

Package ‘rebus.unicode’

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Type Package

Title Unicode Extensions for the 'rebus' Package

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Description Build regular expressions piece by piece using human readable code.
This package contains Unicode functionality, and is primarily intended to be used by package developers.

Depends R (>= 3.1.0)

Imports rebus.base (>= 0.0-2)

Suggests stringi

License Unlimited

LazyLoad yes

LazyData yes

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Collate 'imports.R' 'unicode-classes.R' 'unicode-constants.R'
'unicode-general-category-classes.R'
'unicode-general-category-constants.R' 'unicode-operators.R'

RoxygenNote 5.0.1

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

Match a Unicode General Category.

Usage

- ugc_cased_letter(lo, hi, char_class = TRUE)
- ugc_close_punctuation(lo, hi, char_class = TRUE)
- ugc_connector_punctuation(lo, hi, char_class = TRUE)
- ugc_control(lo, hi, char_class = TRUE)
- ugc_currency_symbol(lo, hi, char_class = TRUE)
- ugc_dash_punctuation(lo, hi, char_class = TRUE)
- ugc_decimal_number(lo, hi, char_class = TRUE)
- ugc_enclosing_mark(lo, hi, char_class = TRUE)
- ugc_final_punctuation(lo, hi, char_class = TRUE)
- ugc_format_control(lo, hi, char_class = TRUE)
- ugc_initial_punctuation(lo, hi, char_class = TRUE)
- ugc_letter(lo, hi, char_class = TRUE)
- ugc_letter_number(lo, hi, char_class = TRUE)
- ugc_line_separator(lo, hi, char_class = TRUE)
- ugc_lowercase_letter(lo, hi, char_class = TRUE)

```
ugc_mark(lo, hi, char_class = TRUE)
ugc_math_symbol(lo, hi, char_class = TRUE)
ugc_modifier_letter(lo, hi, char_class = TRUE)
ugc_modifier_symbol(lo, hi, char_class = TRUE)
ugc_nonspacing_mark(lo, hi, char_class = TRUE)
ugc_number(lo, hi, char_class = TRUE)
ugc_open_punctuation(lo, hi, char_class = TRUE)
ugc_other(lo, hi, char_class = TRUE)
ugc_other_letter(lo, hi, char_class = TRUE)
ugc_other_number(lo, hi, char_class = TRUE)
ugc_other_punctuation(lo, hi, char_class = TRUE)
ugc_other_symbol(lo, hi, char_class = TRUE)
ugc_paragraph_separator(lo, hi, char_class = TRUE)
ugc_private_use_control(lo, hi, char_class = TRUE)
ugc_punctuation(lo, hi, char_class = TRUE)
ugc_separator(lo, hi, char_class = TRUE)
ugc_space_separator(lo, hi, char_class = TRUE)
ugc_spacing_mark(lo, hi, char_class = TRUE)
ugc_surrogate_control(lo, hi, char_class = TRUE)
ugc_symbol(lo, hi, char_class = TRUE)
ugc_titlecase_letter(lo, hi, char_class = TRUE)
ugc_unassigned_control(lo, hi, char_class = TRUE)
ugc_uppercase_letter(lo, hi, char_class = TRUE)
UGC_UPPERCASE_LETTER
```

UGC_LOWERCASE_LETTER

UGC_TITLECASE_LETTER

UGC_CASED_LETTER

UGC_MODIFIER_LETTER

UGC_OTHER_LETTER

UGC_LETTER

UGC_NONSPACING_MARK

UGC_SPACING_MARK

UGC_ENCLOSING_MARK

UGC_MARK

UGC_DECIMAL_NUMBER

UGC_LETTER_NUMBER

UGC_OTHER_NUMBER

UGC_NUMBER

UGC_CONNECTOR_PUNCTUATION

UGC_DASH_PUNCTUATION

UGC_OPEN_PUNCTUATION

UGC_CLOSE_PUNCTUATION

UGC_INITIAL_PUNCTUATION

UGC_FINAL_PUNCTUATION

UGC_OTHER_PUNCTUATION

UGC_PUNCTUATION

UGC_MATH_SYMBOL

UGC_CURRENCY_SYMBOL

UGC_MODIFIER_SYMBOL
UGC_OTHER_SYMBOL
UGC_SYMBOL
UGC_SPACE_SEPARATOR
UGC_LINE_SEPARATOR
UGC_PARAGRAPH_SEPARATOR
UGC_SEPARATOR
UGC_CONTROL
UGC_FORMAT_CONTROL
UGC_SURROGATE_CONTROL
UGC_PRIVATE_USE_CONTROL
UGC_UNASSIGNED_CONTROL
UGC_OTHER

Arguments

lo	A non-negative integer. Minimum number of repeats, when grouped.
hi	positive integer. Maximum number of repeats, when grouped.
char_class	TRUE or FALSE. Should the values be wrapped into a character class?

