

The Room Party part2

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DoorLocked= unlock.DoorUnlocked+checkDoor.'locked.DoorLocked;
DoorUnlocked= lock.DoorLocked+checkDoor.'unlocked.DoorUnlocked;

Room0=status.'empty.Room0+knock.'checkDoor.
(lock.'block.Room0+unlocked.'enter.Room1);
Room1=status.'someone.Room1+knock.'checkDoor.
(lock.'block.Room1+unlocked.'enter.Room2)+exit.Room0;
Room2=status.'party.Room2+knock.'checkDoor.
(lock.'block.Room2+unlocked.'enter.Room3)+exit.Room1;
Room3=status.'party.Room3+exit.Room2;

*outputs on channels when enters and exits room
Student0=wakeAStudent.'knock.
(enter.'studenteEntrato.'studentWait.StudenteEsci
+block.'studentWait.Student0); *altristud
StudenteEsci=wakeAStudent.'exit.'studenteUscito.'studentWait.Student0;

Student1=wakeAStudent.'knock.(enter.'studenteEntrato.'studentWait.StudenteEsci
+block.'studentWait.Student1); *altristud
StudenteEsci1=wakeAStudent.'exit.'studenteUscito.'studentWait.Student1;

Student2=wakeAStudent.'knock.(enter.'studenteEntrato.'studentWait.StudenteEsci
+block.'studentWait.Student2); *altristud*
StudenteEsci2=wakeAStudent.'exit.'studenteUscito.'studentWait.Student2;

S1=studentWait.('wakeDean.S2+'wakeAStudent.S1);
S2=deanWait.('wakeAStudent.S1+'wakeDean.S2);
Start='wakeAStudent.S1+'wakeDean.S2;

*output on channels when starts/ends searching inside room and when detects/
ends party
Dean=wakeDean.'status.(empty.'lock.'starSearch.'deanWait.DeanSearching
+someone.'deanWait.Dean+party.'lock.'partyDetected.'deanWait.DeanFineParty);
DeanFineParty=wakeDean.'status.(someone.'deanWait.DeanFineParty
+party.'deanWait.DeanFineParty+empty.'unlock.'partyEnded.'deanWait.Dean);
DeanSearching=wakeDean.'unlock.'endSearch.'deanWait.Dean;

P=(Dean|Room0|DoorUnlocked|Student0|Student1|Start)\{status,empty,party,someo
ne,unlock,lock,knock,checkDoor,exit,enter,locked,unlocked,
block,wakeDean,wakeAStudent,studentWait, deanWait};
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Satisfied	453 ms	$P \models \text{NoDeadLock}$ $\text{NoDeadLock max} = \leftrightarrow T \text{ and } [-] \text{NoDeadLock}$
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Satisfied	705 ms	$P \models \text{NoStudentEnterWhenDeanInside}$
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NoStudentEnterWhenDeanInside max=([[partyDetected]]
 [['studenteEntrato]]F and [['startSearch]]
 [['studenteEntrato]]F) and <-
 >NoStudentEnterWhenDeanInside

Unsatisfied	812 ms	P \models NoEnterParty NoEnterParty min=<<partyDetected>><<studenteEntrato>>T or <<- >>NoEnterParty
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Satisfied	456 ms	P \models StudenteEnterAfterAnotherStudent StudenteEnterAfterAnotherStudent min= <<'studenteEntrato>><<'studenteEntrato>>T or <- >StudenteEnterAfterAnotherStudent
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Unsatisfied	582 ms	P \models DeanExitNoStudentsInside DeanExitNoStudentsInside max= ([['partyEnded]]<<'studenteUscito>>T and [['endSearch]]<<'studenteUscito>>T) and [[-]]DeanExitNoStudentsInside
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