

Security Assessment with Attack-Defense Trees

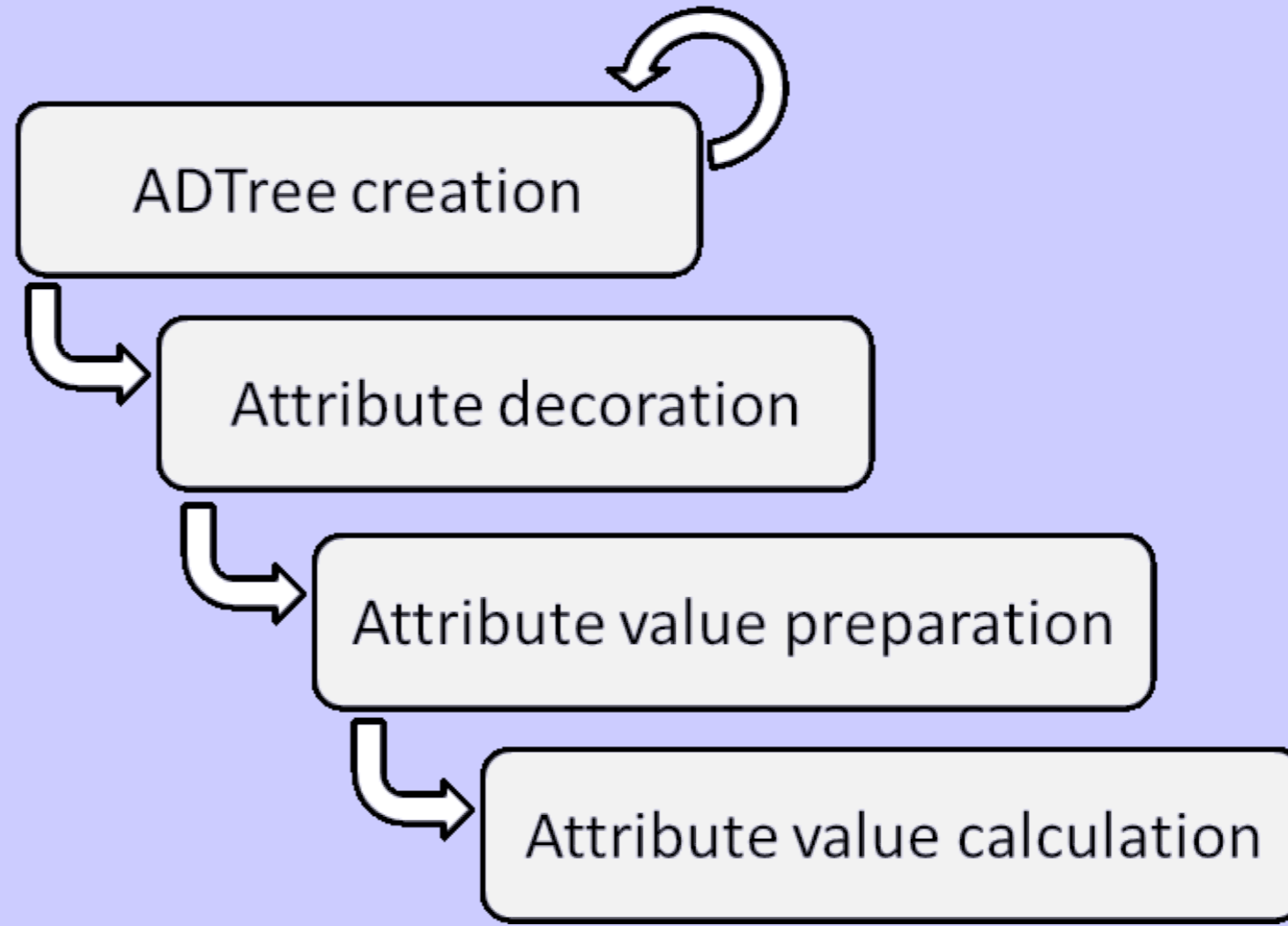
Barbara Kordy, Sjouke Mauw and Patrick Schweitzer

Syntax

- attack node
- defense node
- \nearrow disjunctive refinement
- \wedge conjunctive refinement
- \vdots countermeasure

