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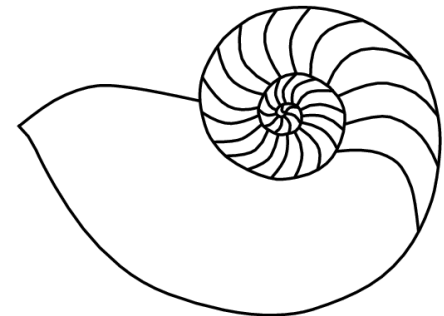
Computer Science

UNIX Commands

RTFM: `grep(1)`, `egrep(1)` & `fgrep(1)`

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What's in a name?...

- **grep**: **g**lobal **r**egular **e**xpression **p**rint
 - Comes from UNIX editor command: **g/re/p**
- **egrep**: *extended* **grep**
 - *Extended* (or *full*) regular expressions
- **fgrep**: *fast* **grep** or *fixed-string* **grep**
 - Matches *fixed* or literal strings
 - Historically, much faster than **grep/egrep**

Limited Regular Expressions

- A.k.a. “*basic*” regular expressions
- Alpha-numeric match literally
- So does *some* punctuation, unless special
- Similar to wildcards in file-name “globbing”
 - “.” matches any single character
 - “*” matches any number of previous character (including zero)
- Use “\.” (or “*”) to match those special characters literally

Limited Regular Expressions (cont.)

■ Character classes:

- “[0-9]” matches any digit
- “[^A-Za-z]” matches anything but letters
- “[0-9-]” matches “-” (literally) or a digit
- “[\[\]]” matches “]” or “[” (literally)

■ Anchors:

- “^” matches beginning of line: “^From_”
- “\$” matches end of line: “_*\$”

Full Regular Expressions

- A.k.a. “*extended*” regular expressions
- Additional *repetition* operators like “*” ...
 - “?” matches zero or one instance of previous character or sub-expression
 - “+” matches one or more instances of previous character or sub-expression

Full Regular Expressions (cont.)

- Sub-expressions enclosed in “(...)”:
 - “(the_)?end” matches “end” or “the end”
 - “(pretty_)*please”
- Alternatives separated by “|”...
 - “(this|that|the_other)”
 - “(this|that|)”
- And many more extensions (possibly)...

grep(1) Man Page

■ NAME

- grep, egrep, fgrep – print lines matching a pattern

■ SYNOPSIS

- **grep** [-cilmqv]... *PATTERN* [*FILE* ...]
- **grep** [-cilmqv]... [-e *PATTERN* | -f *FILE*]
[*FILE* ...]

grep(1) Man Page (cont.)

■ OPTIONS

- **-c** only prints a *count* of matching lines
- **-i** *ignores* letter case distinctions
- **-l** only prints *list* of names of files with matches
- **-n** prefixes line *numbers* to matching lines
- **-q** is *quiet*, returning only appropriate exit status
- **-v** selects *variant* or non-matching lines
- **-e** *PATTERN* makes pattern *explicit*, even if starting with “-”
- **-f** *FILE* takes list of patterns from *file*, one per line



Questions?