

Lab 4 THe Linux fs

Question 1

Table 1

Directory	Function
bin	Essential commands.
dev	device files.
etc	systems configuration files.
home	Users home directory.
opt	add software package
proc	Kernel information process control system hardware information.
srv	Information relating to service that run on the system.
usr	software not essential for system operation such as applications.

Table 2

[Command] What it does | Syntax | Example |pwd | displaying the current working directory | pwd | /home/jdoe | |cd | changing the current working directory | cd+ downloads/ | /downloads\$ pwd| |ls | displaying all the field inside a given directory|-----| -----|

Screenshot



```
sabrina@cis106: ~  
abrina@cis106:~$ cd /home/sabrina/cis106-sp-22/  
abrina@cis106:~/cis106-sp-22$ cd /usr/share/themes/  
abrina@cis106:/usr/share/themes$ cd  
abrina@cis106:~$ pwd  
home/sabrina  
abrina@cis106:~$
```

```
abrina@cis106:~$ cd /home/sabrina/cis106-sp-22/  
abrina@cis106:~/cis106-sp-22$ cd /usr/share/themes/  
abrina@cis106:/usr/share/themes$ cd  
abrina@cis106:~$ pwd  
home/sabrina  
abrina@cis106:~$ cd ../  
abrina@cis106:/home$
```

```
rina@cis106:~$ cd /home/sabrina/cis106-sp-22/  
rina@cis106:~/cis106-sp-22$ cd /usr/share/themes/  
rina@cis106:/usr/share/themes$ cd  
rina@cis106:~$ pwd  
me/sabrina  
rina@cis106:~$ cd ../  
rina@cis106:/home$ cd /usr/share/  
rina@cis106:/usr/share$ ls /home/sabrina/lab4files/  
entries.json  document.docx  helloWorld.c  sample.xls  Ubuntu.pdf  
file.csv      globe.avi      Linux.pdf     Tux.png     website.html  
rina@cis106:/usr/share$
```

Question 2

```
Applications Places lab4.md - cis
File sabrina@cis106: /etc/firefox
sabrina@cis106:~$ pwd
/home/sabrina
sabrina@cis106:~$ cd /usr/share/themes/
sabrina@cis106:/usr/share/themes$ pwd
/usr/share/themes
sabrina@cis106:/usr/share/themes$ cd /
sabrina@cis106:/$ cd /etc/firefox/
sabrina@cis106:/etc/firefox$
```

```
Applications Places lab4.md -
File sabrina@cis106: ~/Documents
sabrina@cis106:/etc/firefox$ cd
sabrina@cis106:~$ cd Downloads/
sabrina@cis106:~/Downloads$ cd ../../
sabrina@cis106:/home$ pwd
/home
sabrina@cis106:/home$ cd sabrina/Documents/
sabrina@cis106:~/Documents$
```

Question 3

```
sabrina@cis106: ~/lab4files

sabrina@cis106:~$ cd /usr/share/
sabrina@cis106:/usr/share$ ls/home/sabrina/lab4files/
bash: ls/home/sabrina/lab4files/: No such file or directory
sabrina@cis106:/usr/share$ ls /home/sabrina/lab4files/
countries.json  document.docx  helloWorld.c  sample.xls  Ubuntu.pdf
csvfile.csv     globe.avi      Linux.pdf     Tux.png     website.html
sabrina@cis106:/usr/share$ cd ~/lab4files/
sabrina@cis106:~/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 sabrina sabrina 20K Feb 22 14:16 countries.json
-rw-rw-r-- 1 sabrina sabrina 278K Feb 22 14:15 csvfile.csv
-rw-rw-r-- 1 sabrina sabrina 747K Feb 22 14:13 document.docx
-rw-rw-r-- 1 sabrina sabrina 726K Feb 22 14:12 globe.avi
-rw-rw-r-- 1 sabrina sabrina 76 Feb 22 14:18 helloWorld.c
-rw-rw-r-- 1 sabrina sabrina 2.5M Feb 22 14:10 Linux.pdf
-rw-rw-r-- 1 sabrina sabrina 8.5K Feb 22 14:12 sample.xls
-rw-rw-r-- 1 sabrina sabrina 42K Feb 22 14:10 Tux.png
-rw-rw-r-- 1 sabrina sabrina 2.1M Feb 22 14:11 Ubuntu.pdf
-rw-rw-r-- 1 sabrina sabrina 135K Feb 22 14:16 website.html
sabrina@cis106:~/lab4files$ ls -lhS
total 6.5M
-rw-rw-r-- 1 sabrina sabrina 2.5M Feb 22 14:10 Linux.pdf
-rw-rw-r-- 1 sabrina sabrina 2.1M Feb 22 14:11 Ubuntu.pdf
-rw-rw-r-- 1 sabrina sabrina 747K Feb 22 14:13 document.docx
-rw-rw-r-- 1 sabrina sabrina 726K Feb 22 14:12 globe.avi
-rw-rw-r-- 1 sabrina sabrina 278K Feb 22 14:15 csvfile.csv
-rw-rw-r-- 1 sabrina sabrina 135K Feb 22 14:16 website.html
-rw-rw-r-- 1 sabrina sabrina 42K Feb 22 14:10 Tux.png
-rw-rw-r-- 1 sabrina sabrina 20K Feb 22 14:16 countries.json
-rw-rw-r-- 1 sabrina sabrina 8.5K Feb 22 14:12 sample.xls
sabrina@cis106:~/lab4files$ ls -lhSgGi
total 6.5M
2890383 -rw-rw-r-- 1 2.5M Feb 22 14:10 Linux.pdf
2890386 -rw-rw-r-- 1 2.1M Feb 22 14:11 Ubuntu.pdf
2890390 -rw-rw-r-- 1 747K Feb 22 14:13 document.docx
2890391 -rw-rw-r-- 1 726K Feb 22 14:12 globe.avi
2890388 -rw-rw-r-- 1 278K Feb 22 14:15 csvfile.csv
2890395 -rw-rw-r-- 1 135K Feb 22 14:16 website.html
2890380 -rw-rw-r-- 1 42K Feb 22 14:10 Tux.png
2890387 -rw-rw-r-- 1 20K Feb 22 14:16 countries.json
2890394 -rw-rw-r-- 1 8.5K Feb 22 14:12 sample.xls
2890392 -rw-rw-r-- 1 76 Feb 22 14:18 helloWorld.c
sabrina@cis106:~/lab4files$ ls -Xr
sample.xls  Ubuntu.pdf  countries.json  document.docx  helloWorld.c
Tux.png     Linux.pdf   website.html    csvfile.csv    globe.avi
sabrina@cis106:~/lab4files$
```