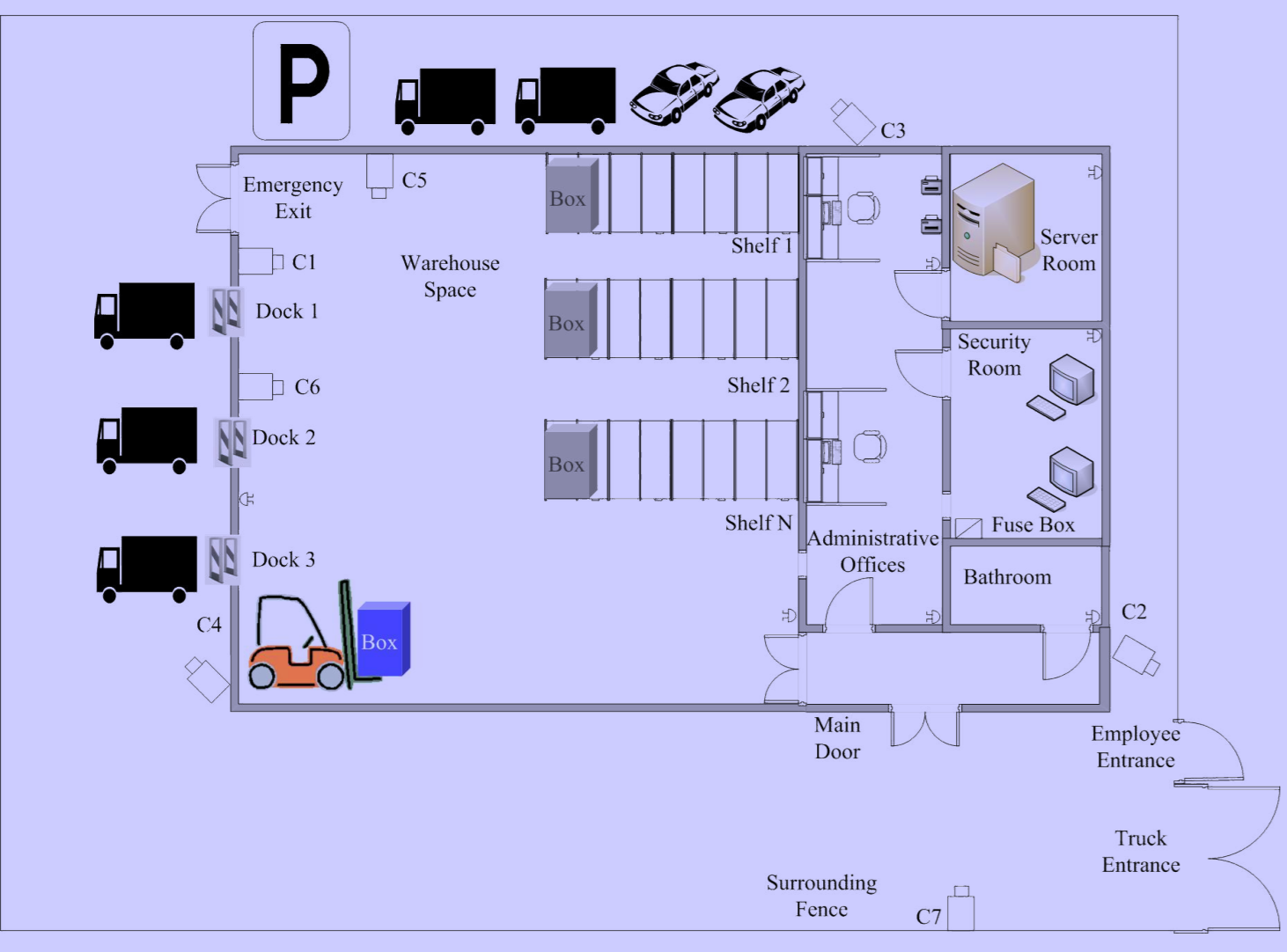
What do the symbols represent?

