Simulate a circuit for controlling a hallway light that has switches at both ends of the hallway. Each switch can be up or down, and the light can be on or off. Toggling either switch turn the lamp on or off.

Provide methods:

public int getFirstSwithchState() // 0 for down, 1 for up

public int getSecondSwitchState()

public int getLampState () // 0 for off, 1 for on

public void toggleFirstSwitch()

public void toggleSeconSwitch()

Write a CircuitTester client that teste all switch combinations in exercise, printing out the actual and expected states for the switches and lamps.

Change the public interface of the circuit class so that it has the following methods:

public int getSwitchState (int switch)

public int getLampState()

public void toggleSwitch(int switch)

Provide an implementation using only language features that have been introduced. The challenge is to find a data representation from witch to recover the switch states.



