Lab 4.2 | File Globing/wildcards

- Question 1 | Using the * Wildcard

```
 Applications  Places
                                                          anand@cis106vm: ~/lab4/question1
anand@cis106vm:~$ curl https://robertalberto.com/cis106/lab4.1.sh | bash
  % Total      % Received % Xferd  Average Speed   Time     Time     Time   Current
                                   Dload  Upload   Total    Spent    Left   Speed
100   660  100   660    0      0    2588      0 --:--:-- --:--:-- --:--:--   2588
anand@cis106vm:~$ ls
cis106-fall21   Downloads  lab4-audio     lab4-video   snap
cisvim          food3.txt  lab4-docs      Music        Templates
Desktop         lab4       lab4-imgs      Pictures     Videos
Documents       Lab-4      lab4olddir.tar Public       wallpapers
anand@cis106vm:~$ cd ~/lab4/question1/
anand@cis106vm:~/lab4/question1$ ls
about-page.html  creation.txt   html_page.html  page.css      styles.css
books.txt        download.js    linux.txt       pageload.js   workload.js
bots.txt         home_page.html main.css        rook.rock.txt
anand@cis106vm:~/lab4/question1$ ls -lx
about-page.html  books.txt      bots.txt    creation.txt  download.js
home_page.html   html_page.html linux.txt   main.css      page.css
pageload.js      rook.rock.txt  styles.css  workload.js
anand@cis106vm:~/lab4/question1$ ls*.txt
ls*.txt: command not found
anand@cis106vm:~/lab4/question1$ ls * .txt
ls: cannot access '.txt': No such file or directory
about-page.html  bots.txt       download.js      html_page.html  main.css  pageload.js     styles.css
books.txt        creation.txt  home_page.html  linux.txt        page.css  rook.rock.txt   workload.js
anand@cis106vm:~/lab4/question1$ ls *txt
books.txt  bots.txt   creation.txt  linux.txt   rook.rock.txt
anand@cis106vm:~/lab4/question1$ ls-Xl b*.txt
ls-Xl: command not found
anand@cis106vm:~/lab4/question1$ ls -Xl b*.txt
-rw-rw-r-- 1 anand anand 0 Nov 13 18:02 books.txt
-rw-rw-r-- 1 anand anand 0 Nov 13 18:02 bots.txt
anand@cis106vm:~/lab4/question1$ ls -xl b*.txt
-rw-rw-r-- 1 anand anand 0 Nov 13 18:02 books.txt
-rw-rw-r-- 1 anand anand 0 Nov 13 18:02 bots.txt
anand@cis106vm:~/lab4/question1$ ls *css
main.css  page.css   styles.css
anand@cis106vm:~/lab4/question1$ ls *html
```

```
 Applications  Places
                                                          anand@cis106vm: ~/lab4/question1
  anand@cis106vm: ~/lab4/question1          anand@cis106vm: ~/lab4/question1              an
anand@cis106vm:~/lab4/question1$ ls *html
about-page.html  home_page.html  html_page.html

lab4-html:
anand@cis106vm:~/lab4/question1$ ls *page*
about-page.html  home_page.html  html_page.html  page.css  pageload.js
anand@cis106vm:~/lab4/question1$ mkdir lab4-html lab4-css lab4-js lab4-txt
anand@cis106vm:~/lab4/question1$ mv  bots.txt  rook.rock.txt   linux.txt   creation.txt  books.txt     lab4-txt
anand@cis106vm:~/lab4/question1$ mv about-page.html   html_page.html    home_page.html    lab4-html
anand@cis106vm:~/lab4/question1$ mv download.js  pageload.js   workload.js   lab4-js
anand@cis106vm:~/lab4/question1$ mv  main.css    styles.css
anand@cis106vm:~/lab4/question1$ mv styles.css main.css
anand@cis106vm:~/lab4/question1$ cp styles.css
cp: missing destination file operand after 'styles.css'
Try 'cp --help' for more information.
anand@cis106vm:~/lab4/question1$ cp styles.css styles.css
cp: cannot stat 'styles.css': No such file or directory
anand@cis106vm:~/lab4/question1$ cp styles.css lab4-css
cp: cannot stat 'styles.css': No such file or directory
anand@cis106vm:~/lab4/question1$ cp main.css styles.css
anand@cis106vm:~/lab4/question1$ mv main.css styles.css page.css lab4-css
anand@cis106vm:~/lab4/question1$
```
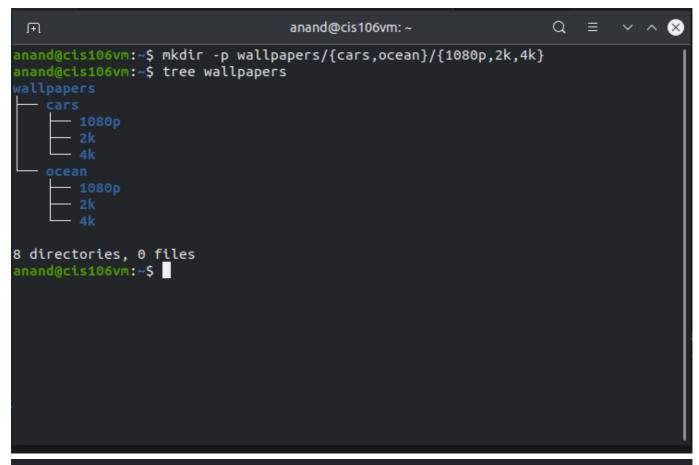
- Question 2 | Using the ? wildcard

