Week Report 6## Wildcards.### * Wildcard

The * wildcard 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*`

[] Wildcard

The [] wildcard matches a single character in a range. Uses exclamation marks to reverse the match(`[!aeiou]` or `[!0-9]`).

- Examples:
    - Match all files that have a vowel after the letter f.
        - `ls f [aeiou]*`
    - Match all files that DO NOT have a vowel after the letter f.
        - `ls f [!aeiou]*`
    - Match all files whose name have at least one number.
        - `ls *[0-9]*`

{} 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/{jazz,rock}/{mp3files,videos,oggfiles}/new{1..3}`
    - To create a N number of files use.
        - `touch website{1..5}.html`
    - To remove multiple files in a single directory.
        - `rm -r {dir1,dir2}`

Practice 1

```
1/1 ▼  +  ⏏  ⏮      Tilix: reaper@cis106: ~/wildcardpractice    Q  ☰  —  ☐  ×

1: reaper@cis106: ~/wildcardpractice ▼                                  ☐   ×

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

2024-04-12 21:01:59 (43.4 MB/s) - 'logo100x100.png' saved [3520/3520]

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

Practice 2

```
1/1 ▼  +  ⏏  ⏮      Tilix: reaper@cis106: ~/wildcardpractice    Q  ☰  —  ☐  ×

1: reaper@cis106: ~/wildcardpractice ▼                                  ☐   ×

reaper@cis106:~/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
reaper@cis106:~/wildcardpractice$ ls .??*
.bash_history  .hidden1.py   .hidden2.py
.hidden1.doc   .hidden2.doc  .hiddenFile.txt
reaper@cis106:~/wildcardpractice$ ls b??*.???
baik.exe  baik.xml   beatk.pdf  book.exe  book.xml
baik.pdf  beatk.exe  beatk.xml  book.pdf
reaper@cis106:~/wildcardpractice$ ls sample?.*
sample1.doc  sample1.xls
reaper@cis106:~/wildcardpractice$ ls .??*??
.bash_history  .hidden1.py   .hidden2.py
.hidden1.doc   .hidden2.doc  .hiddenFile.txt
reaper@cis106:~/wildcardpractice$ 
```
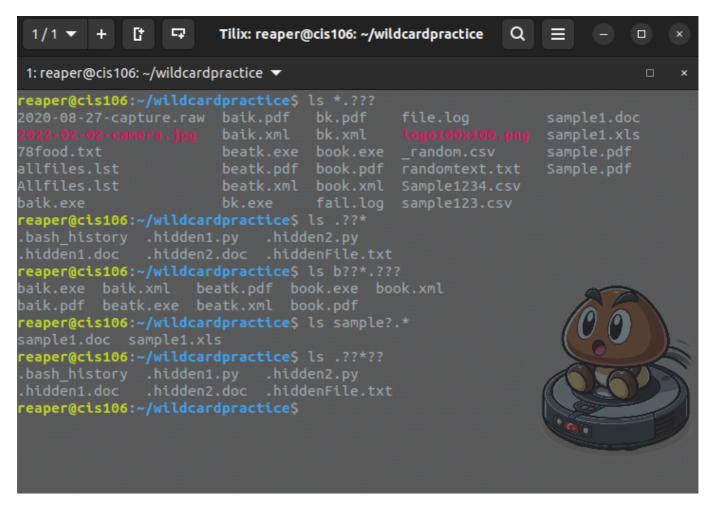
Practice 3

```
reaper@cis106:~/wildcardpractice$ ls [a-z]*???
allfiles.lst   beatk.pdf    book.exe    logo100x100.png   sample1.xls
baik.exe       beatk.xml    book.pdf    random_text.md    sample99.docx
baik.pdf       bk.exe       book.xml    randomtext.txt    samplejsonfile.json
baik.xml       bk.pdf       fail.log    sample123.csv     sample.pdf
beatk.exe      bk.xml       file.log    sample1.doc       samplesite.html
reaper@cis106:~/wildcardpractice$ ls [A-Z]*[0-9]*
Sample1234.csv
reaper@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
reaper@cis106:~/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
reaper@cis106:~/wildcardpractice$ ls [[:punt:]]*
ls: cannot access '[[:punt:]]*': No such file or directory
reaper@cis106:~/wildcardpractice$ ls [[:punct:]]*
_random.csv
reaper@cis106:~/wildcardpractice$
```