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|----- MODULE Trace -----|

CONSTANT Module

CONSTANT InitState

CONSTANT NextState

Init  $\triangleq$ 
  LET IOUtils  $\triangleq$  INSTANCE IOUtils
  IN
    LET ret  $\triangleq$  IOUtils!IOExecTemplate( $\langle$ "rm", "%s.log" $\rangle$ ,  $\langle$ Module $\rangle$ )
    IN TRUE

Log(name, args)  $\triangleq$ 
  LET IOUtils  $\triangleq$  INSTANCE IOUtils
    Json  $\triangleq$  INSTANCE Json
  IN
    LET init  $\triangleq$   $[k \in \{k \in \text{DOMAIN } \textit{InitState} : \text{DOMAIN } \textit{InitState}[k] \neq \{\}\} \mapsto \textit{InitState}[k]]$ 
      next  $\triangleq$   $[k \in \{k \in \text{DOMAIN } \textit{NextState} : \text{DOMAIN } \textit{NextState}[k] \neq \{\}\} \mapsto \textit{NextState}[k]]$ 
      trace  $\triangleq$   $[action \mapsto name,$ 
        args  $\mapsto args,$ 
        init  $\mapsto init,$ 
        next  $\mapsto [k \in \{k \in \text{DOMAIN } \textit{next} : k \notin \text{DOMAIN } \textit{init} \vee \textit{next}[k] \neq \textit{init}[k]\} \mapsto \textit{next}[k]]]$ 
      ret  $\triangleq$  IOUtils!IOExecTemplate( $\langle$ "/bin/sh", "-c", "echo '%s' >> %s.log" $\rangle$ ,  $\langle$ Json!ToJsonObject(trace) $\rangle$ )
    IN ret.exitValue = 0

Step(name, action, args)  $\triangleq$ 
   $\wedge$  action
   $\wedge$  action  $\Rightarrow$  Log(name, args)

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\ * Modification History
\ * Last modified Mon Feb 21 01:49:57 PST 2022 by jordanhalterman
\ * Created Sun Feb 20 01:18:19 PST 2022 by jordanhalterman

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