

# Lab 4 The Linux FS

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## Question 1

```
jrodriguez4@cis106-VirtualBox: /snap/firefox
jrodriguez4@cis106-VirtualBox:~$ pwd
/home/jrodriguez4
jrodriguez4@cis106-VirtualBox:~$ cd /usr/s
sbin/  share/  src/
jrodriguez4@cis106-VirtualBox:~$ cd /usr/share//themes/
jrodriguez4@cis106-VirtualBox:/usr/share/themes$ pwd
/usr/share/themes
jrodriguez4@cis106-VirtualBox:/usr/share/themes$ cd /
jrodriguez4@cis106-VirtualBox:/$ cd /snap/firefox/
jrodriguez4@cis106-VirtualBox:/snap/firefox$
```

```
jrodriguez4@cis106-VirtualBox: ~/Documents
rodriguez4@cis106-VirtualBox:/snap/firefox$ cd
rodriguez4@cis106-VirtualBox:~$ cd Downloads/
rodriguez4@cis106-VirtualBox:~/Downloads$ cd ../../
rodriguez4@cis106-VirtualBox:/home$ pwd
home
rodriguez4@cis106-VirtualBox:/home$ cd jrodriguez4/
rodriguez4@cis106-VirtualBox:~$ cd Documents/
rodriguez4@cis106-VirtualBox:~/Documents$
```

## Question 2

```

jrodriguez4@cis106-VirtualBox:~$ cd /usr/shre
bash: cd /usr/shre: No such file or directory
jrodriguez4@cis106-VirtualBox:~$ cd /usr/share
bash: cd /usr/share: No such file or directory
jrodriguez4@cis106-VirtualBox:~$ pwd
/home/jrodriguez4
jrodriguez4@cis106-VirtualBox:~$ cd /usr/share/
jrodriguez4@cis106-VirtualBox:/usr/share$ ls ~/lab4files
countries.json  document.docx  helloWorld.c  sample.xls  Ubuntu.pdf
csvfile.csv    globe.avi      Linux.pdf     Tux.png     website.html
jrodriguez4@cis106-VirtualBox:/usr/share$ cd ~
jrodriguez4@cis106-VirtualBox:~$ cd ~/lab4files/
jrodriguez4@cis106-VirtualBox:~/lab4files$ ls -l
total 6580
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 20471 Feb 22 2022 countries.json
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 284042 Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 764176 Feb 22 2022 document.docx
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 742478 Feb 22 2022 globe.avi
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 2600138 Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 8704 Feb 22 2022 sample.xls
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 42777 Feb 22 2022 Tux.png
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 2114053 Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 137453 Feb 22 2022 website.html
jrodriguez4@cis106-VirtualBox:~/lab4files$ ls -lh
total 6.5M
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 76 Feb 22 2022 helloWorld.c
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 135K Feb 22 2022 website.html
jrodriguez4@cis106-VirtualBox:~/lab4files$ ls -lhs
total 6.5M
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 135K Feb 22 2022 website.html
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 jrodriguez4 jrodriguez4 76 Feb 22 2022 helloWorld.c
jrodriguez4@cis106-VirtualBox:~/lab4files$ ls -lhSg
total 6.5M
-rw-rw-r-- 1 2.5M Feb 22 2022 Linux.pdf
-rw-rw-r-- 1 2.1M Feb 22 2022 Ubuntu.pdf
-rw-rw-r-- 1 747K Feb 22 2022 document.docx
-rw-rw-r-- 1 726K Feb 22 2022 globe.avi
-rw-rw-r-- 1 278K Feb 22 2022 csvfile.csv
-rw-rw-r-- 1 135K Feb 22 2022 website.html
-rw-rw-r-- 1 42K Feb 22 2022 Tux.png
-rw-rw-r-- 1 20K Feb 22 2022 countries.json
-rw-rw-r-- 1 8.5K Feb 22 2022 sample.xls
-rw-rw-r-- 1 76 Feb 22 2022 helloWorld.c
jrodriguez4@cis106-VirtualBox:~/lab4files$ ls -Xr
sample.xls  Ubuntu.pdf  countries.json  document.docx  helloWorld.c
Tux.png     Linux.pdf   website.html    csvfile.csv    globe.avi
jrodriguez4@cis106-VirtualBox:~/lab4files$