Applications Places

anand@cis106vm: ~/lab4/question2

anand@cis106vm: ~/lab4/question1   anand@cis106vm: ~/lab4/question1   anand@cis

```
anand@cis106vm:~/lab4/question1$ cd ../question2
anand@cis106vm:~/lab4/question2$ ls -xl
total 4
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 bad.xml
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 bed.xml
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 bid.xml
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 casino.xml
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 cat.xml
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 cool.xml
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 feat.json
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 feet.json
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 foot.json
drwxrwxr-x 2 anand anand 4096 Nov 13 18:02 xmlfiles
anand@cis106vm:~/lab4/question2$ ls -xl b?d .xml
ls: cannot access 'b?d': No such file or directory
ls: cannot access '.xml': No such file or directory
anand@cis106vm:~/lab4/question2$ ls -xl b?d.xml
-rw-rw-r-- 1 anand anand 0 Nov 13 18:02 bad.xml
-rw-rw-r-- 1 anand anand 0 Nov 13 18:02 bed.xml
-rw-rw-r-- 1 anand anand 0 Nov 13 18:02 bid.xml
anand@cis106vm:~/lab4/question2$ mv b?d.xml xmlfiles/
anand@cis106vm:~/lab4/question2$ ls -xl
total 4
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 casino.xml
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 cat.xml
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 cool.xml
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 feat.json
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 feet.json
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 foot.json
drwxrwxr-x 2 anand anand 4096 Nov 14 17:49 xmlfiles
anand@cis106vm:~/lab4/question2$ ls .*
.hiddenfileA.log  .hiddenfileB.log  .hiddenfileC.log  .hiddenfileD.log

.:
casino.xml  cat.xml  cool.xml  feat.json  feet.json  foot.json  xmlfiles
```

[Preview lab4.1..md -...   anand@cis106vm: ~/...   [question2]

Applications Places

anand@cis106vm: ~/lab4/question2

anand@cis106vm: ~/lab4/question1   anand@cis106vm: ~/lab4/question1   anand@cis106vm

```
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 cat.xml
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 cool.xml
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 feat.json
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 feet.json
-rw-rw-r-- 1 anand anand    0 Nov 13 18:02 foot.json
drwxrwxr-x 2 anand anand 4096 Nov 14 17:49 xmlfiles
anand@cis106vm:~/lab4/question2$ ls .*
.hiddenfileA.log  .hiddenfileB.log  .hiddenfileC.log  .hiddenfileD.log

.:
casino.xml  cat.xml  cool.xml  feat.json  feet.json  foot.json  xmlfiles

..:
question1  question2  question3  question4
anand@cis106vm:~/lab4/question2$ ls .??*
.hiddenfileA.log  .hiddenfileB.log  .hiddenfileC.log  .hiddenfileD.log
anand@cis106vm:~/lab4/question2$ ls ./.*
./.hiddenfileA.log  ./.hiddenfileB.log  ./.hiddenfileC.log  ./.hiddenfileD.log

./.:
casino.xml  cat.xml  cool.xml  feat.json  feet.json  foot.json  xmlfiles

./..:
question1  question2  question3  question4
anand@cis106vm:~/lab4/question2$ ls *????
casino.xml  cat.xml  cool.xml  feat.json  feet.json  foot.json

xmlfiles:
bad.xml  bed.xml  bid.xml
```

```
anand@cis106vm:~/lab4/question2$ ls f?t*
ls: cannot access 'f?t*': No such file or directory
anand@cis106vm:~/lab4/question2$ ls f??t*
feat.json  feet.json  foot.json
anand@cis106vm:~/lab4/question2$ ▮
```

- Question 3 | Using the [] Wildcard

```
Applications  Places                                              anand@cis106vm: ~/lab4/question3

anand@cis106vm: ~/lab4/qu... ⊗   anand@cis106vm: ~/lab4/qu... ⊗   anand@cis106vm: ~/lab4/qu... ⊗   anand@cis106vm: ~/lab4/qu.

anand@cis106vm:~/lab4/question3$ ls -aX
.  ..  .Anotherapp.py  .app.py  drill.py  Main1.py  .main.py  kcc.rb
anand@cis106vm:~/lab4/question3$ ls -a  [[:lower:]]*
drill.py  kcc.rb
anand@cis106vm:~/lab4/question3$ ls [A-Z][a-z][0-9].*
ls: cannot access '[A-Z][a-z][0-9].*': No such file or directory
anand@cis106vm:~/lab4/question3$ ls [A-Z][a-z]*[0-9].*
Main1.py
anand@cis106vm:~/lab4/question3$ ls [a-de-k]* .??*
.Anotherapp.py  .app.py  drill.py  kcc.rb  .main.py
anand@cis106vm:~/lab4/question3$ ls [!A-Z]*[!0-9]*[!.*]
drill.py  kcc.rb
anand@cis106vm:~/lab4/question3$ ▮
```