Methodology

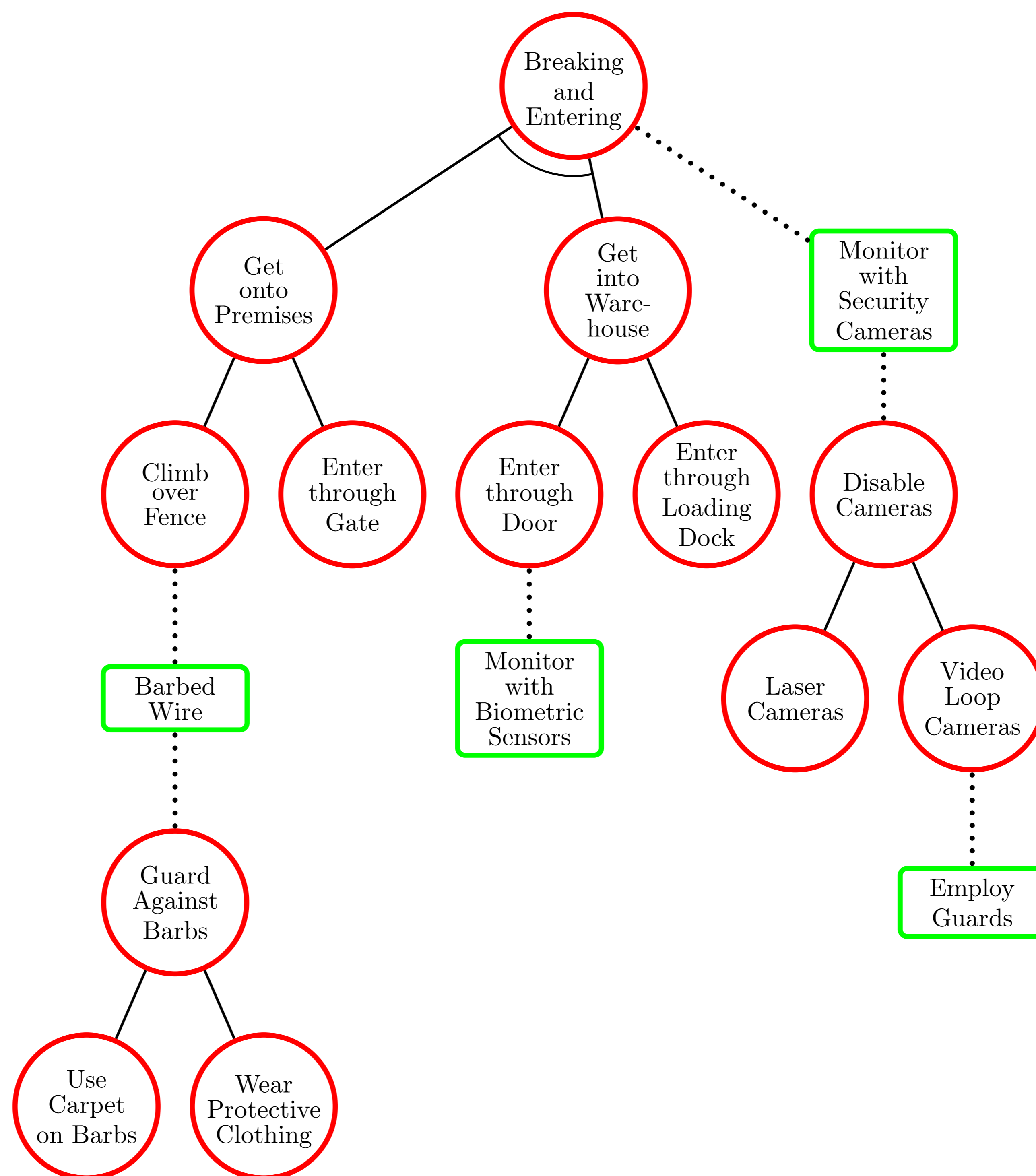


How to analyze security scenarios?