```

## Question 4

```

rodriguez4@cis106-VirtualBox:/$ pwd
rodriguez4@cis106-VirtualBox:/$ cd /usr/share/icons/default/
rodriguez4@cis106-VirtualBox:/usr/share/icons/default$ cd /proc/sys/ipv4
bash: cd: /proc/sys/ipv4: No such file or directory
rodriguez4@cis106-VirtualBox:/usr/share/icons/default$ cd /proc/
rodriguez4@cis106-VirtualBox:/proc$ ls
    1526  1702  1847  1970  2253  3515  4328  53   608  acpi          irq          schedstat
    1527  1708  1852  1986  2271  36    44    54   61  bootconfig   kallsyms     scsi
    1528  1714  1855  1999  2272  3658  45    542  619  buddyinfo    kcore        self
    1538  1728  1856  2    2280  3683  4516  543  628  bus           keys          slabinfo
    1546  1731  1857  20    2281  37    4559  545  63   cgroups      key-users     softirqs
    1553  1739  1858  2027  23    376   4560  546  64   cmdline      kmsg          stat
    1558  1745  1859  2046  236   38    4571  547  665  consoles     kpagecgroup   swaps
    1559  1780  1860  21    2522  3836  4584  548  676  cpuinfo      kpagecount    sys
    1570  1786  1876  2116  26    3872  4599  55   693  crypto        kpageflags     sysrq-trigger
    1576  1791  1877  2118  269   39    4666  554  697  devices       loadavg        sysvipc
    1595  1797  1880  2121  27    4     47    56   699  diskstats    locks          thread-self
    1598  1802  1881  2135  274   40    4719  569  70   dma           mdstat         timer_list
    16    1808  189   2139  275   402   4737  570  717  driver        meminfo        tty
    1613  1810  19    2166  28    41    4752  571  72   dynamic_debug misc           uptime
    1651  1818  1917  2167  29    419   4794  572  73   execdomains  modules        version
    1668  1824  1943  22    3     42    48    578  77   fb            mounts         version_signature
    1669  1825  1953  220   31    4225  49    584  787  filesystems   mtrr          vmallocinfo
    1685  1827  1954  2204  33    4226  5     588  8    fs            net            vmstat
    1686  1832  1958  2219  3351  4228  50    595  822  interrupts    pagetypeinfo  zoneinfo
    1692  1833  1961  2249  34    4232  51    6    823  iomem          partitions
    17    1834  1962  2252  35    43    52    60   848  ioports       pressure
rodriguez4@cis106-VirtualBox:/proc$ cd sys
rodriguez4@cis106-VirtualBox:/proc/sys$ cd ipv4
bash: cd: ipv4: No such file or directory
rodriguez4@cis106-VirtualBox:/proc/sys$ cd Ipv4
bash: cd: Ipv4: No such file or directory
rodriguez4@cis106-VirtualBox:/proc/sys$ cd ipv4
bash: cd: ipv4: No such file or directory
rodriguez4@cis106-VirtualBox:/proc/sys$
rodriguez4@cis106-VirtualBox:/proc/sys$ ls
abi debug dev fs kernel net user vm
rodriguez4@cis106-VirtualBox:/proc/sys$ cd net
rodriguez4@cis106-VirtualBox:/proc/sys/net$ cd ipv4
rodriguez4@cis106-VirtualBox:/proc/sys/net/ipv4$ cd ../
rodriguez4@cis106-VirtualBox:/proc/sys/net$ ls /usr/share/backgrounds/
Blue_flower_by_Elena_Stravoravdi.jpg      jj_light_by_Hiking93.jpg
canvas_by_roytanck.jpg                    Mirror_by_Uday_Nakade.jpg
Cherry_Tree_in_Lakones_by_elenastravoravdi.jpg  Optical_Fibers_in_Dark_by_Elena_Stravoravdi.jpg
contest                                     ubuntu2_by_arman1992.jpg
DSC2943_by_kcpru.jpg                      ubuntu_by_arman1992.jpg
Jammy-Jellyfish_WP_4096x2304_Grey.png       ubuntu-default-greyscale-wallpaper.png
jj_dark_by_Hiking93.jpg                   warty-final-ubuntu.png
rodriguez4@cis106-VirtualBox:/proc/sys/net$ ls ~/cis106/
Cheatsheets      resume_submission.pdf      what_is_ubuntu_submission.md
labs              'Screenshot from 2023-10-11 19-28-38.png'  what_is_ubuntu_submission.pdf
resume_submission.md  weekReports
rodriguez4@cis106-VirtualBox:/proc/sys/net$ ls ~/Downloads/
code_1.82.2-1694671812_amd64.deb      practicels
Games                                  practicels.tar.xz
'Linux Workshop Ubuntu Software installation cheat sheet.png'
rodriguez4@cis106-VirtualBox:/proc/sys/net$ cd ~
rodriguez4@cis106-VirtualBox:~$ ls Downloads/
code_1.82.2-1694671812_amd64.deb      practicels
Games                                  practicels.tar.xz
'Linux Workshop Ubuntu Software installation cheat sheet.png'
rodriguez4@cis106-VirtualBox:~$ cd /dev/disk/by-id/
rodriguez4@cis106-VirtualBox:/dev/disk/by-id$ ls -la
total 0
drwxr-xr-x 2 root root 140 Oct 24 16:05 .
drwxr-xr-x 7 root root 140 Oct 24 16:05 ..
lrwxrwxrwx 1 root root   9 Oct 24 16:05 ata-VBOX_CD-ROM_VB2-01700376 -> ../../sr0
lrwxrwxrwx 1 root root   9 Oct 24 16:05 ata-VBOX_HARDDISK_VBa9d42bb1-830b4208 -> ../../sda
lrwxrwxrwx 1 root root  10 Oct 24 16:05 ata-VBOX_HARDDISK_VBa9d42bb1-830b4208-part1 -> ../../sda1
lrwxrwxrwx 1 root root  10 Oct 24 16:05 ata-VBOX_HARDDISK_VBa9d42bb1-830b4208-part2 -> ../../sda2
lrwxrwxrwx 1 root root  10 Oct 24 16:05 ata-VBOX_HARDDISK_VBa9d42bb1-830b4208-part3 -> ../../sda3
rodriguez4@cis106-VirtualBox:/dev/disk/by-id$ ls -t /usr/share/themes
ls-t: command not found
rodriguez4@cis106-VirtualBox:/dev/disk/by-id$ ls -t /usr/share/themes
Yaru          Yaru-dark-hdpi      Yaru-olive-dark      Yaru-red-dark        Default
Yaru-bark     Yaru-dark-xhdpi     Yaru-sage             Yaru-sage            Emacs
Yaru-bark-dark Yaru-hdpi           Yaru-prussiangreen-dark Yaru-sage-dark       Raleigh
Yaru-blue     Yaru-magenta        Yaru-purple           Yaru-viridian        Adwaita
Yaru-blue-dark Yaru-magenta-dark   Yaru-purple-dark      Yaru-viridian-dark   Adwaita-dark
Yaru-dark     Yaru-olive          Yaru-red              Yaru-xhdpi           HighContrast

