

# Question 1

```
cis106@cis106-standardpci440fxpiix1996:~$ ls /etc/*.conf
etc/akm.conf           /etc/fuse.conf        /etc/libva.conf       /etc/named.conf       /etc/pcurses.conf     /etc/sudo.conf
etc/atmsigd.conf       /etc/gai.conf         /etc/locale.conf      /etc/nfs.conf         /etc/reflector-simple.conf /etc/sudo_logsrvd.conf
etc/brltty.conf        /etc/healthd.conf     /etc/logrotate.conf   /etc/nfsmount.conf    /etc/reflector-simple-tool.conf /etc/ts.conf
etc/dnsmasq.conf       /etc/host.conf        /etc/makepkg.conf     /etc/nlfs_cleanerd.conf /etc/request-key.conf  /etc/updatedb.conf
etc/e2scrub.conf       /etc/imapd.conf       /etc/man_db.conf      /etc/nscd.conf        /etc/resolv.conf       /etc/usb_modeswitch.conf
etc/eos-rankmirrors.conf /etc/krb5.conf        /etc/mdadm.conf       /etc/nsswitch.conf    /etc/resolvconf.conf   /etc/vconsole.conf
etc/eos-script-lib-yad.conf /etc/ld.so.conf      /etc/mke2fs.conf      /etc/ntp.conf         /etc/rsyncd.conf       /etc/whois.conf
etc/eos-sendlog.conf   /etc/libao.conf       /etc/mkinitcpio.conf  /etc/openswap.conf    /etc/sensors3.conf     /etc/xattr.conf
etc/eos-update-notifier.conf /etc/libaudit.conf  /etc/mttools.conf     /etc/pacman.conf      /etc/smartd.conf

cis106@cis106-standardpci440fxpiix1996:~$

cis106@cis106-standardpci440fxpiix1996:~$ ls /etc/*.conf
etc/akm.conf           /etc/fuse.conf        /etc/libva.conf       /etc/named.conf       /etc/pcurses.conf     /etc/sudo.conf
etc/atmsigd.conf       /etc/gai.conf         /etc/locale.conf      /etc/nfs.conf         /etc/reflector-simple.conf /etc/sudo_logsrvd.conf
etc/brltty.conf        /etc/healthd.conf     /etc/logrotate.conf   /etc/nfsmount.conf    /etc/reflector-simple-tool.conf /etc/ts.conf
etc/dnsmasq.conf       /etc/host.conf        /etc/makepkg.conf     /etc/nlfs_cleanerd.conf /etc/request-key.conf  /etc/updatedb.conf
etc/e2scrub.conf       /etc/imapd.conf       /etc/man_db.conf      /etc/nscd.conf        /etc/resolv.conf       /etc/usb_modeswitch.conf
etc/eos-rankmirrors.conf /etc/krb5.conf        /etc/mdadm.conf       /etc/nsswitch.conf    /etc/resolvconf.conf   /etc/vconsole.conf
etc/eos-script-lib-yad.conf /etc/ld.so.conf      /etc/mke2fs.conf      /etc/ntp.conf         /etc/rsyncd.conf       /etc/whois.conf
etc/eos-sendlog.conf   /etc/libao.conf       /etc/mkinitcpio.conf  /etc/openswap.conf    /etc/sensors3.conf     /etc/xattr.conf
etc/eos-update-notifier.conf /etc/libaudit.conf  /etc/mttools.conf     /etc/pacman.conf      /etc/smartd.conf

cis106@cis106-standardpci440fxpiix1996:~$ ls -lgHs --time-style=+%D /etc/h*.conf /etc/p*.conf
-rw-r--r-- 1 3.0K 12/16/21 /etc/pacman.conf
-rw-r--r-- 1 809 12/30/21 /etc/pcurses.conf
-rw-r--r-- 1 450 02/18/21 /etc/healthd.conf
-rw-r--r-- 1 73 12/06/21 /etc/host.conf

cis106@cis106-standardpci440fxpiix1996:~$

[cis106@cis106-standardpci440fxpiix1996 ~]$ mkdir lab6/log-files
[cis106@cis106-standardpci440fxpiix1996 ~]$ mv lab6/*.log lab6/log-files/
[cis106@cis106-standardpci440fxpiix1996 ~]$
```

```

cis106@cis106-standardpci440fxpiix1996:~
[ cis106@cis106-standardpci440fxpiix1996 ~]$ ls -aR /usr/share/themes/ h*.theme
ls: cannot access 'h*.theme': No such file or directory
/usr/share/themes/:
.
..