Format

An object of class regex (inherits from character) of length 1.

Value

A character vector representing part or all of a regular expression.

References

Table 12 of the Unicode Standard Annex #44 defines the Unicode General Categories. <http://www.unicode.org/reports/tr44>

You can see which characters are contained in a category by visiting, e.g., <http://www.fileformat.info/info/unicode/category/Nd/list.htm>

See Also

[unicode_property](#), [Unicode](#)

Examples

```
# Classes
ugc_lowercase_letter()
ugc_decimal_number()
ugc_paragraph_separator()
ugc_currency_symbol()

# With repetition
ugc_nonspacing_mark(3, 6)
ugc_separator(1, Inf)
ugc_dash_punctuation(0, Inf)

# Without a class wrapper
ugc_titlecase_letter(char_class = FALSE)

# Constants
UGC_UPPERCASE_LETTER
UGC_LETTER_NUMBER
UGC_MATH_SYMBOL
UGC_FORMAT_CONTROL

## Not run:
# All the Unicode general categories.
# Not run, since it generates lots of output
ls("package:rebus.unicode", pattern = "^ugc")

## End(Not run)

# Usage
library(rebus.base)
x <- "I exchanged $1000 for \u20ac665.41 and \u00a3243.13."
(rx <- capture(ugc_currency_symbol()) %R%
  capture(
    ugc_decimal_number(1, Inf) %R%
    optional(group("." %R% ugc_decimal_number(2)))
  )
)
stringi::stri_match_all_regex(x, rx)
```

Unicode

Unicode classes

Description

Match ranges of unicode characters. In particular, you can match characters from a particular language.

Usage

```
armenian(lo, hi, char_class = TRUE)
armenian_ligatures(lo, hi, char_class = TRUE)
caucasian_albanian(lo, hi, char_class = TRUE)
cypriot_syllabary(lo, hi, char_class = TRUE)
cyrillic(lo, hi, char_class = TRUE)
cyrillic_supplement(lo, hi, char_class = TRUE)
cyrillic_extended_a(lo, hi, char_class = TRUE)
cyrillic_extended_b(lo, hi, char_class = TRUE)
elbasan(lo, hi, char_class = TRUE)
georgian(lo, hi, char_class = TRUE)
georgian_supplement(lo, hi, char_class = TRUE)
glagolitic(lo, hi, char_class = TRUE)
gothic(lo, hi, char_class = TRUE)
greek_and_coptic(lo, hi, char_class = TRUE)
greek_extended(lo, hi, char_class = TRUE)
latin(lo, hi, char_class = TRUE)
latin_1_supplement(lo, hi, char_class = TRUE)
latin_extended_a(lo, hi, char_class = TRUE)
latin_extended_b(lo, hi, char_class = TRUE)
latin_extended_c(lo, hi, char_class = TRUE)
latin_extended_d(lo, hi, char_class = TRUE)
latin_extended_e(lo, hi, char_class = TRUE)
latin_extended_additional(lo, hi, char_class = TRUE)
latin_ligatures(lo, hi, char_class = TRUE)
```

```
linear_a(lo, hi, char_class = TRUE)
linear_b_syllabary(lo, hi, char_class = TRUE)
linear_b_ideograms(lo, hi, char_class = TRUE)
ogham(lo, hi, char_class = TRUE)
old_italic(lo, hi, char_class = TRUE)
old_permic(lo, hi, char_class = TRUE)
phaistos_disc(lo, hi, char_class = TRUE)
runic(lo, hi, char_class = TRUE)
shavian(lo, hi, char_class = TRUE)
duployan(lo, hi, char_class = TRUE)
shorthand_format_controls(lo, hi, char_class = TRUE)
ipa_extensions(lo, hi, char_class = TRUE)
phonetic_extensions(lo, hi, char_class = TRUE)
phonetic_extensions_supplement(lo, hi, char_class = TRUE)
modifier_tone_letters(lo, hi, char_class = TRUE)
spacing_modifier_letters(lo, hi, char_class = TRUE)
superscripts_and_subscripts(lo, hi, char_class = TRUE)
combining_diacritic_marks(lo, hi, char_class = TRUE)
combining_diacritic_supplement(lo, hi, char_class = TRUE)
combining_diacritic_extended(lo, hi, char_class = TRUE)
combining_half_marks(lo, hi, char_class = TRUE)
bamun(lo, hi, char_class = TRUE)
bamun_supplement(lo, hi, char_class = TRUE)
bassa_vah(lo, hi, char_class = TRUE)
```

```
coptic(lo, hi, char_class = TRUE)
coptic_epact_numbers(lo, hi, char_class = TRUE)
egyptian_hieroglyphs(lo, hi, char_class = TRUE)
ethiopic(lo, hi, char_class = TRUE)
ethiopic_supplement(lo, hi, char_class = TRUE)
ethiopic_extended(lo, hi, char_class = TRUE)
ethiopic_extended_a(lo, hi, char_class = TRUE)
mende_kikakui(lo, hi, char_class = TRUE)
meroitic_cursive(lo, hi, char_class = TRUE)
meroitic_hieroglyphs(lo, hi, char_class = TRUE)
nko(lo, hi, char_class = TRUE)
osmanya(lo, hi, char_class = TRUE)
tifinagh(lo, hi, char_class = TRUE)
vai(lo, hi, char_class = TRUE)
arabic(lo, hi, char_class = TRUE)
arabic_supplement(lo, hi, char_class = TRUE)
arabic_extended_a(lo, hi, char_class = TRUE)
arabic_presentation_forms_a(lo, hi, char_class = TRUE)
arabic_presentation_forms_b(lo, hi, char_class = TRUE)
imperial_aramaic(lo, hi, char_class = TRUE)
avestan(lo, hi, char_class = TRUE)
carian(lo, hi, char_class = TRUE)
cuneiform(lo, hi, char_class = TRUE)
cuneiform_numbers_and_punctuation(lo, hi, char_class = TRUE)
```

```
old_persian(lo, hi, char_class = TRUE)
ugaritic(lo, hi, char_class = TRUE)
hebrew(lo, hi, char_class = TRUE)
lycian(lo, hi, char_class = TRUE)
lydian(lo, hi, char_class = TRUE)
mandaic(lo, hi, char_class = TRUE)
nabataean(lo, hi, char_class = TRUE)
old_north_arabian(lo, hi, char_class = TRUE)
old_south_arabian(lo, hi, char_class = TRUE)
pahlavi_inscriptional(lo, hi, char_class = TRUE)
pahlavi_psalter(lo, hi, char_class = TRUE)
palmyrene(lo, hi, char_class = TRUE)
phoenician(lo, hi, char_class = TRUE)
samaritan(lo, hi, char_class = TRUE)
syriac(lo, hi, char_class = TRUE)
manichaeian(lo, hi, char_class = TRUE)
mongolian(lo, hi, char_class = TRUE)
old_turkic(lo, hi, char_class = TRUE)
