CS 35L Software Construction Lab

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REGEX EXAMPLES

Basic Examples(Quantifiers)

- match a string that has **ab followed by one or more c**
  - **Ans:** abc+
- match a string that has **ab followed by 2 c**
  - **Ans:** abc{2}
- match a string that has **ab followed by 2 or more c**
  - **Ans:** abc{2,}
- match a string that has **ab followed by 2 up to 5 c**
  - **Ans:** abc{2,5}
- match a string that has **a followed by 2 up to 5 copies of the sequence bc**
  - **Ans:** a(bc){2,5}

Basic Examples(OR Operator)

- match a string that has **a followed by b or c**
  - **Ans:** a(b|c)
  - **Ans**: a[bc]
- Match a string that has a character **from 0 to 9 before a % sign**
  - **Ans:** [0-9]%
- Match a string that **does not have a letter from a to z or from A to Z**
  - **Ans:** [^a-zA-Z]

Basic Examples(Look-ahead and Look-behind)

- match a **d** only if is **followed by r, but r will not be** part of the overall regex **match**
  - **Ans:** d(?=r)
- match a **d** only if is **preceded by an r, but r will not be** part of the overall regex **match**
  - **Ans:** (?<=r)d

Difference

- Difference between [.] and (.)

  The [.] will match exactly the '.' character.

  eg: .

  The (.) will match will match any one character.

  eg: a, b, 1

Quantifiers

Quantifier	Legend	Example	Sample Match
+	One or more	Version \w-\w+	Version A-b1_1
{3}	Exactly three times	\D{3}	ABC
{2,4}	Two to four times	\d{2,4}	156
{3,}	Three or more times	\w{3,}	regex_tutorial
*	Zero or more times	A*B*C*	AAACC
?	Once or none	plurals?	plural

Quantifiers

Quantifier	Legend	Example	Sample Match
+	The + (one or more) is "greedy"	\d+	12345
?	Makes quantifiers "lazy"	\d+?	1 in 12345
*	The * (zero or more) is "greedy"	A*	AAA
?	Makes quantifiers "lazy"	A*?	empty in AAA
{2,4}	Two to four times, "greedy"	\w{2,4}	abcd
?	Makes quantifiers "lazy"	\w{2,4}?	ab in abcd

Lazy VS Greedy

- Input String:
  - Hello World
- Regex 1:
  - <.+>
- Regex 2:
  - (<.+?>)

More characters

Character	Legend	Example	Sample Match
.	Any character except line break	a.c	abc
.	Any character except line break	.*	whatever, man.
\.	A period (special character: needs to be escaped by a \)	a\.c	a.c
\	Escapes a special character	\.*\+\? \$\^\/\\	.*+? $^/\
\	Escapes a special character	\[\{\(\)\}\]	[{()}]

Logic

Logic	Legend	Example	Sample Match
|	Alternation / OR operand	22|33	33
(…)	Capturing group	A(nt|pple)	Apple (captures "pple")
\1	Contents of Group 1	r(\w)g\1x	regex
\2	Contents of Group 2	(\d\d)\+(\d\d)=\2\+\1	12+65=65+12
(?: …)	Non-capturing group	A(?:nt|pple)	Apple