



Grep++

# SCS4ALL

# Halloween

- × Costume Contest
- × Friday, November 1st, 6:00-7:30 PM
- × NSH Atrium







# Regex vs Glob

- × Regex: Expanded by the program
  - × Patterns that match against certain strings
    - × Normal Characters
    - × Quantifiers
    - × Character Classes
- × Glob: Expanded by your shell (any shell really)
  - × A little more limited
  - × Context dependent



Quantifier	Matches
a?	Zero or one
a*	Zero or more
a+	One or more
a{3}	Exactly 3
a{3,}	3 or more
a{3,6}	Between 3 and 6



<b>Class</b>	<b>Matches</b>
[abc]	a or b or c
[^abc]	not any of a, b, c
[a-z]	A lowercase letter
[^A-Za-z]	Not a letter
\s	Whitespace
\d	Digit
.	Any single character





Regex	Glob/Range equivalent
.	?
file[1-7]\.txt	file{1..7}.txt
.*	*
(ab)*	Not possible



# Grep:

# Good Practices

- × Command Line Utility for matching text in files.
  - × Globbing and Regex
- × Globbing -- useful for filename expansion, second argument.
- × Regex -- useful for pattern definition, first argument.
- × USE QUOTES TO ENSURE PATTERN IS INTERPRETED PROPERLY.





# Stronger Together



# Grep Specifics

- × Matching Multiple Specific Patterns
  - × `"pattern1\|pattern2\|pattern3"`
  - × -E flag if you don't want to use `\`
- × Bracket notation to match file names
  - × `grep pattern dir/*{"substr1", "substr2", "substr3", "substr4"}`



# Example

mat3e.github.io/brains

cat text file.txt

---

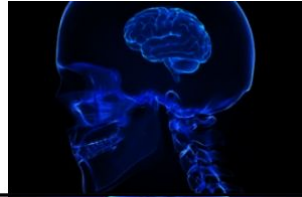
cat "text file.txt"

---

cat text\ file.txt

---

cat "\x74\x65\x78\x74  
\x20\x66\x69\x6c\x65  
\x2e\x74\x78\x74"



×



# Useful Flags

- × To print filenames: `-l`
  - × `grep -l pattern file`
- × To avoid escape characters: `-E`
  - × `grep -E pattern file`
- × To match non matching lines: `-v --invert-match`
- × Many more!





# Man Pages

- × [http://linuxcommand.org/lc3\\_man\\_pages/grep1.html](http://linuxcommand.org/lc3_man_pages/grep1.html)
- × Check these out if you have the time!
- ×



# Lab Hints: Hauntlab

- × Attempting to make without the bonus file will not be possible
  - × Just **touch** the bonus filename and leave it empty
  - × Make should work properly
- × Autolab is being really slow right now for everyone

