

## Synthesis

“combination, composition, putting together; building up of separate elements esp. of conceptions or propositions or facts, into a connected whole, esp. a theory or system...”

## Elements

- Actions in a plan
- Modules in a software/hardware system
- Data/Knowledge Bases for answering a query
- Propositions/subarguments in an argument/proof
- ...

## Are there common solutions?

Relevant issues:

- The elements:
  - discrete/finite or generated/infinite?
  - equally available/known/predictable?
- The connections:
  - enumerating possible configurations
  - local constraints and preconditions
  - propagation of constraints
- Global constraints:
  - Change/dynamics in the world/elements
  - Time/cost/reliability optimisation