DSD Project

The idea after the project is enhancing the automatic gates in Egypt, by adding three sensors, instead of only two. Any gate opens if anyone passes in front of the gate, it will open; however, this is a defect in any gate. Our project opens the gate after three sensors to make sure that the one walking is walking toward the gate not just passing in front of it.

We take as input three motion sensors, one infrared sensor, clock and a reset. As output we have a red, green led and a buzzer.

The red led lights if the gate is closed, green one lights if the gate is opened and the buzzer beeps when heat is sensed in the background.

The process works as follows:-

- the s1 case is visited if the first motion sensor is triggered, and we double check the leds and buzzer and give the nextstate s2. We check if any heat is sensed then we go to s4.
- the s2 case is visited after s1 and double check the leds and buzzer as well and give the nextstate s3. We check if any heat is sensed then we go to s4.
- the s3 case is visited after s2, we open the gates, the red led is turned off, the green one turned on and the buzzer is still off. We check if any heat is sensed then we go to s4.
- the s4 case is visited only if the infrared sensor is triggered, in any of the previous cases, it opens the door and turns on the buzzer. By turning on the green led and the buzzer.

After the process, we assign the currentstate to the nextstate.