
MODULE *Log*

INSTANCE *Naturals*
 INSTANCE *Sequences*
 LOCAL INSTANCE *IOUtils*
 LOCAL INSTANCE *Json*
 CONSTANT *Enabled*
 CONSTANT *File*
 CONSTANT *CurrentState*
 CONSTANT *SuccessorState*
FormatOpts \triangleq
 $[format \mapsto \text{"TXT"},$
 $charset \mapsto \text{"UTF-8"},$
 $openOptions \mapsto \langle \text{"WRITE"}, \text{"CREATE"}, \text{"APPEND"} \rangle]$
Init \triangleq
 $\wedge IOExec(\langle \text{"rm"}, \text{"-f"}, File \rangle).exitValue = 0$
Log(context) \triangleq
 $Enabled \Rightarrow$
 LET $currentState \triangleq [k \in \{k \in \text{DOMAIN } CurrentState : \text{DOMAIN } CurrentState[k] \neq \{\}} \mapsto CurrentState[k]]$
 $successorState \triangleq [k \in \{k \in \text{DOMAIN } SuccessorState : \text{DOMAIN } SuccessorState[k] \neq \{\}} \mapsto SuccessorState[k]]$
 $record \triangleq [context \mapsto context,$
 $currentState \mapsto currentState,$
 $successorState \mapsto [k \in \{k \in \text{DOMAIN } successorState : k \in \text{DOMAIN } currentState$
 $currentState[k] \neq successorState[k]\} \mapsto successorState[k]]]$
 IN $Serialize(ToJsonObject(record) \circ \text{"\n"}, File, FormatOpts).exitValue = 0$
Action(action, context) \triangleq
 $\wedge action$
 $\wedge action \Rightarrow Log(context)$
 ASSUME *Enabled* $\in \text{BOOLEAN}$

\ * Modification History
 \ * Last modified Mon Feb 21 01:49:57 PST 2022 by jordanhalterman
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