

Package ‘rebus’

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Type Package

Title Build Regular Expressions in a Human Readable Way

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Author Richard Cotton [aut, cre]

Maintainer Richard Cotton <richierocks@gmail.com>

Description Build regular expressions piece by piece using human readable code.
This package is designed for interactive use. For package development, use the rebus.* dependencies.

Depends R (>= 3.1.0)

Imports rebus.base (>= 0.0-3), rebus.datetimes, rebus.numbers,
rebus.unicode (>= 0.0-2)

Suggests testthat

License Unlimited

LazyLoad yes

LazyData yes

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Collate 'export-base.R' 'export-datetimes.R' 'export-numbers.R'
'export-unicode.R' 'imports.R' 'regex-package.R'

NeedsCompilation no

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Anchors

The start or end of a string

Description
See [Anchors](#).

as.regex	<i>Convert or test for regex objects</i>
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Description

See [as.regex](#).

Backreferences	<i>Backreferences</i>
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Description

See [Backreferences](#).

capture	<i>Capture a token, or not</i>
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Description

See [capture](#).

CharacterClasses	<i>Class Constants</i>
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Description

See [CharacterClasses](#).

char_class	<i>A range or char_class of characters</i>
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Description

See [char_class](#).

ClassGroups	<i>Character classes</i>
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Description

See [ClassGroups](#).

Concatenation	<i>Combine strings together</i>
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Description

See [Concatenation](#).

DateTime	<i>Date-time regexes</i>
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Description

See [DateTime](#).

escape_special	<i>Escape special characters</i>
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Description

See [escape_special](#).

exactly	<i>Make a regex exact</i>
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Description

See [exactly](#).

format.regex	<i>Print or format regex objects</i>
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Description

See [format.regex](#).

get_weekdays	<i>Get the days of the week or months of the year</i>
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Description

See [get_weekdays](#).

IsoClasses	<i>ISO 8601 date-time classes</i>
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Description

See [IsoClasses](#).

literal	<i>Treat part of a regular expression literally</i>
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Description

See [literal](#).

lookahead	<i>Lookaround</i>
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Description

See [lookahead](#).

modify_mode	<i>Apply mode modifiers</i>
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Description

See [modify_mode](#).

number_range	<i>Generate a regular expression for a number range</i>
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Description

See [number_range](#).

or	<i>Alternation</i>
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Description

See [or](#).

rebus	<i>rebus: Regular Expression Builder, Um, Something</i>
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Description

Build regular expressions in a human readable way.

Details

Regular expressions are a very powerful tool, but the syntax is terse enough to be difficult to read. This makes bugs easy to introduce, and hard to find. This package contains functions to make building regular expressions easier.

Author(s)

Richard Cotton <richierocks@gmail.com>

See Also

`regex` and `regexpr` The `'stringr'` and `'stringi'` packages provide tools for matching regular expressions and nicely complement this package. <http://www.regular-expressions.info> has good advice on using regular expression in R. In particular, see <http://www.regular-expressions.info/rlanguage.html> and <http://www.regular-expressions.info/examples.html> <https://www.debuggex.com> is a visual regex debugging and testing site.

Examples

```
### Match a hex colour, like `"#99af01"`
# This reads *Match a hash, followed by six hexadecimal values.*

"# " %R% hex_digit(6)

# To match only a hex colour and nothing else, you can add anchors to the
# start and end of the expression.

START %R% "# " %R% hex_digit(6) %R% END

### Simple email address matching.
# This reads *Match one or more letters, numbers, dots, underscores, percents,
# plusses or hyphens. Then match an 'at' symbol. Then match one or more letters,
# numbers, dots, or hyphens. Then match a dot. Then match two to four letters.*

one_or_more(char_class(ASCII_ALNUM %R% "._%+-")) %R%
"@ " %R%
one_or_more(char_class(ASCII_ALNUM %R% ".-")) %R%
DOT %R%
ascii_alpha(2, 4)

### IP address matching.
# First we need an expression to match numbers between 0 and 255. Both the
# following syntaxes read *Match two then five then a number between zero and
# five. Or match two then a number between zero and four then a digit. Or match
# an optional zero or one followed by an optional digit folowed by a compulsory
# digit. Make this a single token, but don't capture it.*

# Using the %|% operator
ip_element <- group(
  "25" %R% char_range(0, 5) %|%
  "2" %R% char_range(0, 4) %R% ascii_digit() %|%
  optional(char_class("01")) %R% optional(ascii_digit()) %R% ascii_digit()
)

# The same again, this time using the or function
ip_element <- or(
  "25" %R% char_range(0, 5),
  "2" %R% char_range(0, 4) %R% ascii_digit(),
  optional(char_class("01")) %R% optional(ascii_digit()) %R% ascii_digit()
)

# It's easier to write using number_range, though it isn't quite as optimal
```

```
# as handcrafted regexes.
number_range(0, 255, allow_leading_zeroes = TRUE)

# Now an IP address consists of 4 of these numbers separated by dots. This
# reads *Match a word boundary. Then create a token from an `ip_element`
# followed by a dot, and repeat it three times. Then match another `ip_element`
# followed by a word boundary.*

BOUNDARY %R%
  repeated(group(ip_element %R% DOT), 3) %R%
  ip_element %R%
BOUNDARY
```

recursive	<i>Make the regular expression recursive.</i>
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Description

See [recursive](#).

regex	<i>Create a regex</i>
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Description

See [regex](#).

repeated	<i>Repeat values</i>
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Description

See [repeated](#).

ReplacementCase	<i>Force the case of replacement values</i>
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Description

See [ReplacementCase](#).

roman	<i>Roman numerals</i>
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Description

See [roman](#).

SpecialCharacters	<i>Special characters</i>
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Description

See [SpecialCharacters](#).

Unicode	<i>Unicode classes</i>
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Description

See [Unicode](#).

UnicodeGeneralCategory	<i>Unicode General Categories</i>
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Description

See [UnicodeGeneralCategory](#).

UnicodeOperators	<i>Unicode Operators</i>
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Description

See [UnicodeOperators](#).

UnicodeProperty	<i>Unicode Properties</i>
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Description

See [UnicodeProperty](#).

whole_word	<i>Match a whole word</i>
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Description

See [whole_word](#).

WordBoundaries	<i>Word boundaries</i>
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Description

See [WordBoundaries](#).

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