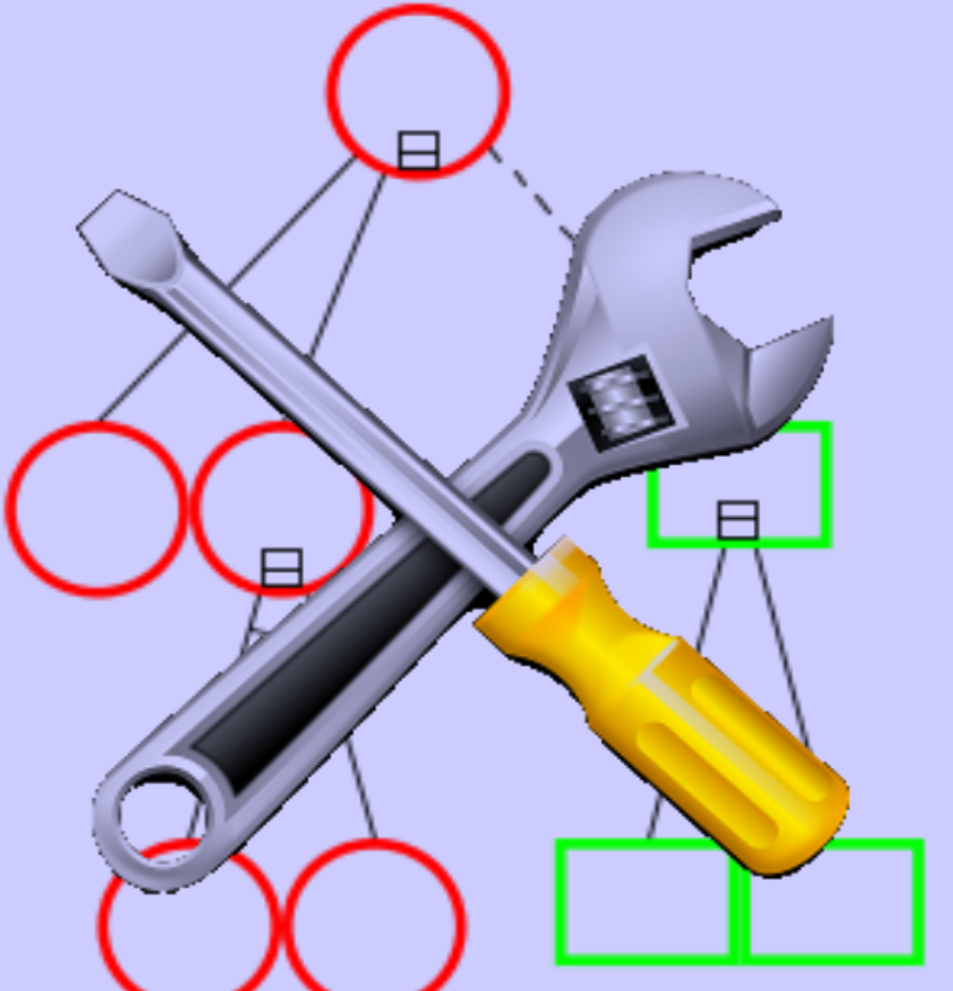
Case Study



How to break into a warehouse?



