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MODULE *Log*

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INSTANCE *Naturals*  
 INSTANCE *Sequences*  
 LOCAL INSTANCE *IOUtils*  
 LOCAL INSTANCE *Json*  
 CONSTANT *Enabled*  
 CONSTANT *File*  
 CONSTANT *CurrState*  
 CONSTANT *SuccState*  
*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  $currState \triangleq [k \in \{k \in \text{DOMAIN } CurrState : \text{DOMAIN } CurrState[k] \neq \{\}} \mapsto CurrState[k]]$   
          $succState \triangleq [k \in \{k \in \text{DOMAIN } SuccState : \text{DOMAIN } SuccState[k] \neq \{\}} \mapsto SuccState[k]]$   
          $record \triangleq [context \mapsto context,$   
                            $currState \mapsto currState,$   
                            $succState \mapsto [k \in \{k \in \text{DOMAIN } succState : k \in \text{DOMAIN } currState \Rightarrow$   
    $currState[k] \neq succState[k]\} \mapsto succState[k]]]$   
     IN  $Serialize(ToJsonObject(record) \circ \text{"\n"}, File, FormatOpts).exitValue = 0$   
*Action*(*action*, *context*)  $\triangleq$   
    $\wedge action$   
    $\wedge action \Rightarrow Log(context)$   
 ASSUME *Enabled*  $\in$  BOOLEAN

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