phags_pa(lo, hi, char_class = TRUE)
tibetan(lo, hi, char_class = TRUE)
bengali_and_assamese(lo, hi, char_class = TRUE)
brahmi(lo, hi, char_class = TRUE)
chakma(lo, hi, char_class = TRUE)
devanagari(lo, hi, char_class = TRUE)
```

```
devanagari_extended(lo, hi, char_class = TRUE)
grantha(lo, hi, char_class = TRUE)
gujarati(lo, hi, char_class = TRUE)
gurmukhi(lo, hi, char_class = TRUE)
kaithi(lo, hi, char_class = TRUE)
kannada(lo, hi, char_class = TRUE)
kharoshthi(lo, hi, char_class = TRUE)
khojki(lo, hi, char_class = TRUE)
khudawadi(lo, hi, char_class = TRUE)
lepcha(lo, hi, char_class = TRUE)
limbu(lo, hi, char_class = TRUE)
mahajani(lo, hi, char_class = TRUE)
malayalam(lo, hi, char_class = TRUE)
meetei_mayek(lo, hi, char_class = TRUE)
meetei_mayek_extensions(lo, hi, char_class = TRUE)
modi(lo, hi, char_class = TRUE)
mro(lo, hi, char_class = TRUE)
ol_chiki(lo, hi, char_class = TRUE)
oriya(lo, hi, char_class = TRUE)
saurashtra(lo, hi, char_class = TRUE)
sharada(lo, hi, char_class = TRUE)
siddham(lo, hi, char_class = TRUE)
sinhala(lo, hi, char_class = TRUE)
sinhala_archaic_numbers(lo, hi, char_class = TRUE)
```

```
sora_sompeng(lo, hi, char_class = TRUE)
syloti_nagri(lo, hi, char_class = TRUE)
takri(lo, hi, char_class = TRUE)
tamil(lo, hi, char_class = TRUE)
telugu(lo, hi, char_class = TRUE)
thaana(lo, hi, char_class = TRUE)
tirhuta(lo, hi, char_class = TRUE)
vedic_extensions(lo, hi, char_class = TRUE)
warang_citi(lo, hi, char_class = TRUE)
cham(lo, hi, char_class = TRUE)
kayah_li(lo, hi, char_class = TRUE)
khmer(lo, hi, char_class = TRUE)
khmer_symbols(lo, hi, char_class = TRUE)
lao(lo, hi, char_class = TRUE)
myanmar(lo, hi, char_class = TRUE)
myanmar_extended_a(lo, hi, char_class = TRUE)
myanmar_extended_b(lo, hi, char_class = TRUE)
new_tai_lue(lo, hi, char_class = TRUE)
pahawh_hmong(lo, hi, char_class = TRUE)
pau_cin_hau(lo, hi, char_class = TRUE)
tai_le(lo, hi, char_class = TRUE)
tai_tham(lo, hi, char_class = TRUE)
tai_viet(lo, hi, char_class = TRUE)
thai(lo, hi, char_class = TRUE)
```

```
balinese(lo, hi, char_class = TRUE)
batak(lo, hi, char_class = TRUE)
buginese(lo, hi, char_class = TRUE)
buhid(lo, hi, char_class = TRUE)
hanunoo(lo, hi, char_class = TRUE)
javanese(lo, hi, char_class = TRUE)
rejang(lo, hi, char_class = TRUE)
sundanese(lo, hi, char_class = TRUE)
sundanese_supplement(lo, hi, char_class = TRUE)
tagalog(lo, hi, char_class = TRUE)
tagbanwa(lo, hi, char_class = TRUE)
bopomofo(lo, hi, char_class = TRUE)
bopomofo_extended(lo, hi, char_class = TRUE)
cjk_unified_ideographs(lo, hi, char_class = TRUE)
cjk_unified_ideographs_extension_a(lo, hi, char_class = TRUE)
cjk_unified_ideographs_extension_b(lo, hi, char_class = TRUE)
cjk_unified_ideographs_extension_c(lo, hi, char_class = TRUE)
cjk_unified_ideographs_extension_d(lo, hi, char_class = TRUE)
cjk_compatibility_ideographs(lo, hi, char_class = TRUE)
cjk_compatibility_ideographs_supplement(lo, hi, char_class = TRUE)
kangxi_radicals(lo, hi, char_class = TRUE)
kangxi_radicals_supplement(lo, hi, char_class = TRUE)
cjk_strokes(lo, hi, char_class = TRUE)
cjk_ideographic_description_characters(lo, hi, char_class = TRUE)
```

```
hangul_jamo(lo, hi, char_class = TRUE)
hangul_jamo_extended_a(lo, hi, char_class = TRUE)
hangul_jamo_extended_b(lo, hi, char_class = TRUE)
hangul_compatibility_jamo(lo, hi, char_class = TRUE)
hangul_syllables(lo, hi, char_class = TRUE)
hiragana(lo, hi, char_class = TRUE)
katakana(lo, hi, char_class = TRUE)
katakana_phonetic_extensions(lo, hi, char_class = TRUE)
kana_supplement(lo, hi, char_class = TRUE)
kanbun(lo, hi, char_class = TRUE)
lisu(lo, hi, char_class = TRUE)
miao(lo, hi, char_class = TRUE)
yi_syllables(lo, hi, char_class = TRUE)
yi_radicals(lo, hi, char_class = TRUE)
cherokee(lo, hi, char_class = TRUE)
deseret(lo, hi, char_class = TRUE)