Question 4

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

```
sabrina@cis106:~/lab4files$ cd ~/Downloads/
sabrina@cis106:~/Downloads$ tree ../labfiles/ -fph
../labfiles [error opening dir]

0 directories, 0 files
sabrina@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
sabrina@cis106:~/Downloads$ tree ../lab4files/ -tug
../lab4files/
├── [sabrina sabrina ] Linux.pdf
├── [sabrina sabrina ] Tux.png
├── [sabrina sabrina ] Ubuntu.pdf
├── [sabrina sabrina ] sample.xls
├── [sabrina sabrina ] globe.avi
├── [sabrina sabrina ] document.docx
└── [sabrina sabrina ] csvfile.csv
```

```

0 directories, 10 files
sabrina@cis106:~/Downloads$ tree ../lab4files/ -tug
../lab4files/
├── [sabrina  sabrina ] Linux.pdf
├── [sabrina  sabrina ] Tux.png
├── [sabrina  sabrina ] Ubuntu.pdf
├── [sabrina  sabrina ] sample.xls
├── [sabrina  sabrina ] globe.avi
├── [sabrina  sabrina ] document.docx
├── [sabrina  sabrina ] csvfile.csv
├── [sabrina  sabrina ] countries.json
├── [sabrina  sabrina ] website.html
└── [sabrina  sabrina ] helloWorld.c

0 directories, 10 files
sabrina@cis106:~/Downloads$ tree ../lab4files/ -X
<?xml version="1.0" encoding="UTF-8"?>
<tree>
  <directory name="../lab4files/">
    <file name="countries.json"></file>
    <file name="csvfile.csv"></file>
    <file name="document.docx"></file>
    <file name="globe.avi"></file>
    <file name="helloWorld.c"></file>
    <file name="Linux.pdf"></file>
    <file name="sample.xls"></file>
    <file name="Tux.png"></file>

```

```

    <file name="Linux.pdf"></file>
    <file name="sample.xls"></file>
    <file name="Tux.png"></file>
    <file name="Ubuntu.pdf"></file>
    <file name="website.html"></file>
  </directory>
</report>
  <directories>0</directories>
  <files>10</files>
</report>
</tree>
sabrina@cis106:~/Downloads$ tree ../lab4files/ -J

{"type":"directory","name":"../lab4files/","contents":[
  {"type":"file","name":"countries.json"},
  {"type":"file","name":"csvfile.csv"},
  {"type":"file","name":"document.docx"},
  {"type":"file","name":"globe.avi"},
  {"type":"file","name":"helloWorld.c"},
  {"type":"file","name":"Linux.pdf"},
  {"type":"file","name":"sample.xls"},
  {"type":"file","name":"Tux.png"},
  {"type":"file","name":"Ubuntu.pdf"},
  {"type":"file","name":"website.html"}
]},
{"type":"report","directories":0,"files":10}

sabrina@cis106:~/Downloads$ █

```

Question 5

```
sabrina@cis106:~$ exa --help
sage:
exa [options] [files...]

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

DISPLAY OPTIONS
  -l, --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
  --color[ur]=WHEN    when to use terminal colours (always, auto, never)
  --color[ur]=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
```

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

```
sabrina@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
```

```
sabrina@cisl06:~$ exa -h
cis106-sp-22  Documents  exa.zip    Music      Public    Templates
Desktop      Downloads  lab4files  Pictures   snap      Videos
sabrina@cisl06:~$
```