

Week Report 6

Wildcards

* Wildcard

The * wild card matches from 0 to any number of characters

- Examples:
 - List all the text file in a directory
 - `ls *.txt`
 - List all the 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
 - list all the files that have 3 characters and are followed by the word file in the name
 - `ls ???File*`
 - list all hidden files
 - `ls ../.??*`
 - list all the files with a four letter file extension
 - `ls *.????`

[] Wildcard

The [] wildcard matches a single character in a range. Uses the ! to reverse the match.

- Examples:
 - to match all files whose name has at least one number
 - `ls *[0-9]*`
 - to match all files whose name begins with a letter from a-p
 - `ls [a-p]*`
 - to match all files that have a vowel after letter m
 - `ls m[aeiou]*`

Brace Expansion

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

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

- to create N number of files
 - `touch image{1..5}.jpg`
- to remove multiple files in a single directory
 - `rm -r {dir1,dir2,dir3,file.txt}`

Practice

Practice 5

```
Tilix: mebrinkmann@cis106: ~/wildcardpractice

1: mebrinkmann@cis106: ~/wildcardpractice v

mebrinkmann@cis106:~$ curl -s https://cis106.com/assets/wildcardpractice.sh | bash
--2023-04-28 09:51:04-- 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

2023-04-28 09:51:04 (50.2 MB/s) - 'logo100x100.png' saved [3520/3520]

mebrinkmann@cis106:~$ cd /wildcardpractice
bash: cd: /wildcardpractice: No such file or directory
mebrinkmann@cis106:~$ ls wildcardpractice/*random*
wildcardpractice/_random.csv  wildcardpractice/random_text.md  wildcardpractice/randomtext.txt
mebrinkmann@cis106:~$ ls wildcardpractice/*.csv wildcardpractice/*.txt
wildcardpractice/78food.txt  wildcardpractice/randomtext.txt  wildcardpractice/sample123.csv
wildcardpractice/_random.csv  wildcardpractice/sample1234.csv
mebrinkmann@cis106:~$ cd wildcardpractice/
mebrinkmann@cis106:~/wildcardpractice$ ls random*.md
random_text.md
mebrinkmann@cis106:~/wildcardpractice$ ls *sample* *.md
random_text.md  sample1.doc  sample99.docx  sample.pdf
sample123.csv  sample1.xls  samplejsonfile.json  samplesite.html
mebrinkmann@cis106:~/wildcardpractice$ _
```

Practice 6

```

1 / 1  +  [ ]  [ ]  Tilix: mebrinkmann@cis106: ~/wildcardpractice  [ ]  [ ]

1: mebrinkmann@cis106: ~/wildcardpractice  v

mebrinkmann@cis106:~/wildcardpractice$ ls *.*??
2020-08-27-capture.raw  Allfiles.lst  beatk.exe  bk.pdf  book.xml  _random.csv  sample1.doc
2022-02-02-camera.jpg  baik.exe     beatk.pdf  bk.xml  fail.log  randomtext.txt  sample1.xls
78food.txt             baik.pdf     beatk.xml  book.exe  file.log  Sample1234.csv  sample.pdf
allfiles.lst           baik.xml     bk.exe     book.pdf  logo100x100.png  sample123.csv  Sample.pdf

mebrinkmann@cis106:~/wildcardpractice$ ls .??*
.bash_history  .hidden1.doc  .hidden1.py  .hidden2.doc  .hidden2.py  .hiddenFile.txt

mebrinkmann@cis106:~/wildcardpractice$ ls b??*.??
baik.exe  baik.pdf  baik.xml  beatk.exe  beatk.pdf  beatk.xml  book.exe  book.pdf  book.xml

mebrinkmann@cis106:~/wildcardpractice$ ls sample?.*
sample1.doc  sample1.xls

mebrinkmann@cis106:~/wildcardpractice$ ls .??*.??
.hidden1.py  .hidden2.py

mebrinkmann@cis106:~/wildcardpractice$ _

```

Practice 7

```

1 / 1  +  [ ]  [ ]  Tilix: mebrinkmann@cis106: ~/wildcardpractice  [ ]  [ ]  [ ]  [ ]  [ ]

1: mebrinkmann@cis106: ~/wildcardpractice  v

mebrinkmann@cis106:~/wildcardpractice$ ls [a-z]*.*??
allfiles.lst  baik.xml  beatk.xml  bk.xml  book.xml  logo100x100.png  sample1.doc
baik.exe      beatk.exe  bk.exe    book.exe  fail.log  randomtext.txt  sample1.xls
baik.pdf      beatk.pdf  bk.pdf    book.pdf  file.log  sample123.csv  sample.pdf

mebrinkmann@cis106:~/wildcardpractice$ ls [A-Z]*[0-9]*
Sample1234.csv

mebrinkmann@cis106:~/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

mebrinkmann@cis106:~/wildcardpractice$ ls [!AEIOUaeiou]
ls: cannot access '[!AEIOUaeiou]': No such file or directory

mebrinkmann@cis106:~/wildcardpractice$ ls [!AEIOUaeiou]*
2020-08-27-capture.raw  baik.pdf  bk.exe  book.xml  random_text.md  sample1.xls  samplesite.html
2021-04-10-screenshot.jpeg  baik.xml  bk.pdf  fail.log  randomtext.txt  sample99.docx
2022-02-02-camera.jpg      beatk.exe  bk.xml  file.log  Sample1234.csv  samplejsonfile.json
78food.txt                 beatk.pdf  book.exe  logo100x100.png  sample123.csv  sample.pdf
baik.exe                   beatk.xml  book.pdf  _random.csv  sample1.doc  Sample.pdf

mebrinkmann@cis106:~/wildcardpractice$ ls [[:punct:]]*
_random.csv

mebrinkmann@cis106:~/wildcardpractice$ _

```