unified_canadian_aboriginal_syllabics(lo, hi, char_class = TRUE)
unified_canadian_aboriginal_syllabics_extended(lo, hi, char_class = TRUE)
alphabetic_presentation_forms(lo, hi, char_class = TRUE)
halfwidth_and_fullwidth_forms(lo, hi, char_class = TRUE)
general_punctuation(lo, hi, char_class = TRUE)
latin_1_punctuation(lo, hi, char_class = TRUE)
small_form_variants(lo, hi, char_class = TRUE)
supplemental_punctuation(lo, hi, char_class = TRUE)
```

```
cjk_symbols_and_punctuation(lo, hi, char_class = TRUE)
cjk_compatibility_forms(lo, hi, char_class = TRUE)
fullwidth_ascii_punctuation(lo, hi, char_class = TRUE)
vertical_forms(lo, hi, char_class = TRUE)
letterlike_symbols(lo, hi, char_class = TRUE)
ancient_symbols(lo, hi, char_class = TRUE)
mathematical_alphanumeric_symbols(lo, hi, char_class = TRUE)
arabic_mathematical_alphanumeric_symbols(lo, hi, char_class = TRUE)
enclosed_alphanumerics(lo, hi, char_class = TRUE)
enclosed_alphanumeric_supplement(lo, hi, char_class = TRUE)
enclosed_cjk_letters_and_months(lo, hi, char_class = TRUE)
enclosed_ideographic_supplement(lo, hi, char_class = TRUE)
cjk_compatibility(lo, hi, char_class = TRUE)
miscellaneous_technical(lo, hi, char_class = TRUE)
control_pictures(lo, hi, char_class = TRUE)
optical_character_recognition(lo, hi, char_class = TRUE)
combining_diacritic_marks_for_symbols(lo, hi, char_class = TRUE)
aegean_numbers(lo, hi, char_class = TRUE)
ancient_greek_numbers(lo, hi, char_class = TRUE)
fullwidth_ascii_digits(lo, hi, char_class = TRUE)
common_indic_number_forms(lo, hi, char_class = TRUE)
coptic_epact_numbers(lo, hi, char_class = TRUE)
counting_rod_numerals(lo, hi, char_class = TRUE)
number_forms(lo, hi, char_class = TRUE)
```

```
rumi_numeral_symbols(lo, hi, char_class = TRUE)
sinhala_archaic_numbers(lo, hi, char_class = TRUE)
math_arrows(lo, hi, char_class = TRUE)
supplemental_arrows_a(lo, hi, char_class = TRUE)
supplemental_arrows_a(lo, hi, char_class = TRUE)
supplemental_arrows_a(lo, hi, char_class = TRUE)
additional_arrows(lo, hi, char_class = TRUE)
supplemental_mathematical_operators(lo, hi, char_class = TRUE)
miscellaneous_mathematical_symbols_a(lo, hi, char_class = TRUE)
miscellaneous_mathematical_symbols_b(lo, hi, char_class = TRUE)
floors_and_ceilings(lo, hi, char_class = TRUE)
invisible_operators(lo, hi, char_class = TRUE)
geometric_shapes(lo, hi, char_class = TRUE)
box_drawing(lo, hi, char_class = TRUE)
block_elements(lo, hi, char_class = TRUE)
geometric_shapes_extended(lo, hi, char_class = TRUE)
alchemical_symbols(lo, hi, char_class = TRUE)
braille_patterns(lo, hi, char_class = TRUE)
currency_symbols(lo, hi, char_class = TRUE)
dingbats(lo, hi, char_class = TRUE)
ornamental_dingbats(lo, hi, char_class = TRUE)
emojis(lo, hi, char_class = TRUE)
chess_checkers draughts(lo, hi, char_class = TRUE)
domino_tiles(lo, hi, char_class = TRUE)
```

```
japanese_chess(lo, hi, char_class = TRUE)
mahjong_tiles(lo, hi, char_class = TRUE)
playing_cards(lo, hi, char_class = TRUE)
card_suits(lo, hi, char_class = TRUE)
miscellaneous_symbols_and_pictographs(lo, hi, char_class = TRUE)
musical_symbols(lo, hi, char_class = TRUE)
ancient_greek_musical_notation(lo, hi, char_class = TRUE)
byzantine_musical_symbols(lo, hi, char_class = TRUE)
transport_and_map_symbols(lo, hi, char_class = TRUE)
yijing_mono_di_and_trigrams(lo, hi, char_class = TRUE)
yijing_hexagram_symbols(lo, hi, char_class = TRUE)
tai_xuan_jing_symbols(lo, hi, char_class = TRUE)
specials(lo, hi, char_class = TRUE)
tags(lo, hi, char_class = TRUE)
variation_selectors(lo, hi, char_class = TRUE)
variation_selectors_supplement(lo, hi, char_class = TRUE)
private_use_area(lo, hi, char_class = TRUE)
supplementary_private_use_area_a(lo, hi, char_class = TRUE)
supplementary_private_use_area_b(lo, hi, char_class = TRUE)
ARMENIAN
ARMENIAN_LIGATURES
CAUCASIAN_ALBANIAN
CYPRIOT_SYLLABARY
CYRILLIC
```

