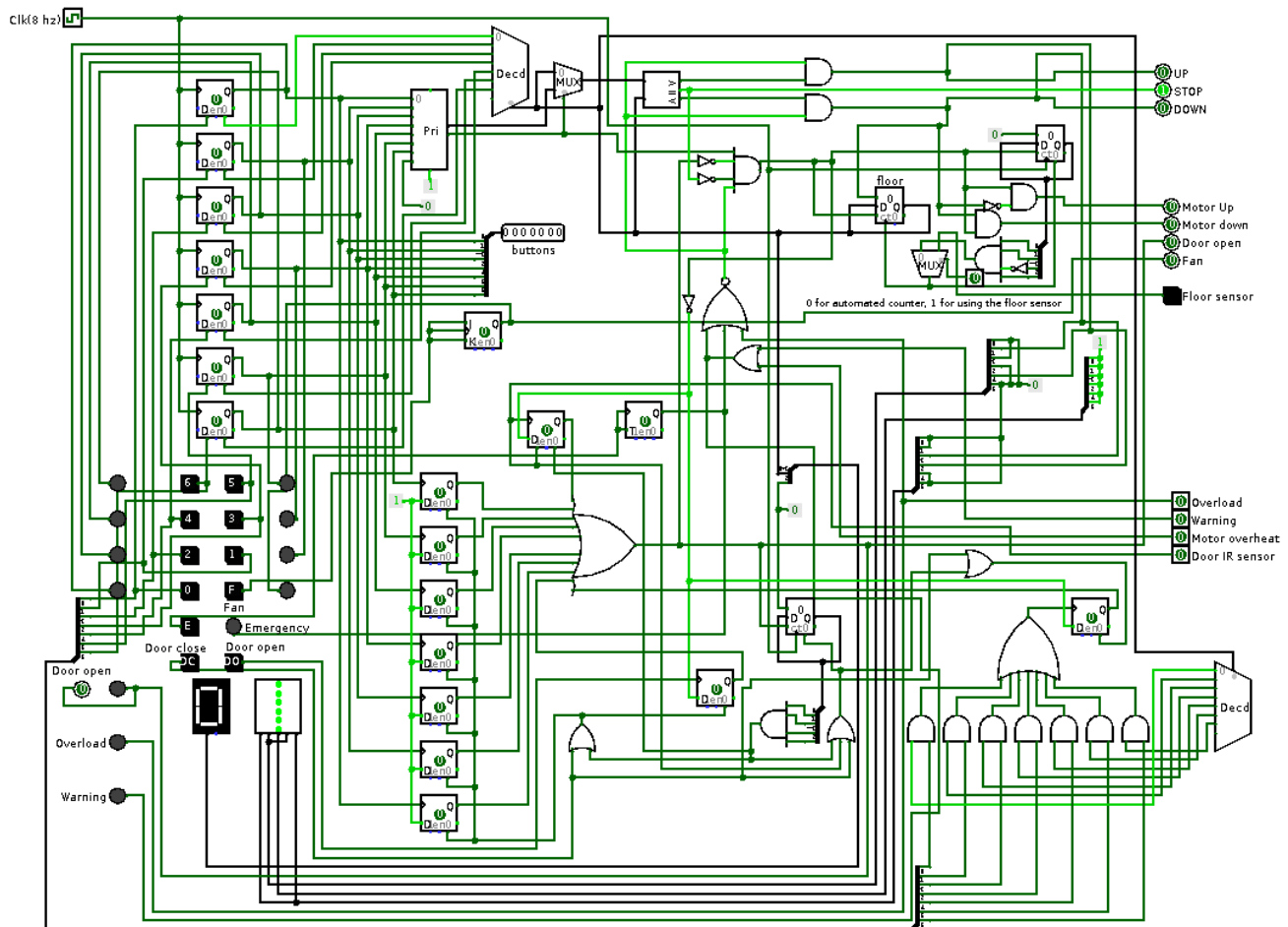


# Output summary for DD group project

## Group 32 | project 13

Circuit Diagram used for the simulation and logging:



1.) Normal working of the elevator where the elevator is called for the 6<sup>th</sup> floor then the ground floor:

floor	Floor sensor	Motor Up	STOP	Motor down	buttons	
000	0	1	0	0	100 0000	Button for 6th floor is pressed
001	1	1	0	0	100 0000	Elevator moves up as Motor up is high
001	0	1	0	0	100 0000	
010	1	1	0	0	100 0000	
010	0	1	0	0	100 0000	
011	1	1	0	0	100 0000	
011	0	1	0	0	100 0000	
100	1	1	0	0	100 0000	
100	0	1	0	0	100 0000	
101	1	1	0	0	100 0000	Elevator reaches 6th floor and motor stops
101	0	1	0	0	100 0000	
110	1	0	1	0	000 0000	Button for ground floor is pressed
110	0	0	1	0	000 0000	
110	0	0	0	1	000 0001	
101	1	0	0	1	000 0001	
101	0	0	0	1	000 0001	Elevator moves down as Motor down is high
100	1	0	0	1	000 0001	
100	0	0	0	1	000 0001	
011	1	0	0	1	000 0001	
011	0	0	0	1	000 0001	
010	1	0	0	1	000 0001	
010	0	0	0	1	000 0001	Elevator reaches ground floor and stops
001	1	0	0	1	000 0001	
001	0	0	0	1	000 0001	
000	1	0	1	0	000 0000	
000	0	0	1	0	000 0000	

2.) Emergency button is pressed while moving:

floor	buttons	Floor sensor	Motor Up	Motor down	UP	DOWN	STOP	Emergency	
000	000 0000	0	0	0	0	0	1	0	Elevator is called for the 6th floor and the elevator starts moving up
000	100 0000	0	1	0	1	0	0	0	
001	100 0000	1	1	0	1	0	0	0	
001	100 0000	0	1	0	1	0	0	0	
010	100 0000	1	1	0	1	0	0	0	
010	100 0000	0	1	0	1	0	0	0	
011	100 0000	1	1	0	1	0	0	0	
011	100 0000	0	1	0	1	0	0	0	
011	100 0000	0	0	0	0	0	0	1	Emergency button is pressed and the elevator stops moving as the motor up is disabled.
011	100 0000	1	0	0	0	0	0	1	
011	100 0000	0	0	0	0	0	0	1	Note: Motor up is disabled despite the fact that the elevator needs to go up
011	100 0000	0	1	0	1	0	0	0	Emergency is revoked and the elevator starts moving up again
100	100 0000	1	1	0	1	0	0	0	
100	100 0000	0	1	0	1	0	0	0	
101	100 0000	1	1	0	1	0	0	0	
101	100 0000	0	1	0	1	0	0	0	
110	000 0000	1	0	0	0	0	1	0	
110	000 0000	0	0	0	0	0	1	0	

3.) Warning input is given while moving  
(Warning can be motor overheat or overload):

floor	Floor sensor	Warning	Motor Up	Motor down	buttons	
000	0	0	0	0	000 0000	Elevator called for 6th floor and starts moving up
000	0	0	1	0	100 0000	
001	1	0	1	0	100 0000	
001	0	0	1	0	100 0000	
010	1	0	1	0	100 0000	
010	0	0	1	0	100 0000	
011	1	0	1	0	100 0000	
011	0	0	1	0	100 0000	Warning signal comes and the motor up is disabled, stopping the elevator
011	0	1	0	0	100 0000	

4.) Door is opened after reaching destination floor:

floor	Floor sensor	buttons	Clk(8 hz)	Door open	
000	0	000 0000	0	0	Elevator is called for 6th floor
000	0	100 0000	0	0	
001	1	100 0000	0	0	
001	0	100 0000	0	0	Elevator moves up
010	1	100 0000	0	0	
010	0	100 0000	0	0	
011	1	100 0000	0	0	
011	0	100 0000	0	0	
100	1	100 0000	0	0	Elevator reaches 6th floor and the door opens
100	0	100 0000	0	0	
101	1	100 0000	0	0	
101	0	100 0000	0	0	
110	1	000 0000	0	1	
110	0	000 0000	0	1	
110	0	000 0000	1	1	
110	0	000 0000	0	1	
110	0	000 0000	1	1	
110	0	000 0000	0	1	
110	0	000 0000	1	1	Door remains open for a few clock cycles
110	0	000 0000	0	1	
110	0	000 0000	1	1	
110	0	000 0000	0	1	
110	0	000 0000	1	1	
110	0	000 0000	0	1	
110	0	000 0000	1	1	
110	0	000 0000	0	1	
110	0	000 0000	1	1	
110	0	000 0000	0	1	
110	0	000 0000	1	1	Door closes as the counter has been reset to its initial value
110	0	000 0000	0	1	
110	0	000 0000	1	0	
110	0	000 0000	0	0	