

## symbol

- a symbol is defined as  $a < x, y, z >$  where  $x, y, z$  are args
- args are evaluated in reverse, so  $x$  can depend on  $y$  and  $z$ , and  $y$  can depend on  $z$
- when a symbol is expanded through a rule  $x, y, z$  refer to the symbol that is expanded and can be used in other symbols:

$$A < x, y, z > \rightarrow B < x > - < z >$$

- $A \rightarrow$ 
  - $A$  (all default)
  - $A <; >$  (all default)
  - $A < x; y; z >$  (no change)
  - $A < x;; >$  ( $y, z$  default)
  - $A < x >$  ( $y, z$  default)
  - $A < \{*, 2\} >$  (default for  $x$  scaled)
  - $A < x\{*, 2\} >$  ( $x$  scaled)
- symbols
  - $[ ]$  (start / end branch)
  - $+,-$  (rotate left / right)  $\rightarrow$  default\_rotation\_angle
  - $,/$  (increase / decrease width)  $\rightarrow$  “?? where to save this information??”
  - $!,?$  (increase / decrease hue)  $\rightarrow$  “implement later, do the above first”
  - ABCD (draw branch)  $\rightarrow$  default\_len
  - abcd (jump)  $\rightarrow$  default\_len

$$a < x\{*, 2\} > A < x\{*, 2\} >$$

## components

- the L-String is generated via button press or at least separately and first
- Structures are generated and drawn over one or more frames
- they get regenerated if global vars or the viewport changes
  - “maybe they could exist in local coordinate systems, so that they don't need to be regenerated on viewport changes. Maybe this can be done with blending?”
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