CYRILLIC_SUPPLEMENT

CYRILLIC_EXTENDED_A

CYRILLIC_EXTENDED_B

ELBASAN

GEORGIAN

GEORGIAN_SUPPLEMENT

GLAGOLITIC

GOTHIC

GREEK_AND_COPTIC

GREEK_EXTENDED

LATIN

LATIN_1_SUPPLEMENT

LATIN_EXTENDED_A

LATIN_EXTENDED_B

LATIN_EXTENDED_C

LATIN_EXTENDED_D

LATIN_EXTENDED_E

LATIN_EXTENDED_ADDITIONAL

LATIN_LIGATURES

LINEAR_A

LINEAR_B_SYLLABARY

LINEAR_B_IDEOGRAMS

OGHAM

OLD_ITALIC

OLD_PERMIC

PHAISTOS_DISC

RUNIC

SHAVIAN

DUPLOYAN

SHORTHAND_FORMAT_CONTROLS

IPA_EXTENSIONS

PHONETIC_EXTENSIONS

PHONETIC_EXTENSIONS_SUPPLEMENT

MODIFIER_TONE_LETTERS

SPACING_MODIFIER_LETTERS

SUPERSCRIPTS_AND_SUBSCRIPTS

COMBINING_DIACRITIC_MARKS

COMBINING_DIACRITIC_SUPPLEMENT

COMBINING_DIACRITIC_EXTENDED

COMBINING_HALF_MARKS

BAMUN

BAMUN_SUPPLEMENT

BASSA_VAH

COPTIC

COPTIC_EPACT_NUMBERS

EGYPTIAN_HIEROGLYPHS

ETHIOPIC

ETHIOPIC_SUPPLEMENT

ETHIOPIC_EXTENDED
ETHIOPIC_EXTENDED_A
MENDE_KIKAKUI
MEROITIC_CURSIVE
MEROITIC_HIEROGLYPHS
NKO
OSMANYA
TIFINAGH
VAI
ARABIC
ARABIC_SUPPLEMENT
ARABIC_EXTENDED_A
ARABIC_PRESENTATION_FORMS_A
ARABIC_PRESENTATION_FORMS_B
IMPERIAL_ARAMAIC
AVESTAN
CARIAN
CUNEIFORM
CUNEIFORM_NUMBERS_AND_PUNCTUATION
OLD_PERSIAN
UGARITIC
HEBREW
LYCIAN
LYDIAN

MANDAIC
NABATAEAN
OLD_NORTH_ARABIAN
OLD_SOUTH_ARABIAN
PAHLAVI_INSCRIPTIONAL
PAHLAVI_PSAULTER
PALMYRENE
PHOENICIAN
SAMARITAN
SYRIAC
MANICHAEAN
MONGOLIAN
OLD_TURKIC
PHAGS_PA
TIBETAN
BENGALI_AND_ASSAMESE
BRAHMI
CHAKMA
DEVANAGARI
DEVANAGARI_EXTENDED
GRANTHA
GUJARATI
GURMUKHI
KAITHI

