CS F215(Digital Design)
Design Assignment

Group 96

OUTPUT SUMMARY

Captured as images

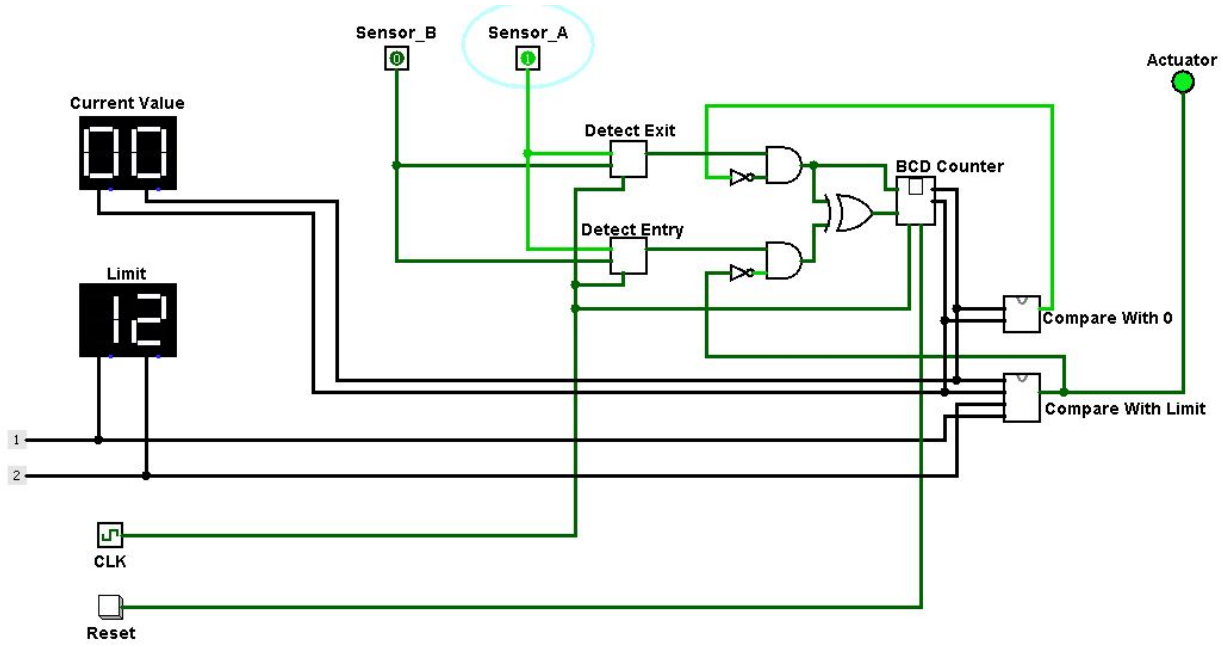
Group Members:

HARSH JAIN 2019A7PS0065G
NUNNA SRI KIRAN 2019A7PS0067G
DEVANSH DIXIT 2019A7PS0069G
REDASANI ANMOL VIVEKKUMAR 2019A7PS0072G
GARVIT SINGH 2019A7PS0073G
HARDIK SHAH 2019A7PS0076G

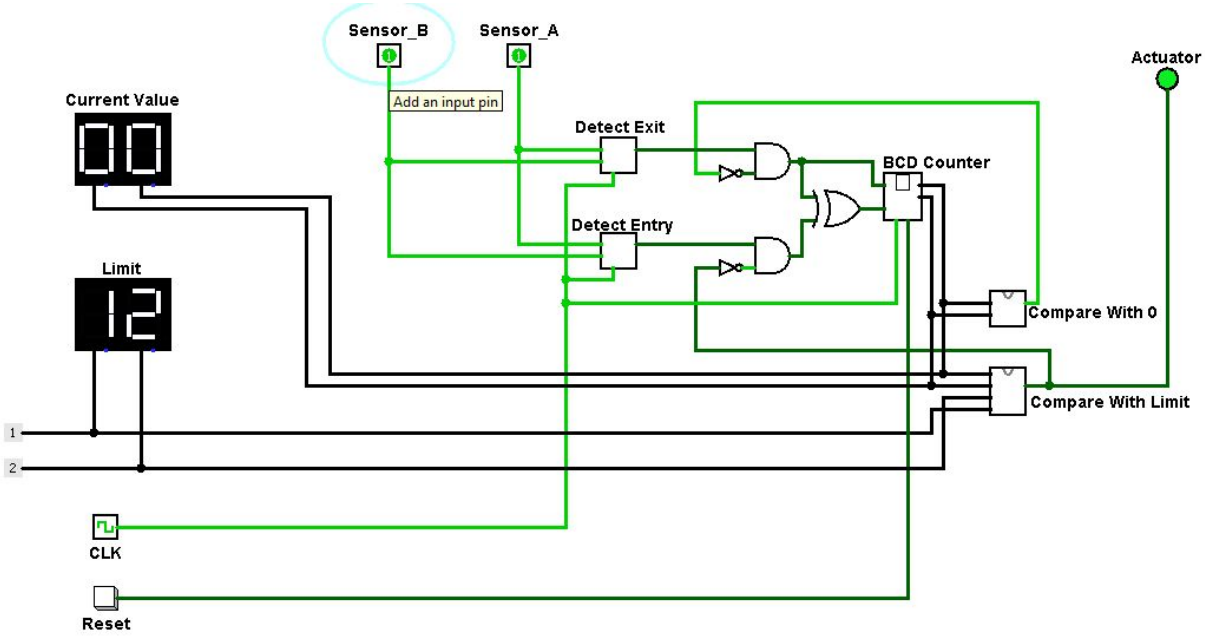
*since our problem statement is a dynamic one, not all output combinations can be depicted as images. A detailed explanation of each output combination will be given in the viva.

