The simulation waveform is correct because when we check the signals inputs and outputs in the waveform all of them are corresponding to the requirements in the lab manual. X is the ignorance control for the windows and door, when the X goes to 1, the window and door signal could no longer When the N is 1 and the G is 0, the alarm clock goes off which means the G signals is correct. When the G is 1, N is 1 and X is 1, the alarm clock goes off no matter how the W and D signals change which indicates that the X signal is correct. When the G is 1, N is 1 and X goes to 0, either the W goes to 0 or D goes to 0 will make the alarm clock to goes on. And finally when the N goes to 0, no matter how the rest signals change, the alarm clock will always goes off because N is the activation input for the whole system.

My equation is here:

