

Week Report 6

Wildcards

- Wildcards represent letters and characters used to specify a file name for searches.
- File globbing is the processing of pattern matching using wildcards.
- The wildcards are officially called metacharacter wildcards.

* Wildcard

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 the word "file":**
 - `ls file*`
 - **Copy all the mp4 files:**
 - `cp Downloads/*.mp4 ~/Videos/Movies/`

? Wildcard

The ? Wildcard metacharacter matches precisely one character.

- **Examples:**
 - **List all the files that have 3 characters and are followed by the word "file" in the name:**
 - `ls ???File*`
 - **List all the files that have a 2 letter extension:**
 - `ls *.??`
 - **List all files that start with the letter p and have a 2 letter extension:**
 - `ls *p?*.??`

[] Wildcard

The [] Wildcard match a single character in a range. The [] Wildcard use the exclamation mark to reverse the match.

- **Examples:**
 - **Match all files that have a vowel after the letter f:**
 - `ls f[aeiou]*`
 - **Match all the files whose name does not have a number in their file name:**
 - `ls *[^0-9].*`
 - **Match all files whose name begins with any 3 combination of numbers and the current user's username:**
 - `ls [0-9][0-9][0-9]$USER`

Brace Expansion

The {} 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}`

- **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 5:

```

1/1  +  [Share] [Copy]
Tilix: jdeguzman@cis106: ~/wildcardpractice

jdeguzman@cis106: ~/wildcardpractice
jdeguzman@cis106:~$ curl -s https://cis106.com/assets/wildcardpractice.sh | bash
--2023-04-29 12:46:17--  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

2023-04-29 12:46:17 (115 MB/s) - 'logo100x100.png' saved [3520/3520]

jdeguzman@cis106:~$ cd wildcardpractice/
jdeguzman@cis106:~/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

jdeguzman@cis106:~/wildcardpractice$ ls *random*
_random.csv  random_text.md  randomtext.txt
jdeguzman@cis106:~/wildcardpractice$ ls *. {csv,txt}
78food.txt  _random.csv  randomtext.txt  Sample1234.csv  sample123.csv
jdeguzman@cis106:~/wildcardpractice$ ls random*.md
random_text.md
jdeguzman@cis106:~/wildcardpractice$ ls sample* *.md
random_text.md  sample1.doc  sample99.docx  sample.pdf
sample123.csv  sample1.xls  samplejsonfile.json  samplesite.html
jdeguzman@cis106:~/wildcardpractice$ _

```

Practice 6:

```

1/1  +  [icons]  Tilix: jdeguzman@cis106: ~/wildcardpractice
1: jdeguzman@cis106: ~/wildcardpractice ~
jdeguzman@cis106:~$ cd wildcardpractice/
jdeguzman@cis106:~/wildcardpractice$ ls *.???
2020-08-27-capture.raw  baik.exe  beatk.xml  book.pdf  _random.csv  sample1.xls
2022-02-02-camera.jpg  baik.pdf  bk.exe    book.xml  randomtext.txt  sample.pdf
78food.txt             baik.xml  bk.pdf    fail.log  Sample1234.csv  Sample.pdf
allfiles.lst           beatk.exe bk.xml    file.log  sample123.csv   sample1.doc
Allfiles.lst           beatk.pdf book.exe  logo100x100.png  sample1.doc
jdeguzman@cis106:~/wildcardpractice$ ls .???*
.bash_history .hidden1.doc .hidden1.py .hidden2.doc .hidden2.py .hiddenFile.txt
jdeguzman@cis106:~/wildcardpractice$ ls b???*???
baik.exe baik.pdf baik.xml beatk.exe beatk.pdf beatk.xml book.exe book.pdf book.xml
jdeguzman@cis106:~/wildcardpractice$ ls sample?.*
sample1.doc sample1.xls
jdeguzman@cis106:~/wildcardpractice$ ls .???*??
.hidden1.py .hidden2.py
jdeguzman@cis106:~/wildcardpractice$ _

```

Practice 7:

```

1/1  +  [icons]  Tilix: jdeguzman@cis106: ~/wildcardpractice
1: jdeguzman@cis106: ~/wildcardpractice ~
jdeguzman@cis106:~/wildcardpractice$ ls
2020-08-27-capture.raw  baik.exe  bk.exe  fail.log  Sample1234.csv  sample.pdf
2021-04-10-screenshot.jpeg  baik.pdf  bk.pdf  file.log  sample123.csv  Sample.pdf
2022-02-02-camera.jpg      baik.xml  bk.xml  logo100x100.png  sample1.doc  samplesite.html
78food.txt               beatk.exe book.exe _random.csv  sample1.xls
allfiles.lst             beatk.pdf book.pdf  random_text.md  sample99.docx
Allfiles.lst             beatk.xml book.xml  randomtext.txt  samplejsonfile.json
jdeguzman@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
jdeguzman@cis106:~/wildcardpractice$ ls [A-Z]*[0-9]*
Sample1234.csv
jdeguzman@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
jdeguzman@cis106:~/wildcardpractice$ ls [!AEIOUaeiou]*
2020-08-27-capture.raw  baik.xml  bk.xml  logo100x100.png  sample1.doc  samplesite.html
2021-04-10-screenshot.jpeg  beatk.exe  book.exe  _random.csv  sample1.xls
2022-02-02-camera.jpg      beatk.pdf  book.pdf  random_text.md  sample99.docx
78food.txt                beatk.xml  book.xml  randomtext.txt  samplejsonfile.json
baik.exe                  bk.exe    fail.log  Sample1234.csv  sample.pdf
baik.pdf                  bk.pdf    file.log  sample123.csv  Sample.pdf
jdeguzman@cis106:~/wildcardpractice$ ls [[:punct:]]*
_random.csv
jdeguzman@cis106:~/wildcardpractice$ _

```