Entry Sequence simulation:

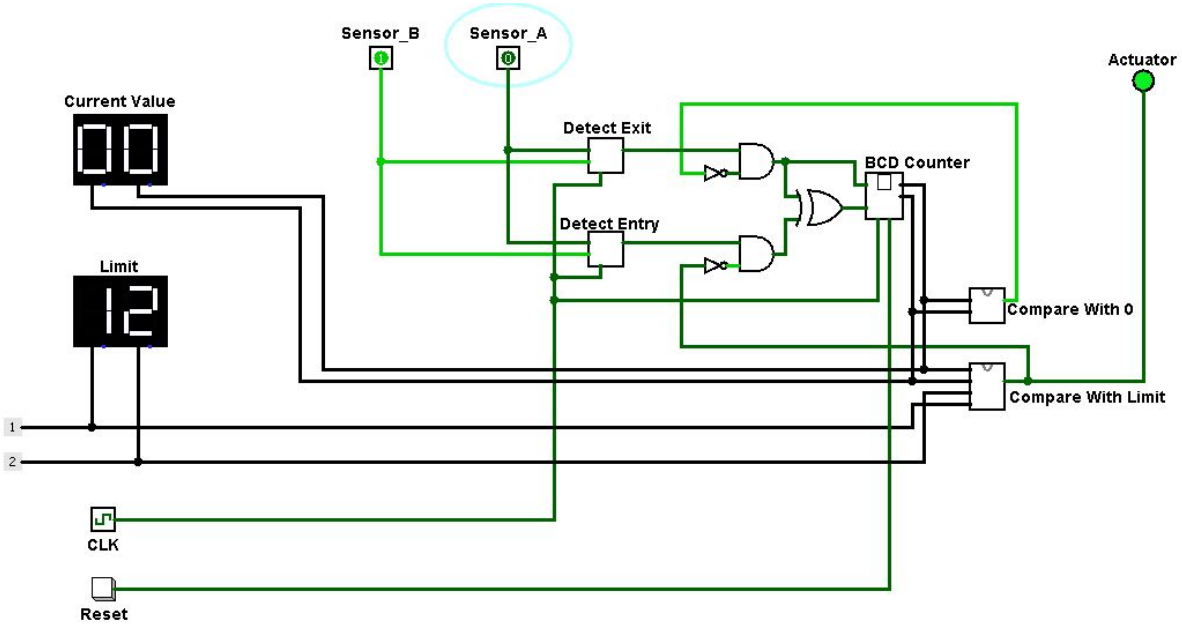
Sensor A: HIGH Sensor B:LOW



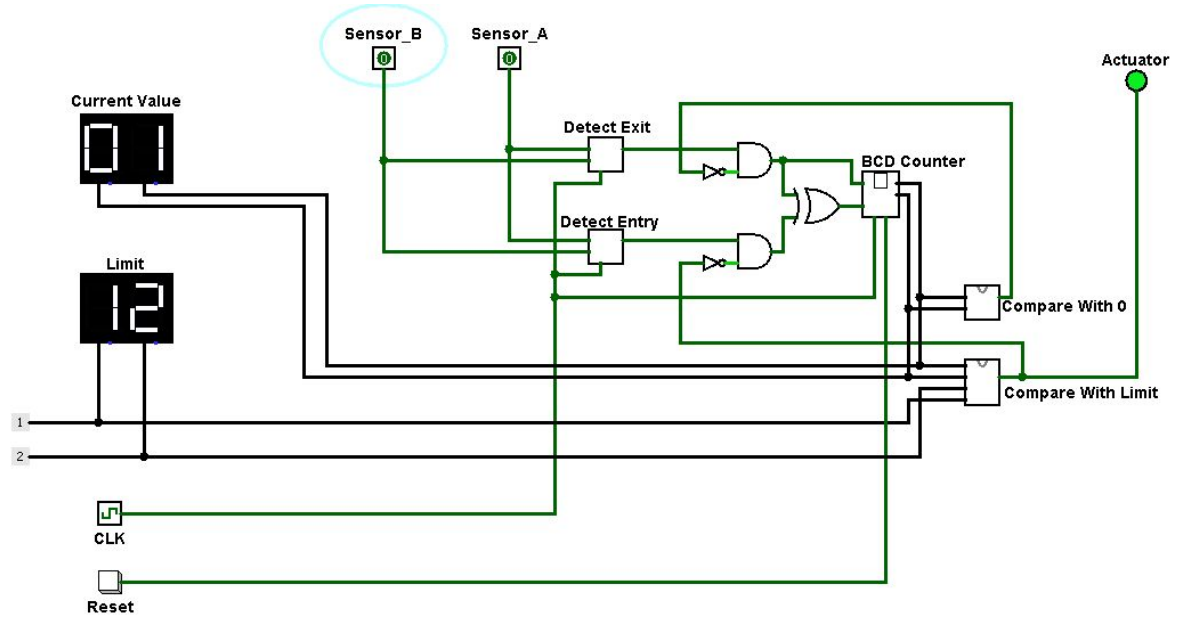
Sensor A: HIGH Sensor B: HIGH



Sensor A: LOW Sensor B: HIGH

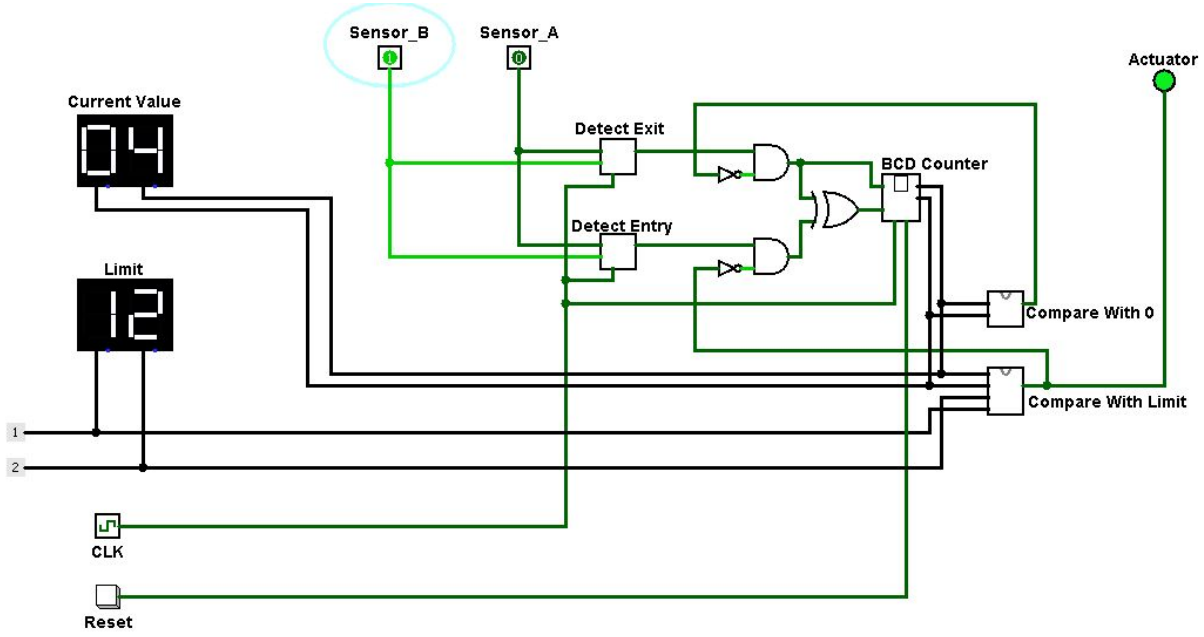


Sensor A: LOW Sensor B: LOW (Entry detected, count increases by 1)

