***Regular Expressions***

* A regular expression is a kind of pattern that can be applied to text (Strings, in Java)
* A regular expression either matches the text (or part of the text), or it fails to match
  + If a regular expression matches a part of the text, then you can easily find out which part
  + If a regular expression is complex, then you can easily find out which parts of the regular expression match which parts of the text
  + With this information, you can readily extract parts of the text, or do substitutions in the text
* Regular expressions are an extremely useful tool for manipulating text
  + Regular expressions are heavily used in the automatic generation of Web pages.

***Sequences and Alternatives***

* If one pattern is followed by another, the two patterns must match consecutively
  + For example, [A-Za-z]+[0-9] will match one or more letters immediately followed by one digit
* The vertical bar, |, is used to separate alternatives

For example, the pattern abc|xyz will match either abc or xyz

***Double Backslahes***

* Backslashes have a special meaning in regular expressions; for example, \b means a word boundary
* Backslashes have a special meaning in Java; for example, \b means the backspace character
* Java syntax rules apply first!
  + If you write "\b[a-z]+\b" you get a string with backspace characters in it--this is *not* what you want!
  + Remember, you can quote a backslash with another backslash, so "\\b[a-z]+\\b" gives the correct string
* Note: if you *read in* a String from somewhere, this does not apply--you get whatever characters are actually there