Regular expressions overview

1 Overview

- Pattern matching
- Simple strings regular expressions matching only themselves
- Generalization is possible via using special symbols
- Used to enhance corpus search

2 Syntax

2.1 Symbol patterns

• [] — set	[aoiuye] \rightarrow any English vowel (exactly one!)
• [] — set in an interval	$\texttt{[a-zA-Z0-9]} \to \text{a letter or a digit (exactly one!)}$
• [^] — 'anti' set	$\texttt{[^aoiuye]} \to \text{any other symbol (exactly one!)}$
ullet . — any symbol	$\texttt{k.lt} \rightarrow \texttt{kalt}, \texttt{kblt}, \texttt{kclt}, \dots$
\bullet — alternative	$ ext{kalt} ext{kält} ightarrow ext{kalt} ext{ or kält}$
• () — group	$ exttt{k(a \ddot{a})lt} ightarrow exttt{kalt} ext{ or k\"{a}lt}$

2.2 Quantifiers

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\bullet ? $-$ 0 or 1 (optional)	$\mathtt{kalt(er)?} \to \mathtt{kalt} \ \mathrm{or} \ \mathtt{kalter}$
\bullet * $-$ 0 or more	[aoiuye]* $ o$ zero or more English vowels
ullet + $-$ 1 or more	[aoiuye]+ $ ightarrow$ at least one English vowel
• $\{a,b\}$ — a number between a and b	[aoiuye]1,4 \rightarrow 1, 2, 3, or 4 English vowels

3 Examples

See http://regexr.com/ to test your regular expressions.

Example 1: Forms of the word kalt: kalt, kälter, kältester, kältesten

- $k(a|\ddot{a})lt(er)? \rightarrow kalt, k\ddot{a}lt, kalter, k\ddot{a}lter$
- $k(a|\ddot{a})lt(er|este(r|n))? \rightarrow kalt, k\ddot{a}lt, kalter, k\ddot{a}lter, kaltester, kaltesten, k\ddot{a}ltester, kaltesten$