Adwaita
Adwaita-dark
Arc
Arc-Dark
Arc-Darker
Arc-Lighter
Default
Emacs
Graphite
Graphite-blue
Graphite-blue-compact
Graphite-blue-compact-hdpi
Graphite-blue-compact-xhdpi
Graphite-blue-dark
Graphite-blue-dark-compact
Graphite-blue-dark-compact-hdpi
Graphite-blue-dark-compact-xhdpi
Graphite-blue-dark-hdpi
Graphite-blue-light
Graphite-blue-light-compact
Graphite-blue-light-compact-hdpi
Graphite-blue-light-compact-xhdpi
Graphite-blue-light-hdpi
Graphite-blue-light-xhdpi
Graphite-blue-xhdpi
Graphite-compact
Graphite-compact-hdpi
Graphite-compact-xhdpi
Graphite-dark
Graphite-green-dark-compact-hdpi
Graphite-green-dark-compact-xhdpi
Graphite-green-dark-hdpi
Graphite-green-dark-xhdpi
Graphite-green-hdpi
Graphite-green-light
Graphite-green-light-compact
Graphite-green-light-compact-hdpi
Graphite-green-light-compact-xhdpi
Graphite-green-light-hdpi
Graphite-green-light-xhdpi
Graphite-green-xhdpi
Graphite-hdpi
Graphite-light
Graphite-light-compact
Graphite-light-compact-hdpi
Graphite-light-compact-xhdpi
Graphite-light-hdpi
Graphite-light-xhdpi
Graphite-orange
Graphite-orange-compact
Graphite-orange-compact-hdpi
Graphite-orange-compact-xhdpi
Graphite-orange-dark
Graphite-orange-dark-compact
Graphite-orange-dark-compact-hdpi
Graphite-orange-dark-compact-xhdpi
Graphite-orange-dark-hdpi
Graphite-orange-dark-xhdpi
Graphite-orange-hdpi
Graphite-orange-light
Graphite-orange-light-compact
Graphite-orange-light-compact-hdpi
Graphite-pink-dark-compact-xhdpi
Graphite-pink-dark-hdpi
Graphite-pink-dark-xhdpi
Graphite-pink-hdpi
Graphite-pink-light
Graphite-pink-light-compact
Graphite-pink-light-compact-hdpi
Graphite-pink-light-compact-xhdpi
Graphite-pink-light-hdpi
Graphite-pink-light-xhdpi
Graphite-pink-xhdpi
Graphite-purple
Graphite-purple-compact
Graphite-purple-compact-hdpi
Graphite-purple-compact-xhdpi
Graphite-purple-dark
Graphite-purple-dark-compact
Graphite-purple-dark-compact-hdpi
Graphite-purple-dark-compact-xhdpi
Graphite-purple-dark-hdpi
Graphite-purple-dark-xhdpi
Graphite-purple-hdpi
Graphite-purple-light
Graphite-purple-light-compact
Graphite-purple-light-compact-hdpi
Graphite-purple-light-compact-xhdpi
Graphite-purple-light-hdpi
Graphite-purple-light-xhdpi
Graphite-red
Graphite-red-compact
Graphite-red-compact-hdpi
Graphite-red-compact-xhdpi
Graphite-red-light-hdpi
Graphite-red-light-xhdpi
Graphite-red-xhdpi
Graphite-teal
Graphite-teal-compact
Graphite-teal-compact-hdpi
Graphite-teal-compact-xhdpi
Graphite-teal-dark
Graphite-teal-dark-compact
Graphite-teal-dark-compact-hdpi
Graphite-teal-dark-compact-xhdpi
Graphite-teal-dark-hdpi
Graphite-teal-dark-xhdpi
Graphite-teal-hdpi
Graphite-teal-light
Graphite-teal-light-compact
Graphite-teal-light-compact-hdpi
Graphite-teal-light-compact-xhdpi
Graphite-teal-light-hdpi
Graphite-teal-light-xhdpi
Graphite-teal-xhdpi
Graphite-yellow
Graphite-yellow-compact
Graphite-yellow-compact-hdpi
Graphite-yellow-compact-xhdpi
Graphite-yellow-dark
Graphite-yellow-dark-compact
Graphite-yellow-dark-compact-hdpi
Graphite-yellow-dark-compact-xhdpi
Graphite-yellow-dark-hdpi
Graphite-yellow-dark-xhdpi
Graphite-yellow-hdpi

```

```

cis106@cis106-standardpci440fxpiix1996:~
Graphite-dark-compact
Graphite-dark-compact-hdpi
Graphite-dark-compact-xhdpi
Graphite-dark-hdpi
Graphite-dark-xhdpi
Graphite-green
Graphite-green-compact
Graphite-green-compact-hdpi
Graphite-green-compact-xhdpi
Graphite-green-dark
Graphite-green-dark-compact
Graphite-orange-light-compact-xhdpi
Graphite-orange-light-hdpi
Graphite-orange-light-xhdpi
Graphite-orange-xhdpi
Graphite-pink
Graphite-pink-compact
Graphite-pink-compact-hdpi
Graphite-pink-compact-xhdpi
Graphite-pink-dark
Graphite-pink-dark-compact
Graphite-pink-dark-compact-hdpi
Graphite-red-dark
Graphite-red-dark-compact
Graphite-red-dark-compact-hdpi
Graphite-red-dark-compact-xhdpi
Graphite-red-dark-hdpi
Graphite-red-dark-xhdpi
Graphite-red-hdpi
Graphite-red-light
Graphite-red-light-compact
Graphite-red-light-compact-hdpi
Graphite-red-light-compact-xhdpi
Graphite-yellow-light
Graphite-yellow-light-compact
Graphite-yellow-light-compact-hdpi
Graphite-yellow-light-compact-xhdpi
Graphite-yellow-light-hdpi
Graphite-yellow-light-xhdpi
Graphite-yellow-xhdpi
HighContrast

/usr/share/themes/Adwaita:
. .. gtk-2.0 gtk-3.0 index.theme

/usr/share/themes/Adwaita/gtk-2.0:
. .. apps.rc assets gtkrc hacks.rc main.rc

/usr/share/themes/Adwaita/gtk-2.0/assets:
. handle.png
. handle-vert.png
border.png line.png
button-active.png menubar-item-active.png
button-hover.png menu-border.png
button-insensitive.png menu-checkbox-checked-hover.png
button.png menu-checkbox-checked-insensitive.png
checkbox-checked-active.png menu-checkbox-checked.png
checkbox-checked-hover.png menu-checkbox-checked-hdpi
checkbox-checked-insensitive.png menu-checkbox-insensitive.png
checkbox-checked.png menu-checkbox-mixed-hover.png
checkbox-mixed-active.png menu-checkbox-mixed-insensitive.png
checkbox-mixed-hover.png menu-checkbox-mixed.png
checkbox-mixed-insensitive.png menu-checkbox.png
checkbox-mixed.png menu-pan-down-insensitive.png
checkbox-unchecked-active.png menu-pan-down.png
checkbox-unchecked-hover.png menu-pan-left-hover.png
pan-down.png pan-left-insensitive.png
pan-left.png pan-left-semi.png
