Week Report 6

Wildcards

* Wildcard

The * Wildcard matches from 0 to any number of characters.

- Examples:
    - List all text files in a directory
        - `ls *.txt`
    - List all files that start with the word File
        - `ls file*`
    - Copy all the mp4 files
        - `cp Downloads/*.mp4 ~/Videos/Movies/`

? Wildcard

The ? Wildcard matches a single character.

- Examples:
    - Lists all hidden files in current directory
        - `ls ./.??*`
    - Lists all hidden files in parent directory
        - `ls ../.??*`
    - Lists all files that have a 3 letter file extension
        - `*.???`

[] Wildcard

The [] Wildcard matches a single character in a range.

- Examples
    - Match all files that have a vowel after the letter f
        - `ls f[aeiou]*`
    - Match files that do not have vowels after the letter f
        - `ls f[!aeiou]*`
    - Match all files that have a range of letters after f
        - `ls f[a-z]*`

Brace Expansion

Brace expansion {} is not a wildcard but another feature of bash that allows you to generate arbitrary strings to use with commands.

- Examples
    - Create a whole directory structure in a single command
        - `mkdir -p music/{jazz,rock}/{mp3files,videos,oggfiles}/new{1..3}`

- Create a N number of files used
    - `touch website{1..5}.html`
- Remove multiple files in a single command
    - `rm -r {dir1,dir2,dir3,file.txt,file.py}`

Practice

- Create a N number of files used
    - `touch website{1..5}.html`
- Remove multiple files in a single command
    - `rm -r {dir1,dir2,dir3,file.txt,file.py}`

```
○ Applications   Places

[⊞]  [⊏]  [⊐]

1: jqaqish@jqaqish-VirtualBox: ~/wildcardpractice ∨

jqaqish@jqaqish-VirtualBox:~$ curl -s https://cis106.com/assets/wildcardpractice.sh | bash
mkdir: cannot create directory '/home/jqaqish/wildcardpractice/': File exists
--2023-04-18 16:48:32--  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.1'

logo100x100.png.1   100%[===================>]   3.44K  --.-KB/s      in 0.004s

2023-04-18 16:48:32 (900 KB/s) - 'logo100x100.png.1' saved [3520/3520]

jqaqish@jqaqish-VirtualBox:~$ ls wildcardpractice/*random*
wildcardpractice/_random.csv      wildcardpractice/randomtext.txt
wildcardpractice/random_text.md
jqaqish@jqaqish-VirtualBox:~$ ls wildcardpractice/*.txt wildcardpractice/*.csv
wildcardpractice/78food.txt       wildcardpractice/Sample1234.csv
wildcardpractice/_random.csv      wildcardpractice/sample123.csv
wildcardpractice/randomtext.txt
jqaqish@jqaqish-VirtualBox:~$ cd wildcardpractice/
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ ls random*.md
random_text.md
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ ls *sample* *.md
random_text.md   sample1.doc.1   sample99.docx       sample.pdf.1
sample123.csv    sample1.xls     samplejsonfile.json  samplesite.html
sample1.doc      sample1.xls.1   sample.pdf
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ _
```

```
[⊞]  [⊏]  [⊐]   ... qish-VirtualBox: ~/wildcardpractice   [Q] [≡]  [—] [□] [✕]

1: jqaqish@jqaqish-VirtualBox: ~/wildcardpractice ∨                    □   ✕

jqaqish@jqaqish-VirtualBox:~$ ~/wildcardpractice/
bash: /home/jqaqish/wildcardpractice/: Is a directory
jqaqish@jqaqish-VirtualBox:~$ cd wildcardpractice/
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ ls *.???
2020-08-27-capture.raw  baik.pdf   bk.pdf    file.log          sample1.doc
2022-02-02-camera.jpg   baik.xml   bk.xml    logo100x100.png   sample1.xls
78food.txt              beatk.exe  book.exe  _random.csv       sample.pdf
allfiles.lst            beatk.pdf  book.pdf  randomtext.txt    Sample.pdf
Allfiles.lst            beatk.xml  book.xml  Sample1234.csv
baik.exe                bk.exe     fail.log  sample123.csv
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ ls .??*
.bash_history   .hidden1.py   .hidden2.py
.hidden1.doc    .hidden2.doc  .hiddenFile.txt
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ ls b??*.???
baik.exe  baik.xml   beatk.pdf  book.exe  book.xml
baik.pdf  beatk.exe  beatk.xml  book.pdf
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ ls sample?.*
```

```
sample1.doc  sample1.doc.1  sample1.xls  sample1.xls.1
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ ls .??*.??
.hidden1.py  .hidden2.py
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$
```

... qish-VirtualBox: ~/wildcardpractice

1: jqaqish@jqaqish-VirtualBox: ~/wildcardpractice

```
jqaqish@jqaqish-VirtualBox:~/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
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ ls [A-Z]*[0-9]*
Sample1234.csv
jqaqish@jqaqish-VirtualBox:~/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
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ ls [!AEIOUaeiou]*
2020-08-27-capture.raw      beatk.xml  logo100x100.png    sample1.xls
2021-04-10-screenshot.jpeg  bk.exe     logo100x100.png.1  sample1.xls.1
2022-02-02-camera.jpg       bk.pdf     _random.csv        sample99.docx
78food.txt                  bk.xml     random_text.md     samplejsonfile.json
baik.exe                    book.exe   randomtext.txt     sample.pdf
baik.pdf                    book.pdf   Sample1234.csv     Sample.pdf
baik.xml                    book.xml   sample123.csv      sample.pdf.1
beatk.exe                   fail.log   sample1.doc        samplesite.html
beatk.pdf                   file.log   sample1.doc.1
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ ls [[:punct:]]*
_random.csv
jqaqish@jqaqish-VirtualBox:~/wildcardpractice$ _
```