

Week 6 Report

* Wildcards

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

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

? Wildcards

The ? wildcard matches precisely one character. Useful when working with hidden files.

- Examples:
 - List all hidden files in the current directory
 - `'ls .??*'`
 - List all the files that have a two character between letter b and k
 - `'ls b??k*'`
 - List all the files that have a single character between letter f and l
 - `'ls f?l*'`

[] Wildcards

The brackets wildcard match a single character in a range. Brackets will use and exclamation mark to reverse the match.

- Examples:
 - To match all files that have a vowel after letter f:
 - `'ls f[aeiou]*'`
 - To match all files whose name begins with a letter from a-p or start with letters s or c
 - `'ls [a-psc]'`
 - To match all files that have a range of letters after f:
 - `'ls f[a-z]'`

Brace Expansion {}

It's not a wildcard but another feature of bash that allows you to generate arbitrary strings to use with commands.

- Example:
 - To create a whole directory structure in a single command:
 - `'mkdir -p music/{jazz,rock}/{mp3files,videos,oggfiles}/new{1..3}'`
 - Remove multiple files in a single directory

- rm -r {dir1,dir2,dir3,file.txt,file.py}
- Create a N number of files
 - touch website{1..5}.html

Practice

Practice 1:

```
blight@blight-VirtualBox:~$ curl -s https://cis106.com/assets/wildcardpractice.sh | bash
--2022-11-03 02:05:43-- 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

2022-11-03 02:05:43 (25.2 MB/s) - 'logo100x100.png' saved [3520/3520]

blight@blight-VirtualBox:~$ ls wildcardpractice/*random*
wildcardpractice/_random.csv      wildcardpractice/randomtext.txt
wildcardpractice/random_text.md

blight@blight-VirtualBox:~$ ls wildcardpractice/*.txt wildcardpractice/*.csv
wildcardpractice/78food.txt      wildcardpractice/sample1234.csv
wildcardpractice/_random.csv     wildcardpractice/sample123.csv
wildcardpractice/randomtext.txt

blight@blight-VirtualBox:~$ ls random*.md
ls: cannot access 'random*.md': No such file or directory

blight@blight-VirtualBox:~$ cd wildcardpractice/
blight@blight-VirtualBox:~/wildcardpractice$ ls random*.md
random_text.md

blight@blight-VirtualBox:~/wildcardpractice$ ls *sample* *.md
random_text.md  sample1.doc  sample99.docx  sample.pdf
sample123.csv  sample1.xls  samplejsonfile.json  samplesite.html

blight@blight-VirtualBox:~/wildcardpractice$
```

Practice 2:

```
blight@blight-VirtualBox:~/wildcardpractice$ ls *.???
2020-08-27-capture.raw  78food.txt  allfiles.lst  baik.exe  baik.pdf  beatk.exe  beatk.xml  bk.pdf  book.exe  book.xml  file.log  _random.csv  sample1234.csv  sample1.doc  sample.pdf
2022-02-02-camera.jpg  allfiles.lst  baik.exe  baik.xml  beatk.pdf  bk.exe  bk.xml  book.pdf  fail.log  logo100x100.png  randomtext.txt  sample123.csv  sample1.xls  sample.pdf

blight@blight-VirtualBox:~/wildcardpractice$ ls .??*
.bash_history  .hidden1.doc  .hidden1.py  .hidden2.doc  .hiddenFile.txt

blight@blight-VirtualBox:~/wildcardpractice$ ls b??*.???
baik.exe  baik.pdf  baik.xml  beatk.exe  beatk.pdf  beatk.xml  book.exe  book.pdf  book.xml

blight@blight-VirtualBox:~/wildcardpractice$ ls sample.*
sample1.doc  sample1.xls

blight@blight-VirtualBox:~/wildcardpractice$ ls .??*.??
.hidden1.py  .hidden2.py

blight@blight-VirtualBox:~/wildcardpractice$
```

Practice 3:

```
blight@blight-VirtualBox:~/wildcardpractice$ ls [a-z]*.???
allfiles.lst  baik.pdf  beatk.exe  beatk.xml  bk.pdf  book.exe  book.xml  file.log  randomtext.txt  sample1.doc  sample.pdf
baik.exe  baik.xml  beatk.pdf  bk.exe  bk.xml  book.pdf  fail.log  logo100x100.png  sample123.csv  sample1.xls

blight@blight-VirtualBox:~/wildcardpractice$ ls [A-Z]*[0-9]*
sample1234.csv

blight@blight-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

blight@blight-VirtualBox:~/wildcardpractice$ ls [IAEIOUaeiou]*
2020-08-27-capture.raw  78food.txt  baik.xml  beatk.xml  bk.xml  book.xml  logo100x100.png  randomtext.txt  sample1.doc  samplejsonfile.json  samplesite.html
2021-04-10-screenshot.jpeg  baik.exe  beatk.exe  bk.exe  book.exe  fail.log  _random.csv  sample1234.csv  sample1.xls  sample.pdf
2022-02-02-camera.jpg  baik.pdf  beatk.pdf  bk.pdf  book.pdf  file.log  random_text.md  sample123.csv  sample99.docx  sample.pdf

blight@blight-VirtualBox:~/wildcardpractice$ ls [[:punct:]]*
_random.csv

blight@blight-VirtualBox:~/wildcardpractice$
```