```

```

SC2943_by_kcpro.jpg          ubuntu_by_arman1992.jpg
ammy-Jellyfish_WP_4096x2304_Grey.png  ubuntu-default-greyscale-wallpaper.png
j_dark_by_Hiking93.jpg       warty-final-ubuntu.png
rodriguez4@cis106-VirtualBox:/proc/sys/net$ ls ~/cis106/
Cheatsheets                  resume_submission.pdf          what_is_ubuntu_submission.md
labs                        'Screenshot from 2023-10-11 19-28-38.png'  what_is_ubuntu_submission.pdf
resume_submission.md        weekReports
rodriguez4@cis106-VirtualBox:/proc/sys/net$ ls ~/Downloads/
code_1.82.2-1694671812_amd64.deb      practicels
Games                                  practicels.tar.xz
Linux Workshop Ubuntu Software installation cheat sheet.png'
rodriguez4@cis106-VirtualBox:/proc/sys/net$ cd ~
rodriguez4@cis106-VirtualBox:~$ ls Downloads/
code_1.82.2-1694671812_amd64.deb      practicels
Games                                  practicels.tar.xz
Linux Workshop Ubuntu Software installation cheat sheet.png'
rodriguez4@cis106-VirtualBox:~$ cd /dev/disk/by-id/
rodriguez4@cis106-VirtualBox:/dev/disk/by-id$ ls -la
total 0
-rwxr-xr-x 2 root root 140 Oct 24 16:05 .
-rwxr-xr-x 7 root root 140 Oct 24 16:05 ..
-rwxrwxrwx 1 root root 9 Oct 24 16:05 ata-VBOX_CD-ROM_VB2-01700376 -> ../../sr0
-rwxrwxrwx 1 root root 9 Oct 24 16:05 ata-VBOX_HARDDISK_VBa9d42bb1-830b4208 -> ../../sda
-rwxrwxrwx 1 root root 10 Oct 24 16:05 ata-VBOX_HARDDISK_VBa9d42bb1-830b4208-part1 -> ../../sda1
-rwxrwxrwx 1 root root 10 Oct 24 16:05 ata-VBOX_HARDDISK_VBa9d42bb1-830b4208-part2 -> ../../sda2
-rwxrwxrwx 1 root root 10 Oct 24 16:05 ata-VBOX_HARDDISK_VBa9d42bb1-830b4208-part3 -> ../../sda3
rodriguez4@cis106-VirtualBox:/dev/disk/by-id$ ls -t /usr/share/themes
ls-t: command not found
rodriguez4@cis106-VirtualBox:/dev/disk/by-id$ ls -t /usr/share/themes
Yaru                    Yaru-dark-hdpi          Yaru-olive-dark          Yaru-red-dark            Default
Yaru-bark               Yaru-dark-xhdpi         Yaru-prussiangreen       Yaru-sage                 Emacs
Yaru-bark-dark          Yaru-hdpi               Yaru-prussiangreen-dark  Yaru-sage-dark           Raleigh
Yaru-blue               Yaru-magenta            Yaru-purple              Yaru-viridian            Adwaita
Yaru-blue-dark          Yaru-magenta-dark       Yaru-purple-dark         Yaru-viridian-dark       Adwaita-dark
Yaru-dark               Yaru-olive              Yaru-red                 Yaru-xhdpi               HighContrast
rodriguez4@cis106-VirtualBox:/dev/disk/by-id$ ls -X /usr/share/themes
Adwaita                Yaru                   Yaru-dark-hdpi          Yaru-olive-dark          Yaru-red-dark
Adwaita-dark           Yaru-bark              Yaru-dark-xhdpi        Yaru-prussiangreen       Yaru-sage
Default                Yaru-bark-dark         Yaru-hdpi              Yaru-prussiangreen-dark  Yaru-sage-dark
Emacs                  Yaru-blue              Yaru-magenta           Yaru-purple              Yaru-viridian
HighContrast           Yaru-blue-dark         Yaru-magenta-dark      Yaru-purple-dark         Yaru-viridian-dark
Raleigh               Yaru-dark              Yaru-olive              Yaru-red                 Yaru-xhdpi
rodriguez4@cis106-VirtualBox:/dev/disk/by-id$