- Question 4 | Using brace expansion

```
anand@cis106vm:~$ mkdir -p wallpapers/{cars,ocean}/{1080p,2k,4k}
anand@cis106vm:~$ tree wallpapers
wallpapers
├── cars
│   ├── 1080p
│   ├── 2k
│   └── 4k
└── ocean
    ├── 1080p
    ├── 2k
    └── 4k

8 directories, 0 files
anand@cis106vm:~$
```

```
8 directories, 0 files
anand@cis106vm:~$ mkdir -p assets/{imgs,video}/{large,small}/{source,source}
anand@cis106vm:~$ tree assets
assets
├── imgs
│   ├── large
│   │   └── source
│   └── small
│       └── source
└── video
    ├── large
    │   └── source
    └── small
        └── source

10 directories, 0 files
anand@cis106vm:~$
```

```
10 directories, 0 files
anand@cis106vm:~$ mkdir -p docs/{books,research}/{history,math,science,social}
anand@cis106vm:~$ tree docs
docs
├── books
│   ├── history
│   ├── math
│   ├── science
│   └── social
└── research
    ├── history
    ├── math
    ├── science
    └── social

10 directories, 0 files
anand@cis106vm:~$ █
```

```
■   ■ Images              ×⃒ lab4.2.md - cis106-fal...   (A) Software Updater      ⬛ anand@cis10
```

```
Applications  Places                                                                anand@cis106vm: ~
```

```
anand@cis106vm:~$ rm -r Research
anand@cis106vm:~$ mkdir -p Research/books/{math,science}/{epub,pdf}
anand@cis106vm:~$ tree Research
Research
└── books
    ├── math
    │   ├── epub
    │   └── pdf
    └── science
        ├── epub
        └── pdf

7 directories, 0 files
anand@cis106vm:~$ mkdir -p Research/maganizes/{computers,running,videogames}/{fanmade,official}
anand@cis106vm:~$ tree Research
Research
├── books
│   ├── math
│   │   ├── epub
│   │   └── pdf
│   └── science
│       ├── epub
│       └── pdf
└── maganizes
    ├── computers
    │   ├── fanmade
    │   └── official
    ├── running
    │   ├── fanmade
    │   └── official
    └── videogames
        ├── fanmade
        └── official

17 directories, 0 files
anand@cis106vm:~$ █
```

```
■   ■ Images              ×⃒ lab4.2.md - cis106-fal...   (A) Software Updater   ⬛ anand@cis106vm: ~   ■ Documents
```

```
Applications  Places

 ⊞                                                                    anand@cis106vm: ~

            └── official

17 directories, 0 files
anand@cis106vm:~$ mkdir -p backup/files/{personal,programs,school}/{jan,feb,mar}
anand@cis106vm:~$ tree backup
backup                                               8 / 9
└── files
    ├── personal
    │   ├── feb
    │   ├── jan
    │   └── mar
    ├── programs
    │   ├── feb
    │   ├── jan
    │   └── mar
    └── school
        ├── feb
        ├── jan
        └── mar
```

```
Applications  Places

 ⊞                                                                    anand@cis106vm: ~

            mar

13 directories, 0 files
anand@cis106vm:~$ mkdir -p backup/images/{cars,classic,panorama,world}/{high,low}
anand@cis106vm:~$ tree backup
backup
├── files
│   ├── personal
│   │   ├── feb
│   │   ├── jan
│   │   └── mar
│   ├── programs
│   │   ├── feb
│   │   ├── jan
│   │   └── mar
│   └── school
│       ├── feb
│       ├── jan
│       └── mar
└── images
    ├── cars
    │   ├── high
    │   └── low
    ├── classic
    │   ├── high
    │   └── low
    ├── panorama
    │   ├── high
    │   └── low
    └── world
        ├── high
        └── low
```

```
  Applications  Places

  [+]

anand@cis106vm:~$ rm random
rm: cannot remove 'random': Is a directory
anand@cis106vm:~$ rm -r random
anand@cis106vm:~$ mkdir -p backup/random
anand@cis106vm:~$ tree backup
backup
├── files
│   ├── personal
│   │   ├── feb
│   │   ├── jan
│   │   └── mar
│   ├── programs
│   │   ├── feb
│   │   ├── jan
│   │   └── mar
│   └── school
│       ├── feb
│       ├── jan
│       └── mar
├── images
│   ├── cars
│   │   ├── high
│   │   └── low
│   ├── classic
│   │   ├── high
│   │   └── low
│   ├── panorama
│   │   ├── high
│   │   └── low
│   └── world
│       ├── high
│       └── low
└── random

27 directories, 0 files
anand@cis106vm:~$ █
```