Week Report 6

Wild Cards.

Wildcard represents letters and characters used to specify a file name for searches. The importance of wildcard would be that:

1. You can use a wildcard to get a long lst of all files in the current directory starting with "new"
2. Move or delete a group of files
3. Create files and directories quicker.

* Wildcard

The importance of the * Wildcard is that it's the main wildcard, it's able to match anything and nothing and matches any number of characters. When you want to list all files with a particular file extension. When you want to copy, move, or remove all files that match a particular naming convention.

* Wildcard examples

1. `ls *.txt`
2. `ls *.txt *.pdf`
3. `ls file.*`

? Wildcard

The ? wildcard meta character matches precisely one character. The ? wildcard proves very useful when working with hidden files.

? Wildcard examples

1. `ls ./. ?*`
2. `ls ../.??*`
3. `ls b??k*`

[] Wildcard

The brackets wildcard match a single character in a range. The brackets wildcard use the exlamation mark to reverse the match.

The [] wildcard

1. `ls f[aeiou]`
2. `ls *[0-9]`
3. `ls [a-psc]`

Brace expansion

Brace expansion {} is not a wildcard but another feature of bash that allows you to generate arbitrary strings to use with commands. To create a whole directory structure in a single command: `mkdir -p music/{jazz,rock}/{mp3files,videos,oggfiles}/new{1..3}`

To create N number of files use: `touch website{1..5}.html touch file{A..Z}.html touch file {001..10}.py touch file {{a..z}, {0..10}}.js`

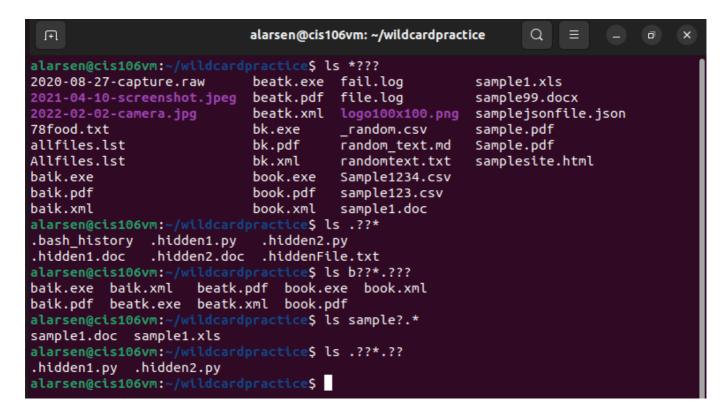To remove multiple files in a single directory `rm -r {dir1,dir2,dir3,file.txt, file.py}`

Practice

Practice 5:

```
alarsen@cis106vm:~$ curl -s https://cis106.com/assets/wildcardpractice.sh | bash
--2022-11-05 11:53:53--  https://cis106.com/assets/logo100x100.png
Resolving cis106.com (cis106.com)... 185.199.108.153
Connecting to cis106.com (cis106.com)|185.199.108.153|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3520 (3.4K) [image/png]
Saving to: 'logo100x100.png'

logo100x100.png     100%[====================>]   3.44K  --.-KB/s    in 0s

2022-11-05 11:53:53 (25.4 MB/s) - 'logo100x100.png' saved [3520/3520]

alarsen@cis106vm:~$ ls wildcardpractice/*random*
wildcardpractice/_random.csv     wildcardpractice/randomtext.txt
wildcardpractice/random_text.md
alarsen@cis106vm:~$ ls wildcardpractice/*.txt wildcardpractice/*.csv
wildcardpractice/78food.txt      wildcardpractice/Sample1234.csv
wildcardpractice/_random.csv     wildcardpractice/sample123.csv
wildcardpractice/randomtext.txt
alarsen@cis106vm:~$ cd wildcardpractice/
alarsen@cis106vm:~/wildcardpractice$ ls random*.md
random_text.md
alarsen@cis106vm:~/wildcardpractice$ ls *sample* *.md*
random_text.md   sample1.doc   sample99.docx        sample.pdf
sample123.csv    sample1.xls   samplejsonfile.json  samplesite.html
alarsen@cis106vm:~/wildcardpractice$
```

Practice 6:

```
alarsen@cis106vm:~/wildcardpractice$ ls *???
2020-08-27-capture.raw      beatk.exe  fail.log        sample1.xls
2021-04-10-screenshot.jpeg  beatk.pdf  file.log        sample99.docx
2022-02-02-camera.jpg       beatk.xml  logo100x100.png samplejsonfile.json
78food.txt                  bk.exe     _random.csv     sample.pdf
allfiles.lst                bk.pdf     random_text.md  Sample.pdf
Allfiles.lst                bk.xml     randomtext.txt  samplesite.html
baik.exe                    book.exe   Sample1234.csv
baik.pdf                    book.pdf   sample123.csv
baik.xml                    book.xml   sample1.doc
alarsen@cis106vm:~/wildcardpractice$ ls .??*
.bash_history   .hidden1.py    .hidden2.py
.hidden1.doc    .hidden2.doc   .hiddenFile.txt
alarsen@cis106vm:~/wildcardpractice$ ls b??*.???
baik.exe   baik.xml    beatk.pdf  book.exe   book.xml
baik.pdf   beatk.exe   beatk.xml  book.pdf
alarsen@cis106vm:~/wildcardpractice$ ls sample?.*
sample1.doc   sample1.xls
alarsen@cis106vm:~/wildcardpractice$ ls .??*.??
.hidden1.py   .hidden2.py
alarsen@cis106vm:~/wildcardpractice$
```

Practice 7:

```
alarsen@cis106vm:~/wildcardpractice$ ls [a-z]*.???
allfiles.lst   beatk.exe  bk.pdf     book.xml         randomtext.txt  sample.pdf
baik.exe       beatk.pdf  bk.xml     fail.log         sample123.csv
baik.pdf       beatk.xml  book.exe   file.log         sample1.doc
baik.xml       bk.exe     book.pdf   logo100x100.png  sample1.xls
alarsen@cis106vm:~/wildcardpractice$ ls [A-Z]*[0-9]*
Sample1234.csv
alarsen@cis106vm:~/wildcardpractice$ ls [0-9][0-9][0-9][0-9]*
2020-08-27-capture.raw   2021-04-10-screenshot.jpeg   2022-02-02-camera.jpg
alarsen@cis106vm:~/wildcardpractice$ ls [!AEIOUaeiou]*
2020-08-27-capture.raw      beatk.pdf  fail.log        sample1.doc
2021-04-10-screenshot.jpeg  beatk.xml  file.log        sample1.xls
2022-02-02-camera.jpg       bk.exe     logo100x100.png sample99.docx
78food.txt                  bk.pdf     _random.csv     samplejsonfile.json
baik.exe                    bk.xml     random_text.md  sample.pdf
baik.pdf                    book.exe   randomtext.txt  Sample.pdf
baik.xml                    book.pdf   Sample1234.csv  samplesite.html
beatk.exe                   book.xml   sample123.csv
alarsen@cis106vm:~/wildcardpractice$ ls [[:punct:]]*
_random.csv
alarsen@cis106vm:~/wildcardpractice$
```