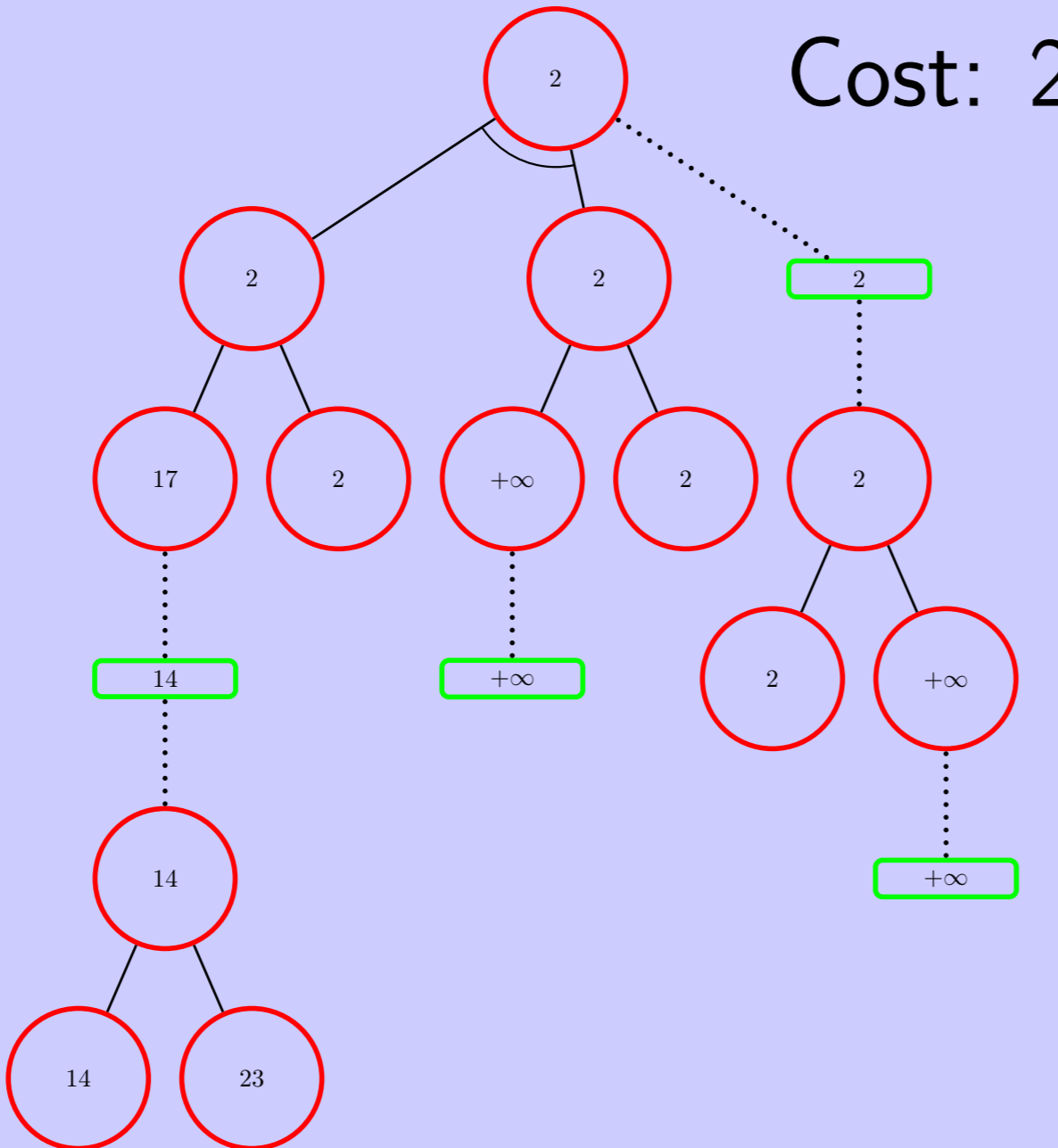
Software



Can the formalism be implemented?

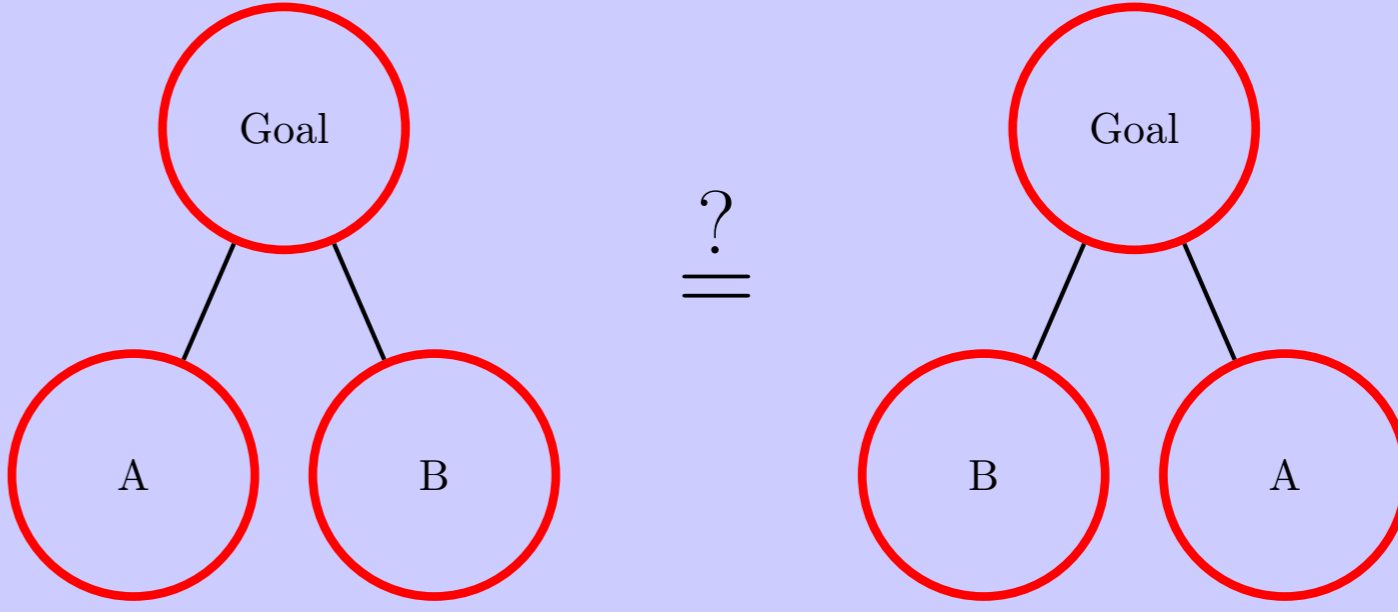
Quantitative Analysis

Cost: 2



Which attributes can we compute?

Semantics



Can different trees model the same scenario?