

Regular Expression (RegEx, re)

/ / : regular expression in java script and xml(?)

/_____/ : length of re

The whole thing is a pattern

Does pattern exist a subject (main string)?

Simple example) Madam, I'm Adam.

Search /a/: Madam, I'm Aadam.

Search /am/: Madam, I'm Aadam.

While inside they wined and dined, safe from the howling wind.

And she whined, it seemed, for the 100th time, into the ear of her friend,

"Why indeed should I wind the clocks up, if they all run down in the end?"

/i case insensitive /s dot all (including newline)

| or Ex) /it|of/ it or of

. any single character except new line

? quantifier, 0 or 1 whatever entity precedes it

ex) /a?b/ ab or b --- greedy, so prefer 'ab'

* quantifier, 0 or more

ex) /a*b/ b or ab or aab... -- greedy (Find max)

+ quantifier, 1 or more

Ex) /a+b/ ab or aab or aaab.. -- greedy

*?, +? Toggle greediness -> ungreedy (find shortest match)

[] character class

ex) [ab] : a or b, [a-c] : a, b, or c, [0-2] : 0, 1, or 2

[ab]* : nothing or consists of only a and b

[a-z] : any lowercase letter, [-0-3] : -, 0, 1, 2, or 3

\w word character, alpha-numeric characters and '_'

$\backslash w \cong [0 - 9a - zA - Z_]$

Ex) /\w*/ any alpha-numeric characters including '_' (no space, ...)

^ caret, anchor assertion, start of string or start of line, used with /m

Ex) /**^ab**/m each line, start with 'ab'

Ex17) /**^[while "end."]+/im**

\$ anchor assertion, end of string or end of each line, used with /m

\b anchor assertion, word boundary,
very beginning/ending of string/newline, after space

/\b**a+**/

/s dot all (including newline "\n" ← one character)

{#,#} or **{#,}** or **{#}** quantifier general case

Ex) /**a{2}**/ means 'aa', /**a{1,3}**/ 'a', 'aa', or 'aaa'

/**a{2,}**/ aa, aaa, or aaaa...

? ≅ {0,1} *** ≅ {0,}** **+ ≅ {1,}**

[**^a**] means except 'a', but [**^aeiou**] does not mean consonants.

Ex22) /**\b\w*?a.*?e.*?o.*?u\w*/is**

Ex25) Write a regular expression to match all words with at least two consonants.