|             | Character Classes                            |
|-------------|--|
| [abc]       | A single character of: a, b or c             |
| [^abc]      | A character except: a, b or c                |
| [a-z]       | A character in the range: a-z                |
| [^a-z]      | A character not in the range: a-z            |
| [0-9]       | A digit in the range: 0-9                    |
| [a-zA-Z]    | A character in the range:<br>a-z or A-Z      |
| [a-zA-Z0-9] | A character in the range:<br>a-z, A-Z or 0-9 |

|        | Quantifiers           |
|--------|-----------------------|
| a?     | Zero or one of a      |
| a*     | Zero or more of a     |
| a+     | One or more of a      |
| [0-9]+ | One or more of 0-9    |
| a{3}   | Exactly 3 of a        |
| a{3,}  | 3 or more of a        |
| a{3,6} | Between 3 and 6 of a  |
| a*     | Greedy quantifier     |
| a*?    | Lazy quantifier       |
| a*+    | Possessive quantifier |

| \$          |                        | End of string         |
|-------------|------------------------|-----------------------|
|             |                        |                       |
|             |                        | Common Metacharacters |
| ^           | {                      | +                     |
| <           | [                      | *                     |
| )           | >                      |                       |
| (           | I                      | \$                    |
| \           | ?                      |                       |
|             |                        |                       |
| Escape thes | e special characters w | vith \                |
|             |                        |                       |

Anchors

Start of string

|            | Meta Sequences                |
|------------|-------------------------------|
|            | Any single character          |
| \s         | Any whitespace character      |
| <b>\</b> S | Any non-whitespace character  |
| \d         | Any digit, Same as [0-9]      |
| \D         | Any non-digit, Same as [^0-9] |
| \w         | Any word character            |
| \W         | Any non-word character        |
|            | Makes any character literal   |
|            |                               |

|         | Substitution                  |
|---------|-------------------------------|
| \0      | Complete match contents       |
| \1      | Contents in capture group 1   |
| \$1     | Contents in capture group 1   |
| \${foo} | Contents in capture group foo |
| \t      | Tab                           |
| \r      | Carriage return               |
| \n      | Newline                       |

|                   | Group Constructs                  |
|-------------------|-----------------------------------|
|                   | Capture everything enclosed       |
| (a b)             | Match either a or b               |
| (?:)              | Match everything enclosed         |
| (?>)              | Atomic group (non-capturing)      |
| (? )              | Duplicate subpattern group number |
| (?#)              | Comment                           |
| (?'name')         | Named Capturing Group             |
|                   |                                   |
| (? <name>)</name> | Named Capturing Group             |