pan-right-insensitive.png pan-right.png
pan-right-semi.png pan-up-insensitive.png
pan-up.png progressbar-horz.png
progressbar-horz-trough.png progressbar-vert.png
progressbar-vert-trough.png radio-checked-active.png
radio-checked-hover.png radio-checked-insensitive.png
radio-checked.png scrollbar-vert-slider-rtl.png
scrollbar-vert-trough.png scrollbar-vert-trough-rtl.png
spin-down-insensitive.png spin-down.png
spin-ltr-down-active.png spin-ltr-down-hover.png
spin-ltr-down-insensitive.png spin-ltr-down.png
spin-ltr-up-active.png spin-ltr-up-hover.png
spin-ltr-up-insensitive.png spin-ltr-up.png
spin-rtl-down-active.png spin-rtl-down-hover.png
spin-rtl-down-insensitive.png spin-rtl-down.png

```

```

cis106@cis106-standardpci440fxpiix1996:~
cis106@cis106-standardpci440fxpiix1996:~
button-insensitive.png      menu-checkbox-checked-hover.png      pan-right.png               spin-ltr-down-active.png
button.png                  menu-checkbox-checked-insensitive.png pan-right-semi.png          spin-ltr-down-hover.png
checkbox-checked-active.png    menu-checkbox-checked.png             pan-up-insensitive.png      spin-ltr-down-insensitive.png
checkbox-checked-hover.png     menu-checkbox-hover.png               progressbar-horz.png         spin-ltr-down.png
checkbox-checked-insensitive.png menu-checkbox-mixed-hover.png          progressbar-horz-trough.png spin-ltr-up-active.png
checkbox-checked.png           menu-checkbox-mixed-insensitive.png     progressbar-vert.png         spin-ltr-up-hover.png
checkbox-mixed-active.png      menu-checkbox-mixed.png                progressbar-vert-trough.png spin-ltr-up-insensitive.png
checkbox-mixed-hover.png       menu-checkbox.png                      radio-checked-active.png     spin-rtl-down-active.png
checkbox-mixed-insensitive.png menu-pan-down-insensitive.png          radio-checked-hover.png     spin-rtl-down-hover.png
checkbox-mixed.png             menu-pan-down.png                     radio-checked-insensitive.png spin-rtl-down-insensitive.png
checkbox-unchecked-active.png  menu-pan-left-hover.png                radio-checked.png            spin-rtl-down.png
checkbox-unchecked-hover.png   menu-pan-left-insensitive.png          radio-mixed-active.png       spin-rtl-up-active.png
checkbox-unchecked-insensitive.png menu-pan-left.png                      radio-mixed-hover.png        spin-rtl-up-hover.png
checkbox-unchecked.png         menu-pan-right-hover.png               radio-mixed-insensitive.png  spin-rtl-up-insensitive.png
combo-entry-ltr-button-active.png menu-pan-right-insensitive.png       radio-mixed.png              spin-rtl-up.png
combo-entry-ltr-button-hover.png menu-pan-right.png                    radio-unchecked-active.png    spin-up-insensitive.png
combo-entry-ltr-button-insensitive.png menu-pan-up-insensitive.png          radio-unchecked-hover.png     spin-up.png
combo-entry-ltr-button.png   menu-pan-up.png                       radio-unchecked-insensitive.png tab-down-active.png
combo-entry-ltr-entry-active.png menu-radio-checked-hover.png          radio-unchecked.png           tab-down.png
combo-entry-ltr-entry-insensitive.png menu-radio-checked-insensitive.png    scale-horz-focus.png          tab-horz-gap.png
combo-entry-ltr-entry.png    menu-radio-checked.png                 scale-horz-trough-active.png tab-left-active.png
combo-entry-rtl-button-active.png menu-radio-hover.png                  scale-horz-trough.png         tab-left.png
combo-entry-rtl-button-hover.png menu-radio-insensitive.png            scale-slider-active.png       tab-right-active.png
combo-entry-rtl-button-insensitive.png menu-radio-mixed-hover.png            scale-slider-hover.png        tab-right.png
combo-entry-rtl-button.png   menu-radio-mixed-insensitive.png       scale-slider-insensitive.png tab-up-active.png
combo-entry-rtl-entry-active.png menu-radio-mixed.png                  scale-slider.png              tab-up.png
combo-entry-rtl-entry-insensitive.png menu-radio.png                        scale-vert-trough-active.png  tab-vert-gap.png
combo-entry-rtl-entry.png     notebook-combo-entry-ltr-entry-active.png scale-vert-trough.png         treeview-pan-down-active.png
entry-active.png             notebook-combo-entry-ltr-entry-insensitive.png scrollbar-horz-slider-active.png treeview-pan-down-hover.png
entry-background.png         notebook-combo-entry-ltr-entry.png      scrollbar-horz-slider-hover.png treeview-pan-down.png
entry-insensitive.png        notebook-combo-entry-rtl-entry-active.png scrollbar-horz-slider.png      treeview-pan-up-active.png
entry.png                    notebook-combo-entry-rtl-entry-insensitive.png scrollbar-horz-trough.png      treeview-pan-up-hover.png
focus.png                   notebook-combo-entry-rtl-entry.png       scrollbar-vert-slider-active.png treeview-pan-up.png
frame-inline.png             notebook-combo-entry-active.png          scrollbar-vert-slider-active-rtl.png treeview-separator-ltr.png
frame-notebook.png           notebook-entry-insensitive.png          scrollbar-vert-slider-hover.png treeview-separator-rtl.png

```

```

/usr/share/themes/HighContrast:
total 8.0K
drwxr-xr-x 1 root root  50 Mar  2 19:24 .