```

## Question 5

```
jrodriguez4@cis106-VirtualBox:/dev/disk/by-id$ cd ../../../../
jrodriguez4@cis106-VirtualBox:/$ pwd
/
jrodriguez4@cis106-VirtualBox:/$ cd home
jrodriguez4@cis106-VirtualBox:/home$ cd jrodriguez4/
jrodriguez4@cis106-VirtualBox:~$ cd Downloads/
jrodriguez4@cis106-VirtualBox:~/Downloads$ pwd
/home/jrodriguez4/Downloads
jrodriguez4@cis106-VirtualBox:~/Downloads$
```

```
jrodriguez4@cis106-VirtualBox:/dev/disk/by-id$ cd ../../../../
jrodriguez4@cis106-VirtualBox:/$ pwd
/
jrodriguez4@cis106-VirtualBox:/$ cd home
jrodriguez4@cis106-VirtualBox:/home$ cd jrodriguez4/
jrodriguez4@cis106-VirtualBox:~$ cd Downloads/
jrodriguez4@cis106-VirtualBox:~/Downloads$ pwd
/home/jrodriguez4/Downloads
jrodriguez4@cis106-VirtualBox:~/Downloads$ cd /usr/share/themes/Adwaita
jrodriguez4@cis106-VirtualBox:/usr/share/themes/Adwaita$ cd /home/jrodriguez4/Documents/
jrodriguez4@cis106-VirtualBox:~/Documents$ pwd
/home/jrodriguez4/Documents
jrodriguez4@cis106-VirtualBox:~/Documents$
```