  -S, --blocks         show number of file system blocks
  -t, --time FIELD     which timestamp field to list (modified, accessed, created)
  -u, --accessed       use the accessed timestamp field
  -U, --created        use the created timestamp field
  --changed            use the changed timestamp field
  --time-style         how to format timestamps (default, iso, long-iso, full-iso)
  --no-permissions     suppress the permissions field
  --octal-permissions  list each file's permission in octal format
  --no-filesize        suppress the filesize field
  --no-user            suppress the user field
  --no-time            suppress the time field
  --git               list each file's Git status, if tracked or ignored
  -@, --extended       list each file's extended attributes and sizes

student@cis106:~$

```

```

student@cis106: ~
student@cis106: ~ /lab4files

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

```

```
— globe.avi
— helloWorld.c
— Linux.pdf
— sample.xls
— Tux.png
— Ubuntu.pdf
— website.html
student@cis106:~$
```