

# Week Report 6

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## Wildcards

- Wildcards represents letters and characters that are used to specify a file name for searches.

### \* Wildcard

- The \* or star wildcard matches anything and nothing but it also matches any number of characters.
- Examples:
  - List all files in a directory that end in .txt
    - `ls *.txt`
  - List all the files that end in .txt or .pdf
    - `ls *.txt *.pdf`
  - List all the files that start with the word file
    - `ls file*`

### ? Wildcard

- The ? wildcard matches only one character.
- Examples:
  - List all the files that have two characters 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*`
  - List all files that have a 3 letter file extension.
    - `ls *.???`

### [] Wildcard

- The brackets wildcard match a single character in a range.
- Examples:
  - To match all files that have a vowel after f.
    - `ls f[aeiou]*`
  - To match all files that do not have a vowel after letter f.
    - `ls f[!aeiou]`
  - To 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.

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

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

## Let's Practice

### Practice 5

```
cltorres-quinteros@cis106vm:~$ curl -s https://cis106.com/assets/wildcardpractice.sh | bash
--2023-11-17 21:16:05-- 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

2023-11-17 21:16:05 (75.1 MB/s) - 'logo100x100.png' saved [3520/3520]

cltorres-quinteros@cis106vm:~$ ls wildcardpractice/*random*
wildcardpractice/_random.csv      wildcardpractice/randomtext.txt
wildcardpractice/random_text.md

cltorres-quinteros@cis106vm:~$ ls wildcardpractice/*.txt wildcardpractice/*.csv
wildcardpractice/78food.txt      wildcardpractice/sample1234.csv
wildcardpractice/_random.csv     wildcardpractice/sample123.csv
wildcardpractice/randomtext.txt

cltorres-quinteros@cis106vm:~$ cd wildcardpractice/
cltorres-quinteros@cis106vm:~/wildcardpractice$ ls random*.md
random_text.md

cltorres-quinteros@cis106vm:~/wildcardpractice$ ls *sample* *.md
random_text.md  sample1.doc  sample99.docx  sample.pdf
sample123.csv  sample1.xls  samplejsonfile.json  samplesite.html
cltorres-quinteros@cis106vm:~/wildcardpractice$
```

### Practice 6

```

cltorres-quinteros@cis106vm:~/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

cltorres-quinteros@cis106vm:~/wildcardpractice$ ls .??*
.bash_history  .hidden1.py  .hidden2.py
.hidden1.doc   .hidden2.doc .hiddenFile.txt

cltorres-quinteros@cis106vm:~/wildcardpractice$ ls b??*.???
baik.exe  baik.xml  beatk.pdf  book.exe  book.xml
baik.pdf  beatk.exe  beatk.xml  book.pdf

cltorres-quinteros@cis106vm:~/wildcardpractice$ ls sample?.*
sample1.doc  sample1.xls

cltorres-quinteros@cis106vm:~/wildcardpractice$ ls .??*.??
.hidden1.py  .hidden2.py

cltorres-quinteros@cis106vm:~/wildcardpractice$

```

## Practice 7

```

cltorres-quinteros@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

cltorres-quinteros@cis106vm:~/wildcardpractice$ ls [A-Z]*[0-9]*
Sample1234.csv

cltorres-quinteros@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

cltorres-quinteros@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

cltorres-quinteros@cis106vm:~/wildcardpractice$ ls [[:punct:]]*
_random.csv

cltorres-quinteros@cis106vm:~/wildcardpractice$

```