Workflow: $G = (V, E)$
Activities: $V = \{v_1, \ldots, v_n\}$
Activity States: $S = \{s_1, \ldots, s_n\}$, where $s_i \subseteq \{Executed, Pending, Included\}$
Relation (E): R = (condition, response, milestone, include, exclude), $e = (v_x, v_y, r_i)$, $E = \{e_1, \ldots, e_m\}$
Actors: $P = \{$Alice (A), Bob (B)$\}$.
History, $H_A(t)$, $H_B(t)$: Sequence of activity executions up to, and at time t, as perceived by A and B, respectively.
Execution: (v_i, t, p_i), where v_i is the activity executed at time t, executed by actor p_i.

What we want to achieve:

Correctness : Any DCR graph must

$H_A(t) \subset H_A(t+1)$ No execution violates DCR rules