KANNADA

KHAROSHTHI

KHOJKI

KHUDAWADI

LEPCHA

LIMBU

MAHAJANI

MALAYALAM

MEETEI_MAYEK

MEETEI_MAYEK_EXTENSIONS

MODI

MRO

OL_CHIKI

ORIYA

SAURASHTRA

SHARADA

SIDDHAM

SINHALA

SINHALA_ARCHAIC_NUMBERS

SORA_SOMPENG

SYLOTI_NAGRI

TAKRI

TAMIL

TELUGU

THAANA

TIRHUTA

VEDIC_EXTENSIONS

WARANG_CITI

CHAM

KAYAH_LI

KHMER

KHMER_SYMBOLS

LAO

MYANMAR

MYANMAR_EXTENDED_A

MYANMAR_EXTENDED_B

NEW_TAI_LUE

PAHAWH_HMONG

PAU_CIN_HAU

TAI_LE

TAI_THAM

TAI_VIET

THAI

BALINESE

BATAK

BUGINESE

BUHID

HANUNOO

JAVANESE

REJANG

SUNDANESE

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Arguments

lo	A non-negative integer. Minimum number of repeats, when grouped.
hi	positive integer. Maximum number of repeats, when grouped.
char_class	TRUE or FALSE. Should the values be wrapped into a character class?

Format

An object of class `regex` (inherits from `character`) of length 1.

Value

A character vector representing part or all of a regular expression.

Note

Windows currently doesn't handle Unicode points with more than four digits correctly. See https://bugs.r-project.org/bugzilla3/show_bug.cgi?id=16098

References

<http://www.unicode.org/charts>

See Also

[ClassGroups](#)

Examples

```
# Classes
latin()
greek_and_coptic()
cyrillic()
arabic()

# With repetition
hebrew(3, 6)
hiragana(1, Inf)
katakana(0, Inf)

# Without a class wrapper
cjk_unified_ideographs(char_class = FALSE)

# Constants
ARMENIAN
LINEAR_B_IDEOGRAMS
DUPLOYAN
OSMANYA

## Not run:
# All the Unicode character classes
# Not run, since it generates lots of output
setdiff(
  ls("package:rebus.unicode", pattern = lower()),
  ls(
    "package:rebus.unicode",
    pattern = START %R% case_insensitive(or("up", "ugc", "unicode")))
)

## End(Not run)

# Usage
pythag <- "\u03b1^2 + \u03b2^2 = \u03b3^2"
stringi::stri_extract_all_regex(pythag, greek_and_coptic())
```

Description

Manipulate and combine Unicode Properties.

Usage

```
unicode_inverse(x, char_class = TRUE)

unicode_union(..., char_class = TRUE)

unicode_intersect(x, y, char_class = TRUE)

unicode_setdiff(x, y, char_class = TRUE)
```

Arguments

<code>x</code>	A character vector containing Unicode General Category or Unicode Properties. Use the functional forms (<code>ugc_*</code> ()) not the constants.
<code>char_class</code>	TRUE or FALSE. Should the values be wrapped into a character class?
<code>...</code>	Character vectors containing Unicode General Category or Unicode Properties. Use the functional forms (<code>ugc_*</code> ()) not the constants.
<code>y</code>	A character vector containing Unicode General Category or Unicode Properties. Use the functional forms (<code>ugc_*</code> ()) not the constants.

Note

Use these with ICU-based regular expression engines (`stringi` and `stringr`).

References

<http://userguide.icu-project.org/strings/unicodeset>

Examples

```
# POSIX [:punct:] is more or less equivalent to the union of
# Unicode punctuation and symbol general categories
unicode_union(ugc_punctuation(), ugc_symbol())

# Everything except "A" to "Z" (including punctuation, control chars etc.)
unicode_inverse("[A-Z]")

# Uppercase letters, except "A" to "Z"
unicode_setdiff(ugc_uppercase_letter(), "[A-Z]")

# "A" to "F" (in upper or lower case)
unicode_intersect(ugc_letter(), up_ascii_hex_digit())

# Usage
x <- c(letters, LETTERS)
rx <- unicode_intersect(ugc_letter(), up_ascii_hex_digit())
stringi::stri_extract_first_regex(x, rx)
```

up_alphabetic	<i>Unicode Properties</i>
---------------	---------------------------

Description

Match a Unicode Property.