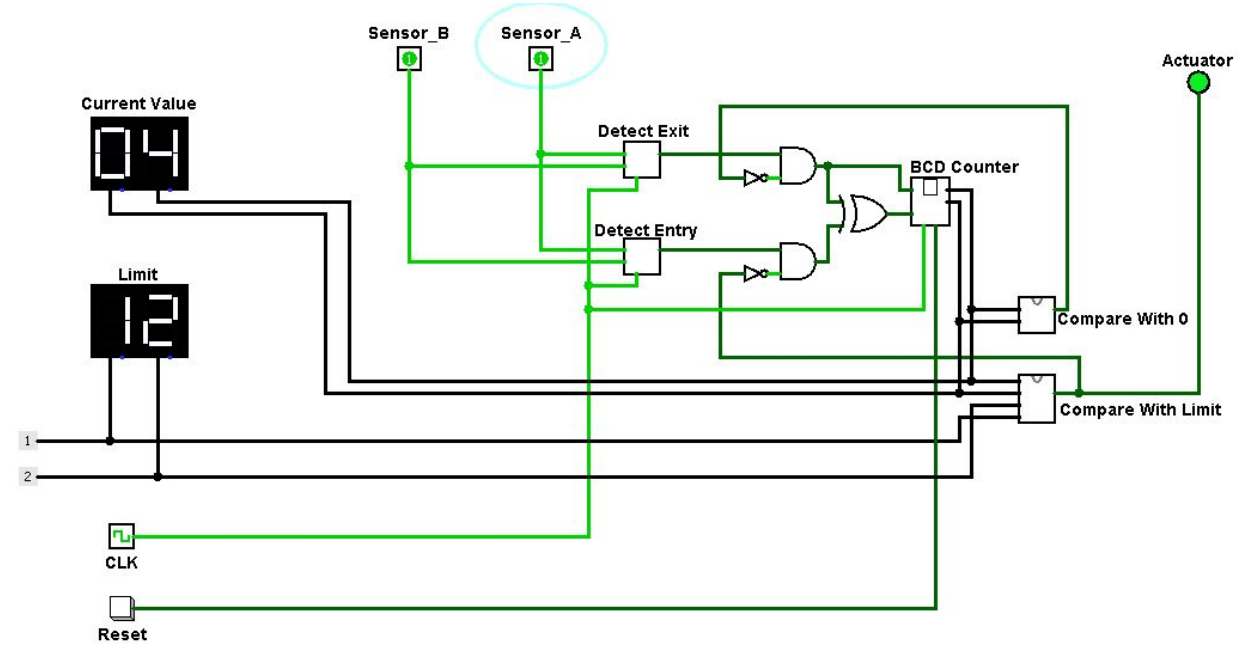


Exit Sequence simulation:

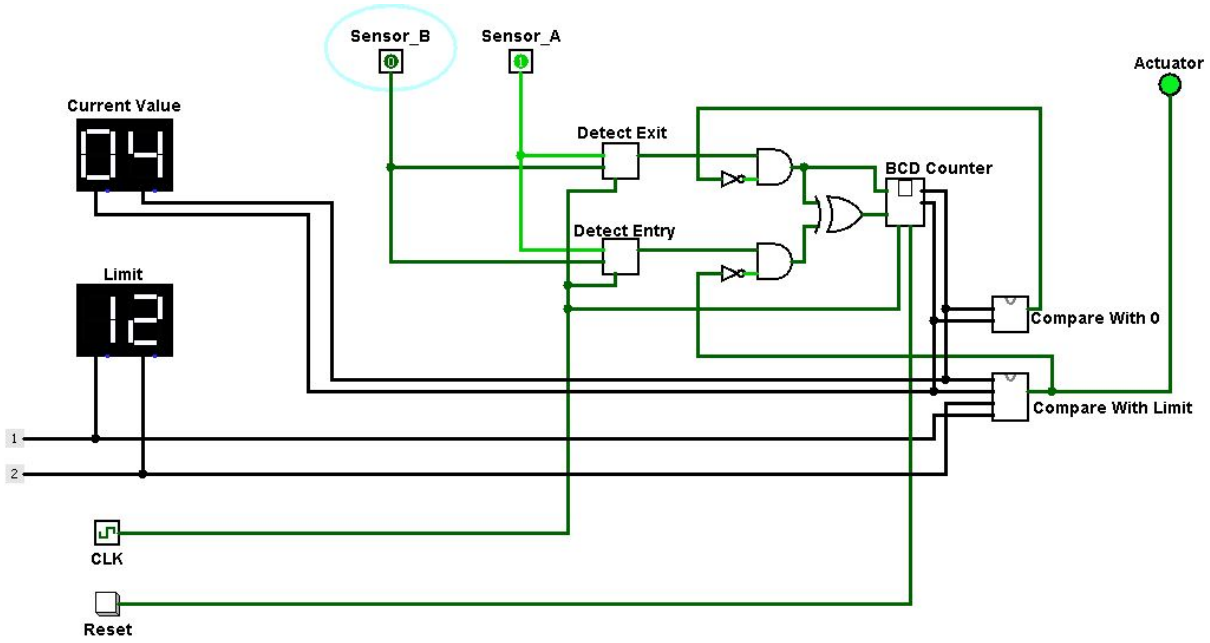
Sensor A: LOW Sensor B: HIGH



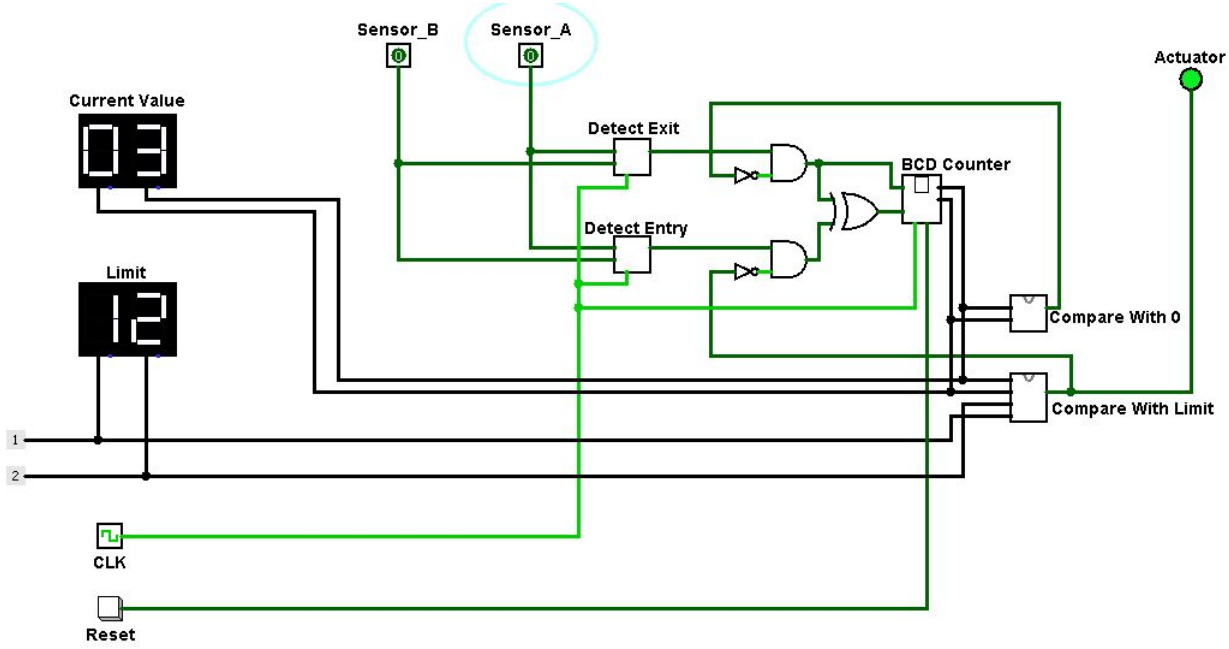
Sensor A: HIGH Sensor B: HIGH



