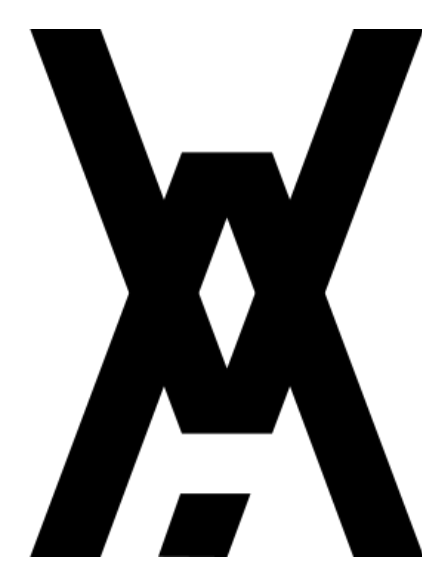


BRACHYLOG



Control Flow

- ,** And
- ;** Or
- ** Backtrack (always false)
- ()** Group clauses
- !** Cut
- '** Not provable
- ~** Reverse Arguments
- :** Inline append

Arithmetic

- +** Sum, Absolute value
- Subtract, Negate
- *** Multiply
- /** Divide, Inverse
- ^** Power
- %** Remainder
- \$!** Factorial
- \$p** Prime decomposition

Math Functions

- \$e** Exponential
- \$l** Natural logarithm
- \$r** Square root
- \$c** cos
- \$s** sin
- \$t** tan
- \$1** arccos
- \$2** arcsin
- \$3** arctan
- \$4** cosh
- \$5** sinh
- \$6** tanh
- \$7** arcosh
- \$8** arsinh
- \$9** artanh
- \$[** Floor
- \$]** Ceil

Elements

- h** Head (first element)
- b** Behead (all but first element)
- t** Tail (last element)
- e** Enumerate
- c** Concatenate
- d** Duplicates
- l** Length
- m** Member
- s** Subset (ordered)
- x** Xterminate (strings only for now)

Predicates

- { }** Inline predicate
- \n** Declare predicate
- |** New rule
- &** Call predicate

Constraints

- =** Labelize
- <** Less than
- <=** Less than or equal
- >** Greater than
- >=** Greater than or equal
- #d** All different
- #\$** Coerce to integer
- #@** Coerce to string
- ##** Coerce to list

Meta Predicates

- a** Apply
- f** Findall
- i** Iterate
- &** Call Predicate

Types and Variables

- ?** Input of the rule
- .** Output of the rule
- [A-Z]** Variables
- [I:J]** Lists
- []** Empty list
- "abc"** Strings
- 42** Integers
- _25** Negative numbers
- 3.14** Floats

Strings

- @l** Lowercase
- @u** Uppercase

Miscellaneous

- w** Write to STDOUT
- v** Void
- z** Zip

Transform

- r** Reverse
- p** Permute
- o** Order (sort lexicographically)
- g** Group (put in a list)
- \$** Transpose
- \$/** Antitranspose
- \$(** Circular permute left
- \$)** Circular permute right
- @2-9** Split in 2-9

Math Constants

- | | | | |
|------------|------------------------|------------|----------|
| \$A | $\frac{1+\sqrt{5}}{2}$ | \$B | $\ln(2)$ |
| \$D | $\ln(10)$ | \$E | e |
| \$G | 10^9 | \$K | 10^3 |
| \$M | 10^6 | \$P | π |
| \$R | $\sqrt{2}$ | | |

String Constants

- | | | | |
|-----------|------------|-----------|-----------------|
| @A | Alphabet | @C | Consonants |
| @D | Cons. var. | @H | "Hello, World!" |
| @N | "\n" | @P | Printable ASCII |
| @Q | "@Qw" | @S | " " |
| @T | "\t" | @V | Vowels |
| @W | Vow. var. | @Z | Rev. Alphabet |