CMSC330 Ruby RegExp Cheat Sheet

String search operations	
s.index(target,pos)	Find target, start at pos
s.sub(old,new)	Substitute new for 1st old
s.gsub(old,new)	Substitute new for old, all
s.split(target)	Split string on target
s =~ /pattern/	Contains: First position or nil
s !~ /pattern/	Not contain: true if *not* found

Regular expressions	
/Ruby/	Exact match
/RubyOcaml/	Concatenation
/(Ruby)(Ocaml)/	Concatenation with grouping
/(Ruby|Ocaml)/	Match either
/R(uby|Regular)/	Match
/(Ruby)*/	Match 0 or more (in order)
/(Ruby)+/	Match 1 or more
/(Ruby)?/	Match 0 or 1
/(Ruby){3}/	Match exactly 3
/(Ruby){3,}/	Match 3 or more
/(Ruby){3,5}/	Match 3 to 5

Extracting substrings	
$n (eg, $1, $2, …)	Back reference
	Matches groups in parens
	Use (?:abc) to ignore group
s.scan(/pattern/)	Return array of matches
s.scan(/(p1)(p2)/	Return array of arrays
str.scan(regexp) { |match| block }	*short for*
str.scan(regexp).each { |match| block }	
	Applies code block to matches
	in order

Regexp class and objects	
Regexp.new(str)	Create Regexp object with str
Examples:	Regexp.new('\w+')
	Regexp.new("abc" + "[0-9]{2}")
Regexp.new(regexp)	Create with literal regexp
	Regexp.new(\Ruby\)

Character classes	
. (period)	Any character
\d	Digit [0-9]
\s	Whitespace [\t\r\n\f\s]
\w	Alphanumeric [A-Za-z0-9]
\D	Non-digit [^0-9]
\S	Non-whitespace [^\t\r\n\f\s]
\W	Non-word [^A-Za-z0-9]
/[abcd]/	Character class
/[a-z]/	Character range
/[^0-9]/ , /[^abc]/	Match not in class

Anchors/Boundaries	
^	Beginning of line (after \n)
$	End of line
\A	Beginning of string (ignores \n)
\z	End of string
\b	Word boundary (change)
(anchors and boundaries do not consume characters)	

Metacharacters	
^ [ ] . $ { } * ( ) \ + | ? < >	Must be escaped

Special characters			
\\	Backslash	[\b]	Backspace
\n	New line	\r	Carriage return
\t	Tab	\v	Vertical tab
\f	Form feed	\e	Esc character
\xhh		Hex character hh	
\Oxxx		Octal character xxx	

1. Order of precedence: *, {n}, + bind most tightly, then concatenate, then |

2. RegExp references

Official reference:	http://ruby-doc.org/core-2.4.0/Regexp.html
Rubular online editor	https://rubular.com