drwxr-xr-x 1 root root 7.9K Mar  6 01:05 ..
drwxr-xr-x 1 root root  10 Mar  2 19:24 gtk-2.0
drwxr-xr-x 1 root root  14 Mar  2 19:24 gtk-3.0
-rw-r--r-- 1 root root 6.0K Dec 12 16:38 index.theme

/usr/share/themes/HighContrast/gtk-2.0:
total 4.0K
drwxr-xr-x 1 root root  10 Mar  2 19:24 .
drwxr-xr-x 1 root root  50 Mar  2 19:24 ..
-rw-r--r-- 1 root root 2.0K Dec 12 16:38 gtkrc

/usr/share/themes/HighContrast/gtk-3.0:
total 4.0K
drwxr-xr-x 1 root root 14 Mar  2 19:24 .
drwxr-xr-x 1 root root 50 Mar  2 19:24 ..
-rw-r--r-- 1 root root 70 Dec 12 16:38 gtk.css
[cis106@cis106-standardpci440fxpiix1996 ~]$

```

```

cis106@cis106-standardpci440fxpiix1996:~
[cis106@cis106-standardpci440fxpiix1996 ~]$ ls -A lab6/log-files/*.log
lab6/log-files/88_Application-log.log
lab6/log-files/apache01-error.log
lab6/log-files/apache22.log
lab6/log-files/endeavour-install.log
lab6/log-files/grub-fix-initrd-generation.log
lab6/log-files/httpd04.log
lab6/log-files/pacman.log
[cis106@cis106-standardpci440fxpiix1996 ~]$

```

## Question 2

```
cis106@cis106-standardpci440fxpiix1996:~  
[cis106@cis106-standardpci440fxpiix1996 ~]$ ls -A lab6/.*?  
lab6/.appveyor.yml  lab6/.dir-locals.el  lab6/.gitattributes  lab6/.jscs.json      lab6/.meta.isrunning  lab6/.PKGINFO      lab6/.travis.yml  
lab6/.auto-changelog  lab6/.editorconfig  lab6/.gitconfig      lab6/.jscsrc         lab6/.min-wd          lab6/.prettierrc.yml  lab6/.vsixmanifest  
lab6/.bash_history    lab6/.envrc          lab6/.gitignore      lab6/.jshintignore    lab6/.MTREE           lab6/.prettierrc.yaml  
lab6/.bash_logout    lab6/.eslintignore   lab6/.gitkeep        lab6/.jshintrc       lab6/.npmignore       lab6/.SRCINFO  
lab6/.bash_profile    lab6/.eslintrc       lab6/.gitmodules     lab6/.keep           lab6/.nycrc           lab6/.startup-incomplete  
lab6/.bashrc          lab6/.eslintrc.js    lab6/.hidden         lab6/.landscape.yml  lab6/.obsolete        lab6/.tern-project  
lab6/.BUILDDINFO     lab6/.eslintrc.json  lab6/.htaccess       lab6/.lessshst       lab6/.padding         lab6/.tm_properties  
lab6/.coveralls.yml  lab6/.eslintrc.yml  lab6/.istanbul.yml  lab6/.metadata-v2    lab6/.parentlock     lab6/.tonic_example.js  
[cis106@cis106-standardpci440fxpiix1996 ~]$  
  
[cis106@cis106-standardpci440fxpiix1996 ~]$ ls -A lab6/  
.25Games.lst      .BUILDDINFO      .eslintrc.js    file_04.sh      .htaccess      .landscape.yml  .min-wd      .prettierrc.yml  q1.png      trip22-info.doc  
apache03.err      .coveralls.yml  .eslintrc.json  file_05.sh      .istanbul.yml  last.txt       .MTREE      .prettierrc.yaml  q2.1.png      .vsixmanifest  
appveyor.yml      .dir-locals.el  .eslintrc.yml  .gitattributes  .jscs.json     .lessshst     .npmignore   q1.2.png      .SRCINFO  
auto-changelog    Document.doc     Expenses.xls    .gitconfig      .jscsrc        list.txt       .nycrc       q1.3.png      .startup-incomplete  
bash_history      .editorconfig   file_00.sh     .gitignore      .jshintignore   log-files      .obsolete    q1.4.png      .tern-project  
bash_logout       .envrc          file_01.sh     .gitkeep        .jshintrc      lost.txt       .padding     q1.5.png      .tm_properties  
bash_profile      .eslintignore   file_02.sh     .gitmodules     .keep          .metadata-v2   .parentlock  q1.6.png      .tonic_example.js  
bashrc            .eslintrc       file_03.sh     .hidden         lab6.md        .meta.isrunning .PKGINFO     q1.7.png      .travis.yml  
[cis106@cis106-standardpci440fxpiix1996 ~]$ ls -A lab6/*.*?  