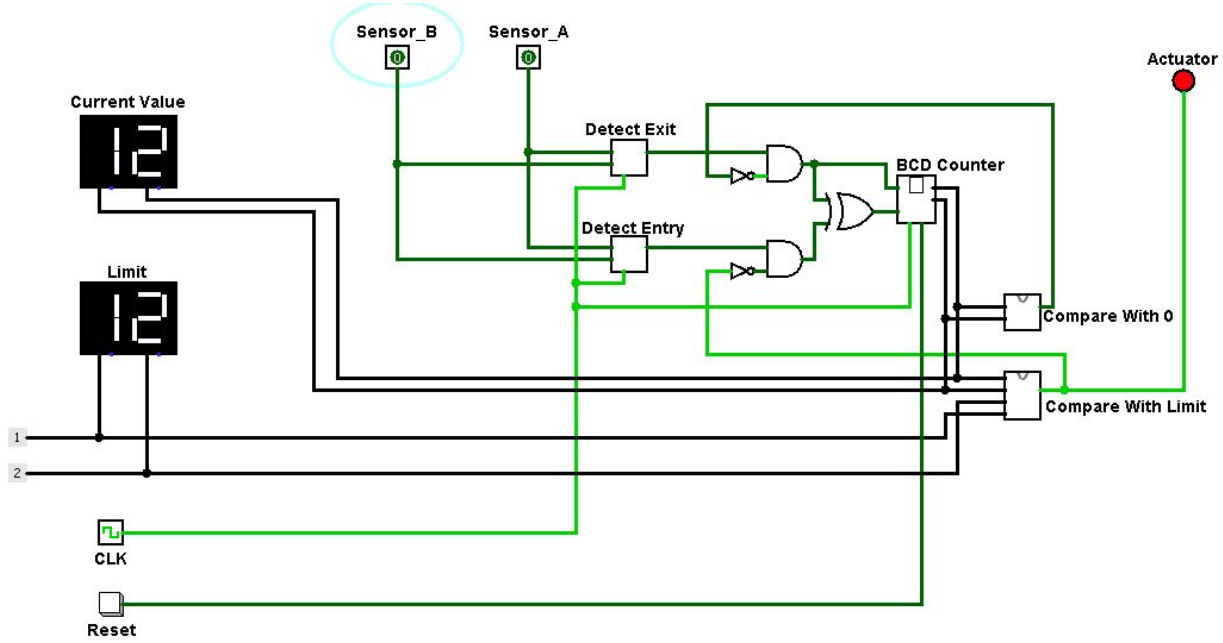
Sensor A: HIGH Sensor B: LOW



Sensor A: LOW Sensor B: LOW (exit detected, count decreases by 1)



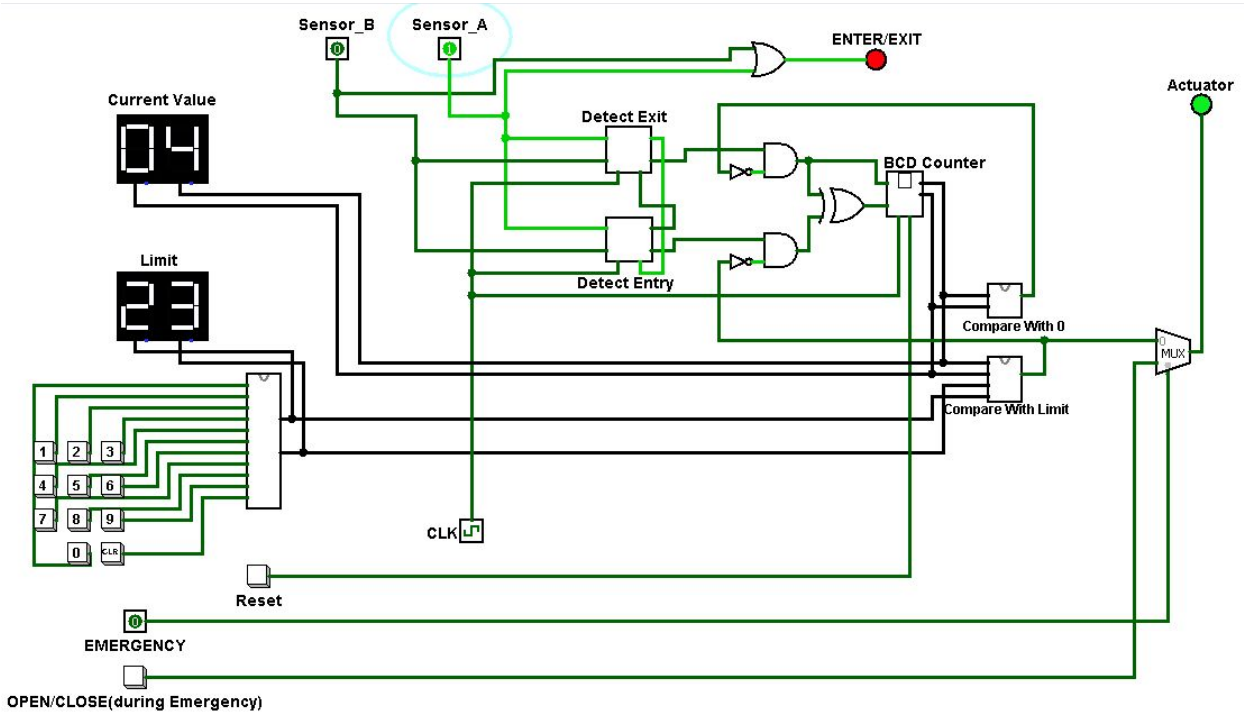
Actuator receives signal to close the door when limit reached:
(LED turns red)



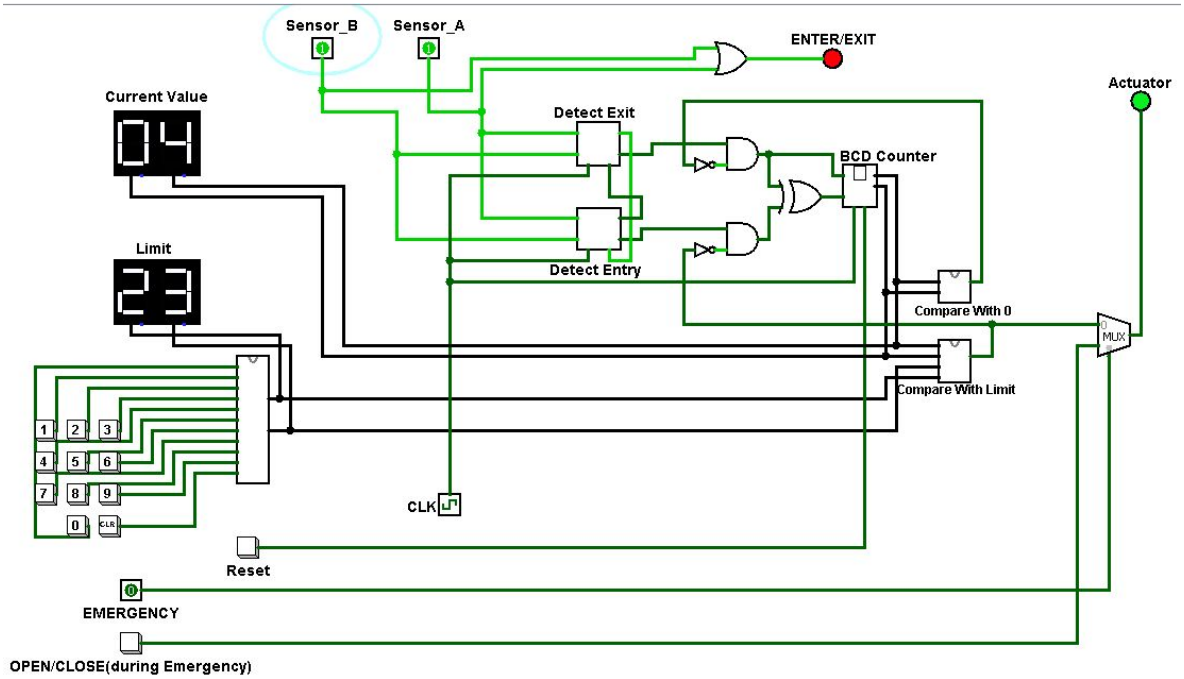
Additional Functionalities:

Detect U-Turn:

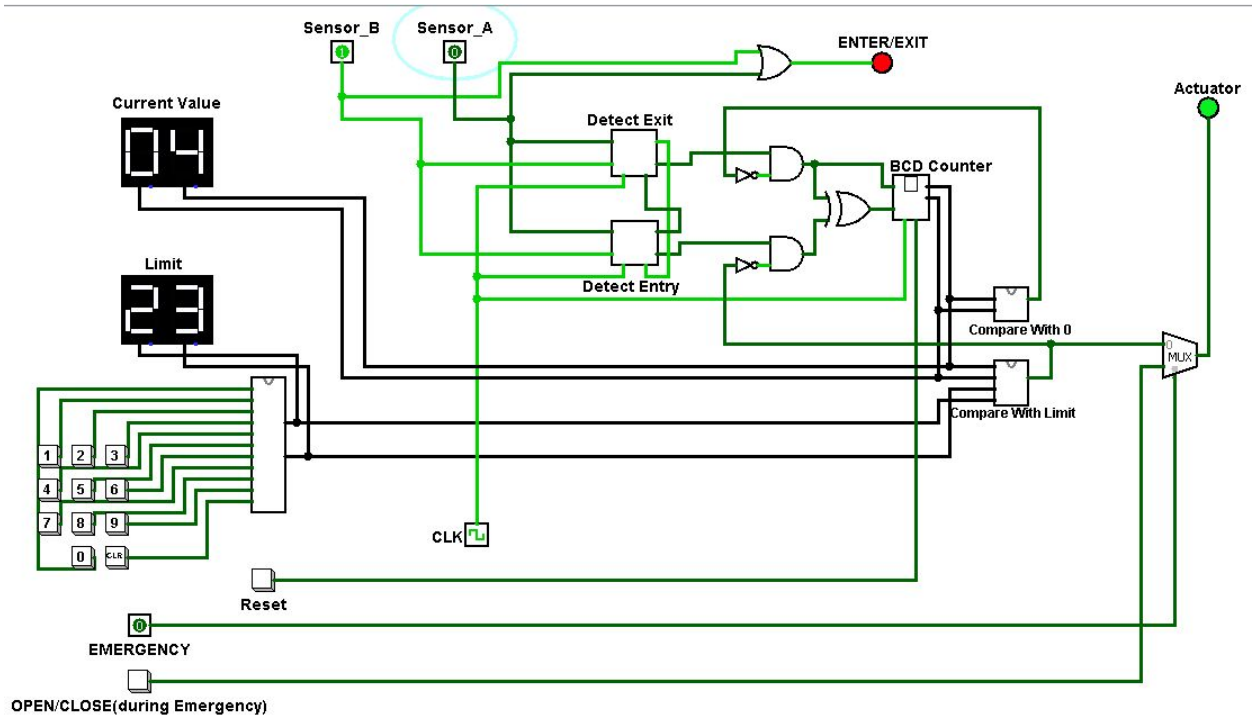
Sensor A: HIGH Sensor B: LOW



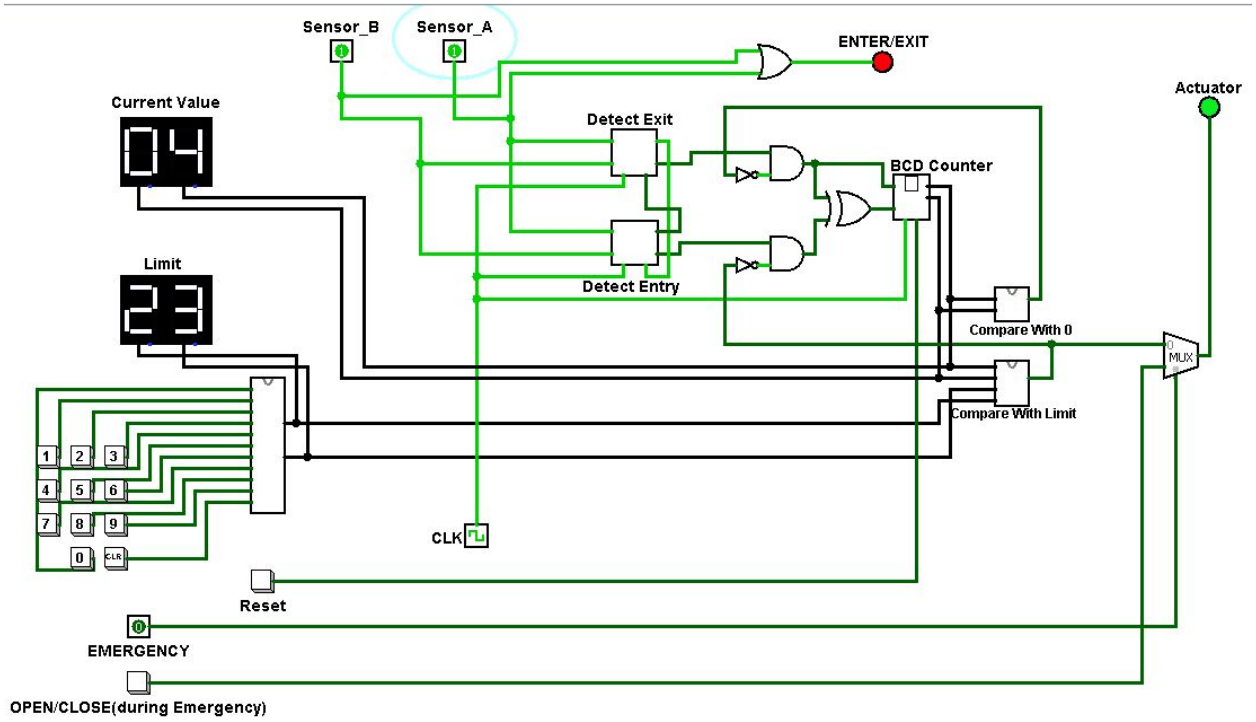
Sensor A: HIGH Sensor B: HIGH



