

Funcons-beta: Graphs *

The P_LanCompS Project

Graphs.cbs | PLAIN | PRETTY

Graphs

[*Type* directed-graphs
Funcon is-cyclic
Funcon topological-sort]

Meta-variables $GT <:$ ground-values

Type directed-graphs(GT) \rightsquigarrow maps(GT , sets(GT))

directed-graphs(GT) models directed graphs with vertices of type GT , represented as maps from vertices to the set of vertices to which the vertex has an edge. E.g., the graph

(1)--->(2)

would be represented as $\{1 \mapsto \{2\}, 2 \mapsto \{\}\}$

Built-in Funcon is-cyclic($_ : \text{directed-graphs}(GT)$) : \Rightarrow booleans

Built-in Funcon topological-sort($_ : \text{directed-graphs}(GT)$) : $\Rightarrow (GT)^*$

topological-sort(DG) returns a topological ordering of the vertices of the graph DG , as a sequence of vertices, provided that DG is not cyclic.

*Suggestions for improvement: plancomps@gmail.com.
Reports of issues: <https://github.com/plancomps/CBS-beta/issues>.