lab6/file_00.sh  lab6/file_01.sh  lab6/file_02.sh  lab6/file_03.sh  lab6/file_04.sh  lab6/file_05.sh  lab6/lab6.md  
[cis106@cis106-standardpci440fxpiix1996 ~]$  
  
[cis106@cis106-standardpci440fxpiix1996 lab6]$ ls -d l*st*?  
last.txt  list.txt  lost.txt  
[cis106@cis106-standardpci440fxpiix1996 lab6]$
```

## Question 3

```

cis106@cis106-standardpci440fxpiix1996:~$ ls lab6/[A-Z]*
lab6/Document.doc  lab6/Expenses.xls
cis106@cis106-standardpci440fxpiix1996:~$ ls lab6/*[0-9]*
lab6/25Games.lst  lab6/file_01.sh  lab6/file_04.sh  lab6/q1.2.png  lab6/q1.5.png  lab6/q1.8.png  lab6/q2.2.png  lab6/trip22-info.doc
lab6/apache03.err  lab6/file_02.sh  lab6/file_05.sh  lab6/q1.3.png  lab6/q1.6.png  lab6/q1.png  lab6/q2.3.png
lab6/file_00.sh  lab6/file_03.sh  lab6/lab6.md  lab6/q1.4.png  lab6/q1.7.png  lab6/q2.1.png  lab6/q2.4.png
cis106@cis106-standardpci440fxpiix1996:~$ ls lab6/[A-Z0-9]*
lab6/25Games.lst  lab6/Document.doc  lab6/Expenses.xls
cis106@cis106-standardpci440fxpiix1996:~$
```

## Question 4

```

cis106@cis106-standardpci440fxpiix1996:~/lab6$ cd lab6/
cis106@cis106-standardpci440fxpiix1996 lab6$ mkdir -p wallpapers/cars/{1080p,2k,4k}
cis106@cis106-standardpci440fxpiix1996 lab6$ tree wallpapers/
wallpapers/
├── cars
│   ├── 1080p
│   ├── 2k
│   └── 4k
4 directories, 0 files
cis106@cis106-standardpci440fxpiix1996 lab6$
```

```

cis106@cis106-standardpci440fxpiix1996:~/lab6$ mkdir -p assets/{imgs,video}/{large,small}
cis106@cis106-standardpci440fxpiix1996 lab6$ tree assets/
assets/
├── imgs
│   ├── large
│   └── small
└── video
    ├── large
    └── small
6 directories, 0 files
cis106@cis106-standardpci440fxpiix1996 lab6$
```

```
cis106@cis106-standardpci440fxpiix1996:~/lab6
cis106@cis106-standardpci440fxpiix1996:~/lab6
[cis106@cis106-standardpci440fxpiix1996 lab6]$ mkdir -p docs/books/{history,math}/{fall,spring}
[cis106@cis106-standardpci440fxpiix1996 lab6]$ tree docs/
docs/
├── books
│   ├── history
│   │   ├── fall
│   │   └── spring
│   └── math
│       ├── fall
│       └── spring
7 directories, 0 files
[cis106@cis106-standardpci440fxpiix1996 lab6]$ touch docs/books/{history,math}/{fall,spring}/book.pdf
[cis106@cis106-standardpci440fxpiix1996 lab6]$ tree docs/
docs/
├── books
│   ├── history
│   │   ├── fall
│   │   │   └── book.pdf
│   │   └── spring
│   │       └── book.pdf
│   └── math
│       ├── fall
│       │   └── book.pdf
│       └── spring
│           └── book.pdf
7 directories, 4 files
[cis106@cis106-standardpci440fxpiix1996 lab6]$
```

```
cis106@cis106-standardpci440fxpiix1996:~/lab6
[cis106@cis106-standardpci440fxpiix1996 lab6]$ mkdir -p research/{books/{math,science}/{ebub,pdf},magazines/{computers,runing,videogames}/{fanmade,official}}/
[cis106@cis106-standardpci440fxpiix1996 lab6]$ tree research/
research/
├── books
│   ├── math
│   │   ├── ebub
│   │   └── pdf
│   └── science
│       ├── ebub
│       └── pdf
└── magazines
    ├── computers
    │   ├── fanmade
    │   └── official
    ├── runing
    │   ├── fanmade
    │   └── official
    └── videogames
        ├── fanmade
        └── official
17 directories, 0 files
[cis106@cis106-standardpci440fxpiix1996 lab6]$
```

## Question 5

```

cis106@cis106-standardpci440fxpiix1996:usr/share
[cis106@cis106-standardpci440fxpiix1996 ~]$ mkdir lab6-q5
[cis106@cis106-standardpci440fxpiix1996 ~]$ cd /
[cis106@cis106-standardpci440fxpiix1996 /]$ touch ~/lab6-q5/{program.py,people.csv,data.xls}
[cis106@cis106-standardpci440fxpiix1996 /]$ tree ~/lab6-q5/
/home/cis106/lab6-q5/
├── data.xls
├── people.csv
└── program.py

0 directories, 3 files
[cis106@cis106-standardpci440fxpiix1996 /]$ cd usr/share/
[cis106@cis106-standardpci440fxpiix1996 share]$ mkdir ~/lab6-q5/movies/{movies.lst,marvel.txt,disney.doc}
mkdir: cannot create directory '/home/cis106/lab6-q5/movies/movies.lst': No such file or directory
