## Regular Expressions

Regular expression queries provide a powerful way of searching texts, allowing for higher-level descriptions than just literal words or characters. For example, to search for either "car" or "cars", use the pattern cars? . The ? allows the previous element ("s") to occur either 0 or 1 time.

| Pattern | Description | Example query |
| :---: | :---: | :---: |
|  | Match any character | b.t |
| ? | Match the previous element zero or one time | car.? |
| * | Match the previous element zero or more times | r |
| + | Match the previous element one or more times | car.+ |
| \{3,7\} | Match the previous element between 3 and 7 times | . $\{10,12\}$ |
| $\{3$, | Match the previous element at least 3 times | . $\{14$, |
| $\{, 7\}$ | Match the previous element no more than 7 times (including 0) | . $\{, 2\}$ |
| 1 | Match the previous element or the subsequent element | ablcd |
| (...) | Group the characters within the parentheses | talk(eding) |
| [ptk] | Match either p , t , or k | [mb] et |
| [^ptk] | Match anything except $\mathrm{p}, \mathrm{t}$, or k | [ ${ }^{\text {mb] }}$ et |
| -a | Match a only at the beginning of an entire query | -met |
| a\$ | Match a only at the end of an entire query | met\$ |
| \w | Match any alphabetic or numeric character (word-like) | \w+ |
| \W | Match anything except alphabetic or numeric characters | \W+ |
| \d | Match any number (digit) | $\backslash w+\backslash . \ d+$ |
| \D | Match anything except numbers |  |
| \s | Match any space character (eg. space, tab) |  |
| \S | Match anything except space characters |  |
| \b | Word boundary | \bhello\b |

## 1 Examples

Find either Meghan or Megan: Megh?an
Find either Katelyn or Catelyn: [CK] atelyn
Find either Ben or Benjamin: Ben(jamin)?
Find either Emily or Emilie: $\ulcorner$ Emil (iely)
Find a credit card number: $\backslash d\{16\}$
Find a recent year: (19|20) \d\{2\}
Find either Detmar or Dettmar or Dietmar or Dietmarr:

