## Regular Expressions Cheat Sheet

| Wildcards |  |
| :---: | :--- |
| . | Any character |
| $\backslash \mathbf{w}$ | Word character: Letters, <br> numbers, and _ |
| $\backslash \mathbf{W}$ | Non-word character |
| $\backslash \mathbf{s}$ | White space: Space, tab, or end <br> of line (EOL) |
| $\backslash \mathbf{S}$ | Non-white space character |
| $\backslash \mathbf{d}$ | Digit character (but not . in <br> $2.4)$ |
| $\backslash \mathbf{D}$ | Non-digit character |
| $\backslash \mathbf{t}$ | Tab character |
| $\backslash \mathbf{n}$ | Newline character (some use <br> r) |
| $\backslash \backslash$ | \is the escape character so $\backslash \backslash$ <br> matches a $\backslash, \backslash^{\wedge}$ matches $\wedge, ~ e t c . ~$ |

## Boundary qualifiers

| $\wedge$ | Match at start of <br> string/line |
| :---: | :--- |
| $\mathbf{\$}$ | Match at end of string/line |
| $\mathbf{\wedge A B C}^{\mathbf{A B}}$ | Exact match to ABC-Both <br> starts and ends in ABC |

## Capturing and replacing

( ) Capture the search results between the parentheses and save for use. Save in order of appearance of (if multiple or nested.
\$1 Variables containing the
\$2 captured text numbered in order of (. Can be used for replacing. Some editors (BBEdit) use $\backslash 1$, $\backslash 2$, etc.

| Repetitions |  |
| :---: | :--- |
| $*$ | Match 0 or more times |
| $\boldsymbol{+}$ | Match 1 or more times |
| $\boldsymbol{?}$ | Non-greedy-get shortest <br> match |
| $\mathbf{\{ n \}}$ | Match exactly n times |
| $\mathbf{\{ n , \}}$ | Match at least n times |
| $\mathbf{\{ n , m}\}$ | Match at least n, but not <br> more than m times |


| Character classes |  |
| :---: | :---: |
| [AEIOU] | Match 1 vowel character |
| [A-Z] | Match on capital letter |
| $\begin{gathered} \text { [A-Za-z0- } \\ \text { 9_] } \end{gathered}$ | Same as \w |
| ${ }^{\wedge}$ [A-Za-z] | Match one letter at beginning of string/line |
| [^A-Za-z] | Match any character that is not a letter (including EOL)NOTE the very different meaning of ${ }^{\wedge}$ here. Within [], ^ means NOT. |

## Some Examples

This is 1.0 (one) line to play with

| Pattern | Matches: |
| :---: | :---: |
| $\backslash \mathbf{w}^{*}$ | This |
| $\backslash \mathrm{d}+$ | 1 |
| [0-9\.]+ | 1.0 |
| $\left({ }^{\left(\backslash w^{*}\right.}\right) \backslash \mathbf{s}\left(\backslash \mathbf{w}^{*}\right)$ ) | $\begin{aligned} & \$ 1=\text { This is, } \\ & \$ 2=\text { This, } \$ 3=\text { is (or } \\ & \backslash 1, \backslash 2, \backslash 3 \text { in } \\ & \text { BBEdit) } \end{aligned}$ |
| \w*\$ | With |
| "is "\{2\} | is is (from This is) |
| $\backslash(.+\backslash)$ | (one) (note the escaping of parentheses) |
| $\backslash \mathbf{w}+$ | $T$ (note the nongreediness of ?) |
| $\backslash \mathbf{w}^{*}$ ? | Blank match (why?) |