mkdir: cannot create directory '/home/cis106/lab6-q5/movies/marvel.txt': No such file or directory
mkdir: cannot create directory '/home/cis106/lab6-q5/movies/disney.doc': No such file or directory
[cis106@cis106-standardpci440fxpiix1996 share]$ mkdir ~/lab6-q5/movies
[cis106@cis106-standardpci440fxpiix1996 share]$ mkdir ~/lab6-q5/movies/{movies.lst,marvel.txt,disney.doc}
[cis106@cis106-standardpci440fxpiix1996 share]$ touch ~/lab6-q5/movies/{movies.lst,marvel.txt,disney.doc}
[cis106@cis106-standardpci440fxpiix1996 share]$

```

```

cis106@cis106-standardpci440fxpiix1996:usr/share
[cis106@cis106-standardpci440fxpiix1996 share]$ rm -r ~/lab6-q5/program.py ~/lab6-q5/movies/{people.csv,disney.doc,marvel.txt}
rm: cannot remove '/home/cis106/lab6-q5/program.py': No such file or directory
rm: cannot remove '/home/cis106/lab6-q5/movies/people.csv': No such file or directory
[cis106@cis106-standardpci440fxpiix1996 share]$ rm -r ~/lab6-q5/program.py ~/lab6-q5/movies/{people.csv,disney.doc,marvel.txt}
bash: rm-r: command not found
[cis106@cis106-standardpci440fxpiix1996 share]$ rm ~/lab6-q5/program.py ~/lab6-q5/movies/{people.csv,disney.doc,marvel.txt}
rm: cannot remove '/home/cis106/lab6-q5/program.py': No such file or directory
rm: cannot remove '/home/cis106/lab6-q5/movies/people.csv': No such file or directory
rm: cannot remove '/home/cis106/lab6-q5/movies/disney.doc': No such file or directory
rm: cannot remove '/home/cis106/lab6-q5/movies/marvel.txt': No such file or directory
[cis106@cis106-standardpci440fxpiix1996 share]$ ls ~/lab6-q5/movies
movies.lst
[cis106@cis106-standardpci440fxpiix1996 share]$

```

## challenge-questions

```

cis106@cis106-standardpci440fxpiix1996:~
[cis106@cis106-standardpci440fxpiix1996 ~]$ curl https://cis106.com/assets/lab6cq.sh | bash
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
           Dload  Upload   Total   Spent    Left   Speed
100 170 100 170    0    0 1268    0  --:--:-- --:--:-- --:--:-- 1268
[cis106@cis106-standardpci440fxpiix1996 ~]$

```

```

cis106@cis106-standardpci440fxpiix1996:~$ mkdir -p challenge-Lab6/{audio/aac,mp3,docs/{docx,pdf,xls},images/jpg/png}
cis106@cis106-standardpci440fxpiix1996:~$ tree challenge-Lab6
challenge-Lab6
├── audio
│   └── aac
├── docs
│   ├── docx
│   ├── pdf
│   └── xls
├── images
│   ├── jpg
│   └── png
└── mp3

10 directories, 0 files
cis106@cis106-standardpci440fxpiix1996:~$
```

```

cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images/jpg/png$ mv image1.jpg image2.jpg image3.jpg image1.png image2.png image3.png /ChallengeQuestion-Lab6/images/
mv: target '/ChallengeQuestion-Lab6/images/' is not a directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6$ mv image1.jpg image2.jpg image3.jpg image1.png image2.png image3.png /images/
mv: target '/images/' is not a directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6$ mv image1.jpg image2.jpg image3.jpg image1.png image2.png image3.png images/
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6$ mv image1.jpg image2.jpg image3.jpg images/jpg
mv: cannot stat 'image1.jpg': No such file or directory
mv: cannot stat 'image2.jpg': No such file or directory
mv: cannot stat 'image3.jpg': No such file or directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6$ mv image1.jpg image2.jpg image3.jpg images/ jpg
mv: target 'jpg' is not a directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6$ cd images
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg jpg/
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ ls
image1.png image2.png image3.png jpg
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ ls
image1.png image2.png image3.png jpg
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ cd jpg
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images/jpg$ ls
image1.jpg image2.jpg image3.jpg png
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images/jpg$ cd ..