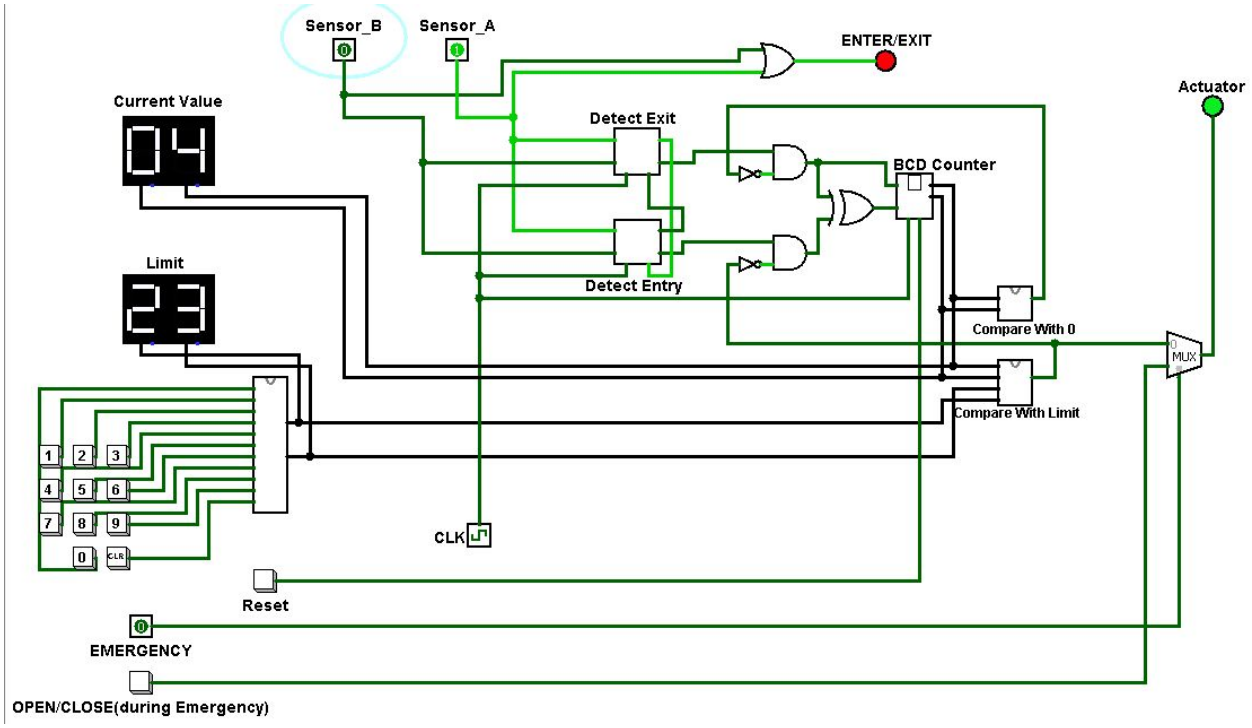
Sensor A: LOW Sensor B: HIGH



Sensor A: HIGH Sensor B: HIGH



Sensor A: HIGH Sensor B: LOW



Sensor A: LOW Sensor B: LOW (U- Turn detected, count remains same)