File Globs

- Bash Globbing Tutorial
- `man 7 glob` to read about file globbing
- Actions can be performed on *globs* of files at once using patterns and wild cards
- "The process of expanding a nonspecific file name containing wildcard characters in specific file names"
- The `*` wildcard matches zero or more of any character
- The `?` wildcard matches exactly one of any character
    - To match more than one character, you can use more than one `?`
        - ie. `ls file??.txt`
- Passing a character set pattern for a wildcard allows you to match specific characters
    - ie. `mv file[123].txt ..` will move all files starting with `file` having either a 1, 2 or 3 in the name, then `.txt`
- To pass a range into a character set use a hyphen
    - ie. `cp file[1-99].txt` will match files `file1.txt` through `file99.txt`
    - ie. `ls file[a-zA-Z].txt` will match upper-case and lower-case
    - ie. `mv file[0-9abc].txt ..`
- To match a hyphen, the hyphen character must be included at the beginning of the character set
    - ie. `file[-0-9].txt`
- Negate a character by placing a `^` or `!` at the beginning of a character set

Character classes

- In addition to using character set patterns, you can also use character classes
- A character class is a grouping of like characters, such as letters, numbers, or punctuation

Class	Match	Result	Equivalent
[:digit:]	Whole Numbers	1,2,3	[0-9]
[:upper:]	Uppercase Letters	A,B,C	[A-Z]
[:lower:]	Lowercase Letters	a,b,c	[a-z]
[:alpha:]	Uppercase & Lowercase	a,b,C	[a-zA-Z]
[:alnum:]	Uppercase, Lowercase & Numbers	a,B,9	[a-zA-Z0-9]
[:space:]	Tab, Newline, Vertical Tab, Form Feed, Carriage Return, & Space		
[:graph:]	Printable Characters, not including Spaces		
[:print:]	Printable Characters, including Spaces		
[:punct]	Punctuation	!,?,~	[-!"#$%&'()+,./:;<=>?@[]^_`{
[:cntrl:]	Nonprintable Control Characters		

Class	Match	Result	Equivalent
[:xdigit:]	Hexadecimal Characters	0-9, A-F, a-f	[0-9A-Fa-f]

- To use a character class use it inside a character set
  - ie. `ls file[[:digit:]]`
  - ie. `ls file[[:digit:][:space:]]`
  - ie. `ls file[![:alnum:][:punc:]].txt - match any pattern *not* alphanumeric or punctuation

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