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg jpg/png
mv: cannot stat 'image1.jpg': No such file or directory
mv: cannot stat 'image2.jpg': No such file or directory
mv: cannot stat 'image3.jpg': No such file or directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg jpg /png
mv: target '/png' is not a directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg /png
mv: target '/png' is not a directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg png/
mv: target 'png/' is not a directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg jpg/png/
mv: cannot stat 'image1.jpg': No such file or directory
mv: cannot stat 'image2.jpg': No such file or directory
mv: cannot stat 'image3.jpg': No such file or directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg jpg/png/
```

```

cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images/jpg/png$ mv image1.jpg image2.jpg image3.jpg png/
mv: target 'png/' is not a directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg jpg/png/
mv: cannot stat 'image1.jpg': No such file or directory
mv: cannot stat 'image2.jpg': No such file or directory
mv: cannot stat 'image3.jpg': No such file or directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg jpg/png/
mv: cannot stat 'image1.jpg': No such file or directory
mv: cannot stat 'image2.jpg': No such file or directory
mv: cannot stat 'image3.jpg': No such file or directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg jpg/
mv: cannot stat 'image1.jpg': No such file or directory
mv: cannot stat 'image2.jpg': No such file or directory
mv: cannot stat 'image3.jpg': No such file or directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg jpg/
mv: cannot stat 'image1.jpg': No such file or directory
mv: cannot stat 'image2.jpg': No such file or directory
mv: cannot stat 'image3.jpg': No such file or directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg jpg/
mv: cannot stat 'image1.jpg': No such file or directory
mv: cannot stat 'image2.jpg': No such file or directory
mv: cannot stat 'image3.jpg': No such file or directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.png image2.png image3.png images/ jpg
mv: cannot stat 'images/': No such file or directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.png image2.png image3.png / jpg
mv: target 'jpg' is not a directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.jpg image2.jpg image3.jpg images/jpg
mv: target 'images/jpg' is not a directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.png image2.png image3.png images/ jpg
mv: cannot stat 'images/': No such file or directory
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images$ mv image1.png image2.png image3.png / jpg
```



```
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6/images/jpg/png

[cis106@cis106-standardpci440fxpiix1996 images]$ mv image1.jpg image2.jpg image3.jpg jpg
mv: cannot stat 'image1.jpg': No such file or directory
mv: cannot stat 'image2.jpg': No such file or directory
mv: cannot stat 'image3.jpg': No such file or directory
[cis106@cis106-standardpci440fxpiix1996 images]$ mv image1.jpg image2.jpg image3.jpg /jpg
mv: target '/jpg' is not a directory
[cis106@cis106-standardpci440fxpiix1996 images]$ mv image1.jpg image2.jpg image3.jpg images/jpg
mv: target 'images/jpg' is not a directory
[cis106@cis106-standardpci440fxpiix1996 images]$ mv image1.png image2.png image3.png images/ jpg
mv: cannot stat 'images/': No such file or directory
[cis106@cis106-standardpci440fxpiix1996 images]$ mv image1.png image2.png image3.png / jpg
mv: cannot stat 'image1.png': No such file or directory
mv: cannot stat 'image2.png': No such file or directory
mv: cannot stat 'image3.png': No such file or directory
mv: inter-device move failed: '/' to 'jpg'; unable to remove target: Directory not empty
[cis106@cis106-standardpci440fxpiix1996 images]$ mv image1.png image2.png image3.png /jpg
mv: target '/jpg' is not a directory
[cis106@cis106-standardpci440fxpiix1996 images]$ mv image1.png image2.png image3.png jpg/
mv: cannot stat 'image1.png': No such file or directory
mv: cannot stat 'image2.png': No such file or directory
mv: cannot stat 'image3.png': No such file or directory
[cis106@cis106-standardpci440fxpiix1996 images]$ ls
jpg
[cis106@cis106-standardpci440fxpiix1996 images]$ cd jpg
[cis106@cis106-standardpci440fxpiix1996 jpg]$ ls
image1.jpg image1.png image2.jpg image2.png image3.jpg image3.png png
[cis106@cis106-standardpci440fxpiix1996 jpg]$ mv image1.png image2.png image3.png jpg/
mv: target 'jpg/' is not a directory
[cis106@cis106-standardpci440fxpiix1996 jpg]$ ls
image1.jpg image1.png image2.jpg image2.png image3.jpg image3.png png
[cis106@cis106-standardpci440fxpiix1996 jpg]$ mv image1.png image2.png image3.png png/
[cis106@cis106-standardpci440fxpiix1996 jpg]$ ls
image1.jpg image2.jpg image3.jpg png
[cis106@cis106-standardpci440fxpiix1996 jpg]$ cd png
[cis106@cis106-standardpci440fxpiix1996 png]$ ls
image1.png image2.png image3.png
```

```
