Week Report 6

Wildcards

* Wildcard

The * wildcard can represent any character, or any number of characters. It matches anything and nothing.

- Examples:
    - List all of the PDF files in this directory
        - `ls *.pdf`
    - List all of the files and folders that start with the word "Phone"
        - `ls phone*`
    - Delete multiple files that have a certain pattern in their names
        - `rm test*.log`

? Wildcard

The ? wildcard can represent any type of character, but can only represent one single character.

- Examples:
    - List all of the PDF files in this directory that only have one character
        - `ls ?.pdf`
    - List all of the files and folders that start with the word "phone" and a single character after it
        - `ls phone?`
    - Delete multiple files that have 2 characters in their name
        - `rm ??.log`

[] Wildcard

The [] wildcard matches a single character in a range

- Examples:
    - List all files that have a vowel after the letter f
        - `ls f[aeiou]*`
    - List all of the files whose name has at least one number
        - `ls *[0-9]*`
    - List all files that do not have a vowel after the letter f
        - ls f[!aeiou]*

Brace Expansions

Brace expansion is a feature of bash that allows you to generate arbitrary strings to use with commands.

Examples:

- This will create the three directories in the current directory.
    - `mkdir folder{1,2,3}`

- This will copy three files to the specified diretory.
  - `cp file{1,2,3}.txt /home/jdpaz/Downloads/`
- This will rename the three files in the current directory.
  - `mv testFile{1,2,3}.txt newFile{1,2,3}.txt`

Practice

Practice 5

```
jdpaz@cis106vm ~$ curl -s https://cis106.com/assets/wildcardpractice.sh | bash
--2023-05-02 21:46:24--  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

2023-05-02 21:46:24 (50.6 MB/s) - 'logo100x100.png' saved [3520/3520]

jdpaz@cis106vm ~$ ls *random*
ls: cannot access '*random*': No such file or directory
jdpaz@cis106vm ~$ ls
Backup      Downloads    lab5ChallengeQuestion  Music      Templates
cis106      lab4files    lab5-docs                         Pictures  Videos
Desktop     Lab-5        lab5-imgs                         Public    website
Documents   lab5-audio   lab5-video                        snap      wildcardpractice
jdpaz@cis106vm ~$ cd wildcardpractice/
jdpaz@cis106vm wildcardpractice$ ls *random*
_random.csv  random_text.md  randomtext.txt
jdpaz@cis106vm wildcardpractice$ ls *.csv *.txt
78food.txt  _random.csv  randomtext.txt  Sample1234.csv  sample123.csv
jdpaz@cis106vm wildcardpractice$ ls random*.md
random_text.md
jdpaz@cis106vm wildcardpractice$ ls *sample* *.md
random_text.md  sample1.doc  sample99.docx       sample.pdf
sample123.csv   sample1.xls  samplejsonfile.json  samplesite.html
jdpaz@cis106vm wildcardpractice$ _
```

Practice 6

```
jdpaz@cis106vm wildcardpractice$ ls *.???
2020-08-27-capture.raw  78food.txt    Allfiles.lst  baik.pdf  beatk.exe  beatk.xml  bk.pdf  book.exe  book.xml  file.log    _random.csv    Sample1234.csv  sample1.doc  sample.pdf
2022-02-02-camera.jpg   allfiles.lst  baik.exe      baik.xml  beatk.pdf  bk.exe     bk.xml  book.pdf  fail.log  logo100x100.png  randomtext.txt  sample123.csv   sample1.xls  Sample.pdf
jdpaz@cis106vm wildcardpractice$ ls .*.???
.hidden1.py  .hidden2.py
jdpaz@cis106vm wildcardpractice$ ls b??.???
ls: cannot access 'b??.???': No such file or directory
jdpaz@cis106vm wildcardpractice$ ls b??*.???
baik.exe  baik.pdf  baik.xml  beatk.exe  beatk.pdf  beatk.xml  book.exe  book.pdf  book.xml
jdpaz@cis106vm wildcardpractice$ ls sample?.*
sample1.doc  sample1.xls
jdpaz@cis106vm wildcardpractice$ ls .*.??
.hidden1.py  .hidden2.py
jdpaz@cis106vm wildcardpractice$ _
```

Practice 7

```
jdpaz@cis106vm wildcardpractice$ ls [a-z]*.???
allfiles.lst  baik.pdf  beatk.exe  beatk.xml  bk.pdf  book.exe  book.xml  file.log        randomtext.txt  sample1.doc  sample.pdf
baik.exe      baik.xml  beatk.pdf  bk.exe     bk.xml  book.pdf  fail.log  logo100x100.png  sample123.csv   sample1.xls
jdpaz@cis106vm wildcardpractice$ ls [A-Z]*[0-9]*
Sample1234.csv
jdpaz@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
jdpaz@cis106vm wildcardpractice$ ls [!AEIOUaeiou]*
2020-08-27-capture.raw      78food.txt  baik.xml   beatk.xml  bk.xml   book.xml  logo100x100.png  randomtext.txt  sample1.doc   samplejsonfile.json  samplesite.html
2021-04-10-screenshot.jpeg  baik.exe    beatk.exe  bk.exe     book.exe  fail.log  _random.csv      Sample1234.csv  sample1.xls   sample.pdf
2022-02-02-camera.jpg       baik.pdf    beatk.pdf  bk.pdf     book.pdf  file.log  random_text.md   sample123.csv   sample99.docx  Sample.pdf
jdpaz@cis106vm wildcardpractice$ ls [:punc:]*
ls: cannot access '[:punc:]*': No such file or directory
jdpaz@cis106vm wildcardpractice$ ls [:punct:]*
ls: cannot access '[:punct:]*': No such file or directory
jdpaz@cis106vm wildcardpractice$ ls [[:punct:]]*
_random.csv
jdpaz@cis106vm wildcardpractice$ _
```