



## spatial relations



## shape rules



spatial relation: A + B

rules:  $A \rightarrow A + B$  $B \rightarrow A + B$ 



## spatial relation rules





spatial relation A + B between two oblongs



addition rule  $A \rightarrow A + B$  based on the spatial relation



different labelings of the rule  $A \rightarrow A + B$ 





rule



design



rule



design





rule





rule





spatial relation A + B between two oblongs



different labelings of a rule A  $\rightarrow$  A + B





spatial relation A + B between an oblong and a pillar



different labelings of a rule A  $\rightarrow$  A + B



different labelings of a rule  $B \rightarrow A + B$ 







rules



design



design



rules



rules





design

design

## Assignment

Practice using 3D shape grammars.

Go back to the shape grammar examples from the lecture, and try applying labeled rules you did not do in class.