

# Week Report 6

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## Wildcards

**The `*` wildcard:** The star alone matches anything and nothing and matches any number of characters.

**Examples** To list all files with `.txt`: `ls *.txt` To move all files containing `.txt` to the Documents directory:  
`mv *.txt Documents` To list all files in the Documents directory containing the word "games": `ls ~/Documents/*games*`

**The `?` wildcard:** Matches precisely one character.

**Examples** To list all hidden files: `ls .??*` To list all files that have a three-letter file extension: `ls *.???`  
To list all files that have two characters between letter g and s: `ls g??s*`

**The `[]` wildcard:** Matches a character in range. The exclamation point reverses the match.

**Examples** To match all files that contain a vowel after the letter s: `ls s[aeiou]*` To match all files that do not contain a vowel after the letter s: `ls s![aeiou]*` To match all files whose name has at least one number: `ls *[0-9]*`

## Brace Expansion

Brace expansion is another feature of bash that lets you create arbitrary strings to use with commands.

**Examples** To make a whole directory structure in a single command: `mkdir -p games/{shooter,rpg} music/{rock,lo-fi} pictures/{photos-of-my-dog,family}` To create a certain number of files:  
`touch food{1..4}.png` To remove multiple files in a directory: `rm -r {games,music,pictures,docs.docx,words.txt}`

## Practice 5

```
kevin@kevins-VirtualBox:~$ curl -s https://cis106.com/assets/wildcardpractice.sh | bash
--2023-11-16 20:52:24-- 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
2023-11-16 20:52:24 (89.6 MB/s) - 'logo100x100.png' saved [3520/3520]

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

## Practice 6

```

kevin@kevins-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

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

kevin@kevins-VirtualBox:~/wildcardpractice$ b??*.???
baik.exe: command not found

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

kevin@kevins-VirtualBox:~/wildcardpractice$ sample?.*
sample1.doc: command not found

kevin@kevins-VirtualBox:~/wildcardpractice$ ls sample?.*
sample1.doc  sample1.xls

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

kevin@kevins-VirtualBox:~/wildcardpractice$

```

## Practice 7

```

kevin@kevins-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

kevin@kevins-VirtualBox:~/wildcardpractice$ ls {A-Z}*[0-9]*
ls: cannot access '{A-Z}*[0-9]*': No such file or directory

kevin@kevins-VirtualBox:~/wildcardpractice$ ls [A-Z]*[0-9]*
Sample1234.csv

kevin@kevins-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

kevin@kevins-VirtualBox:~/wildcardpractice$ ls [!AEIOU]*[!aeiou]*
2020-08-27-capture.raw  beatk.exe  book.xml  sample123.csv
2021-04-10-screenshot.jpeg  beatk.pdf  fail.log  sample1.doc
2022-02-02-camera.jpg      beatk.xml  file.log  sample1.xls
78food.txt                 bk.exe    logo100x100.png  sample99.docx
allfiles.lst               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

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

kevin@kevins-VirtualBox:~/wildcardpractice$

```