cis106@cis106-standardpci440fxpiix1996:~

[cis106@cis106-standardpci440fxpiix1996 ~]$ tree challenge-Lab6
challenge-Lab6
├── audio
│   └── aac
│       ├── song1.aac
│       ├── song2.aac
│       └── song3.aac
├── docs
│   ├── docs1.doc
│   ├── docs2.doc
│   ├── docs3.doc
│   ├── docx
│   │   ├── docs1.docx
│   │   ├── docs2.docx
│   │   └── docs3.docx
│   ├── pdf
│   │   ├── docs1.pdf
│   │   ├── docs2.pdf
│   │   └── docs3.pdf
│   └── xls
├── images
│   ├── image1.gif
│   ├── image2.gif
│   ├── image3.gif
│   ├── jpg
│   │   ├── image1.jpg
│   │   ├── image2.jpg
│   │   └── image3.jpg
│   ├── png
│   │   ├── image1.png
│   │   ├── image2.png
│   │   └── image3.png
└── mp3
    ├── song1.mp3
    ├── song2.mp3
    └── song3.mp3
```

```
cis106@cis106-standardpci440fxpiix1996:~  
cis106@cis106-standardpci440fxpiix1996:~$ ls  
docs1.doc  
docs2.doc  
docs3.doc  
docx  
  docs1.docx  
  docs2.docx  
  docs3.docx  
pdf  
  docs1.pdf  
  docs2.pdf  
  docs3.pdf  
xls  
images  
  image1.gif  
  image2.gif  
  image3.gif  
  jpg  
    image1.jpg  
    image2.jpg  
    image3.jpg  
  png  
    image1.png  
    image2.png  
    image3.png  
mp3  
  song1.mp3  
  song2.mp3  
  song3.mp3  
programs.go  
programs.py  
programs.rb  
programs.sh  
10 directories, 28 files  
[cis106@cis106-standardpci440fxpiix1996 ~]$
```

```
cis106@cis106-standardpci440fxpiix1996:~/challenge-Lab6  
[cis106@cis106-standardpci440fxpiix1996 ~]$ ls  
challenge-Lab6 Desktop lab-5 lab5-imgs Music 'Screenshot from 2022-03-06 15-45-47.png'  
chrome-gnome-shell Documents lab5-audio lab5-video Pictures 'Screenshot from 2022-03-06 15-47-36.png'  
cis106 Downloads lab5ChallengeQuestion lab6 Public Templates  
Command-does.png lab4files lab5-docs lab6-q5 q3.1.png Videos  
[cis106@cis106-standardpci440fxpiix1996 ~]$ cd challenge-Lab6  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ ls  
audio docs1.doc docs1.pdf docs2.docx docs3.doc docs3.pdf image2.gif images programs.go programs.rb song1.aac song2.aac song3.aac  
docs docs1.docx docs2.doc docs2.pdf docs3.docx image1.gif image3.gif mp3 programs.py programs.sh song1.mp3 song2.mp3 song3.mp3  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ mv song1.aac song2.aac song3.aac aduio/  
mv: target 'aduio/' is not a directory  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ mv song1.aac song2.aac song3.aac aduio  
mv: target 'aduio' is not a directory  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ mv song1.aac song2.aac song3.aac audio/  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ ls  
audio docs1.doc docs1.pdf docs2.docx docs3.doc docs3.pdf image2.gif images programs.go programs.rb song1.mp3 song3.mp3  
docs docs1.docx docs2.doc docs2.pdf docs3.docx image1.gif image3.gif mp3 programs.py programs.sh song2.mp3  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ mv docs1.docx docs2.docx docs3.docx docs/docsx  
mv: target 'docs/docsx' is not a directory  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ mv docs1.docx docs2.docx docs3.docx docs/docx  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ ls  
audio docs1.doc docs2.doc docs3.doc image1.gif image3.gif mp3 programs.py programs.sh song2.mp3  
docs docs1.pdf docs2.pdf docs3.pdf image2.gif images programs.go programs.rb song1.mp3 song3.mp3  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ mv docs1.pdf docs2.pdf docs3.pdf docs/pdf  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ mv song1.mp3 song2.mp3 song3.mp3 mp3/  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ mv image1.gif image2.gif image3.gif images/  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ mv docs1.doc docs2.doc docs3.doc docs/  
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$
```

```

cis106@cis106-standardpci440fxpiix1996 ~/challenge-Lab6
cis106@cis106-standardpci440fxpiix1996 ~]$ ls
challenge-Lab6 Desktop lab-5 lab5-imgs Music 'Screenshot from 2022-03-06 15-45-47.png'
chrome-gnome-shell Documents lab5-audio lab5-video Pictures 'Screenshot from 2022-03-06 15-47-36.png'
cis106 Downloads lab5ChallengeQuestion lab6 Public Templates
Command-does.png lab4files lab5-docs lab6-q5 q3.1.png Videos
[cis106@cis106-standardpci440fxpiix1996 ~]$ cd challenge-Lab6
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ ls
audio docs1.doc docs1.pdf docs2.docx docs3.doc docs3.pdf image2.gif images programs.go programs.rb song1.mp3 song3.mp3
docs docs1.docx docs2.doc docs2.pdf docs3.docx image1.gif image3.gif mp3 programs.py programs.sh song2.mp3
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$ cd audio
[cis106@cis106-standardpci440fxpiix1996 audio]$ ls
aac song1.aac song2.aac song3.aac
[cis106@cis106-standardpci440fxpiix1996 audio]$ mc song1.aac song2.aac song3.aac aac/
bash: mc: command not found
[cis106@cis106-standardpci440fxpiix1996 audio]$ mv song1.aac song2.aac song3.aac aac/
[cis106@cis106-standardpci440fxpiix1996 audio]$ ls
aac
[cis106@cis106-standardpci440fxpiix1996 audio]$ cd ..
[cis106@cis106-standardpci440fxpiix1996 challenge-Lab6]$
```