
MODULE *appex2_4*

EXTENDS *Integers, TLC*
VARIABLES *p*
CONSTANTS *input, output*

$n \triangleq 10$
 $nodes \triangleq 1 \dots n$
 $l \triangleq [i \in 1 \dots n \mapsto \text{IF } i = 1 \text{ THEN } \{4, 5\} \text{ ELSE}$
 $\quad \text{IF } i = 2 \text{ THEN } \{6, 7, 10\} \text{ ELSE}$
 $\quad \text{IF } i = 4 \text{ THEN } \{7, 8\} \text{ ELSE}$
 $\quad \text{IF } i = 5 \text{ THEN } \{\} \text{ ELSE}$
 $\quad \text{IF } i = 6 \text{ THEN } \{4\} \text{ ELSE}$
 $\quad \text{IF } i = 7 \text{ THEN } \{5\} \text{ ELSE}$
 $\quad \text{IF } i = 8 \text{ THEN } \{5, 2\} \text{ ELSE}$
 $\quad \{\}$
 $\quad]$

$lab \triangleq [\langle x, y \rangle \in (nodes \times nodes) \mapsto$
 $\quad \text{IF } x = 1 \wedge y = 1 \text{ THEN } \{\langle 1, 2 \rangle\} \text{ ELSE}$
 $\quad \text{IF } x = 1 \wedge y = 2 \text{ THEN } \{\langle 1, 1 \rangle, \langle 1, 3 \rangle, \langle 2, 2 \rangle\} \text{ ELSE}$
 $\quad \text{IF } x = 1 \wedge y = 3 \text{ THEN } \{\langle 1, 2 \rangle\} \text{ ELSE}$
 $\quad \text{IF } x = 2 \wedge y = 2 \text{ THEN } \{\langle 1, 2 \rangle\}$
 $\quad \text{ELSE } \{\}$
 $\quad]$

$Init \triangleq p = 1$
 $M(i) \triangleq \wedge i \in l[p]$
 $\quad \wedge p' = i$
 $Next \triangleq \exists i \in 1 \dots n : M(i)$

$Initlab \triangleq p = input$
 $ML(q) \triangleq \wedge q \in lab[p]$
 $\quad \wedge p' = q$
 $Nextlab \triangleq \exists q \in nodes \times nodes : ML(q)$

$Sortie \triangleq p \notin output$