Usage

```
up_alphabetic(lo, hi, char_class = TRUE)
up_ascii_hex_digit(lo, hi, char_class = TRUE)
up_bidi_control(lo, hi, char_class = TRUE)
up_bidi_mirrored(lo, hi, char_class = TRUE)
up_case_ignorable(lo, hi, char_class = TRUE)
up_case_sensitive(lo, hi, char_class = TRUE)
up_cased(lo, hi, char_class = TRUE)
up_changes_when_casefolded(lo, hi, char_class = TRUE)
up_changes_when_casemapped(lo, hi, char_class = TRUE)
up_changes_when_lowercased(lo, hi, char_class = TRUE)
up_changes_when_nfkc_casefolded(lo, hi, char_class = TRUE)
up_changes_when_titlecased(lo, hi, char_class = TRUE)
up_changes_when_uppercased(lo, hi, char_class = TRUE)
up_dash(lo, hi, char_class = TRUE)
up_default_ignorable_code_point(lo, hi, char_class = TRUE)
up_deprecated(lo, hi, char_class = TRUE)
up_diacritic(lo, hi, char_class = TRUE)
up_extender(lo, hi, char_class = TRUE)
up_hex_digit(lo, hi, char_class = TRUE)
```

```
up_hyphen(lo, hi, char_class = TRUE)
up_id_continue(lo, hi, char_class = TRUE)
up_id_start(lo, hi, char_class = TRUE)
up_ideographic(lo, hi, char_class = TRUE)
up_lowercase(lo, hi, char_class = TRUE)
up_math(lo, hi, char_class = TRUE)
up_noncharacter_code_point(lo, hi, char_class = TRUE)
up_posix_alnum(lo, hi, char_class = TRUE)
up_posix_blank(lo, hi, char_class = TRUE)
up_posix_graph(lo, hi, char_class = TRUE)
up_posix_print(lo, hi, char_class = TRUE)
up_posix_xdigit(lo, hi, char_class = TRUE)
up_quotation_mark(lo, hi, char_class = TRUE)
up_soft_dotted(lo, hi, char_class = TRUE)
up_terminal_punctuation(lo, hi, char_class = TRUE)
up_uppercase(lo, hi, char_class = TRUE)
up_white_space(lo, hi, char_class = TRUE)
UP_ALPHABETIC
UP_ASCII_HEX_DIGIT
UP_BIDI_CONTROL
UP_BIDI_MIRRORED
UP_DASH
UP_DEFAULT_IGNOREABLE_CODE_POINT
UP_DEPRECATED
```

UP_DIACRITIC
UP_EXTENDER
UP_HEX_DIGIT
UP_HYPHEN
UP_ID_CONTINUE
UP_ID_START
UP_IDEOGRAPHIC
UP_LOWERCASE
UP_MATH
UP_NONCHARACTER_CODE_POINT
UP_QUOTATION_MARK
UP_SOFT_DOTTED
UP_TERMINAL_PUNCTUATION
UP_UPPERCASE
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UP_CHANGES_WHEN_UPPERCASED

UP_CHANGES_WHEN_TITLECASED

UP_CHANGES_WHEN_CASEFOLDED

UP_CHANGES_WHEN_CASEMAPPED

UP_CHANGES_WHEN_NFKC_CASEFOLDED

Arguments

lo	A non-negative integer. Minimum number of repeats, when grouped.
hi	positive integer. Maximum number of repeats, when grouped.
char_class	TRUE or FALSE. Should the values be wrapped into a character class?

Format

An object of class `regex` (inherits from `character`) of length 1.

Value

A character vector representing part or all of a regular expression.

References

Table 12 of the Unicode Standard Annex #44 defines the Unicode General Categories. <http://www.unicode.org/reports/tr44/>

You can see which characters are contained in a category by visiting, e.g., <http://www.fileformat.info/info/unicode/category/Nd/list.htm>

See Also

[unicode_general_category](#), [Unicode](#), [stringi-search-charclass](#)

Examples

```
# Classes
up_math()
up_posix_alnum()
up_changes_when_uppercased()
up_diacritic()

# With repetition
ugc_nonspacing_mark(3, 6)
up_quotation_mark(1, Inf)
up_posix_xdigit(0, Inf)

# Without a class wrapper
up_hyphen(char_class = FALSE)
```

```
# Constants
UP_ALPHABETIC
UP_DASH
UP_POSIX_ALNUM
UP_CHANGES_WHEN_LOWERCASED

## Not run:
# All the Unicode properties.
# Not run, since it generates lots of output
ls("package:rebus.unicode", pattern = "^up")

## End(Not run)

# Usage
# Hello in Samoan, Serbian, Persian, Simplified Chinese
hello <- "t\u101lofa, \u437\u434\u440\u430\u432\u43e, \u633\u644\u627\u645, \u4f60\u597d"
stringi::stri_extract_all_regex(hello, up_alphabetic(1, Inf))
stringi::stri_extract_all_regex(hello, up_case_sensitive(1, Inf))
```

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