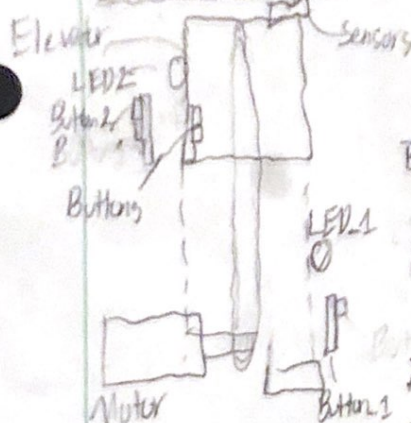


HW 0x00

ME 305

CHRISTIAN CLEPHAN

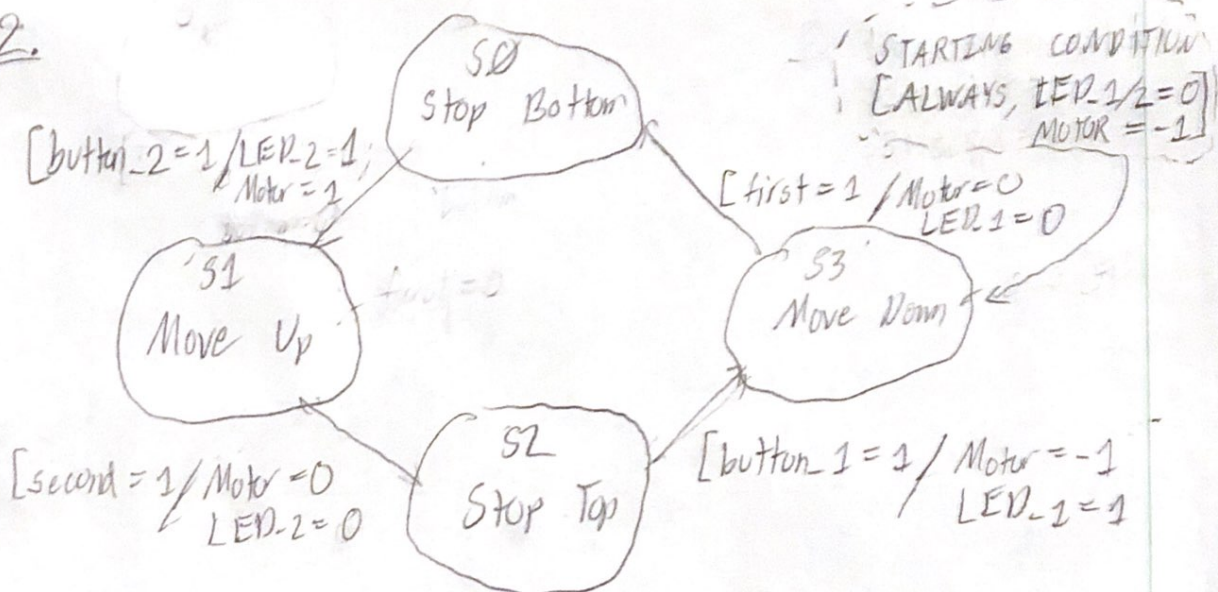
Elevator Diagram:



## 1. INPUT/OUTPUT TABLE:

INPUT	OUTPUT	DESCRIPTION
Button 2 = 1	Motor = 1, LED 2 = 1	Upper button is pressed causing elevator to move up and turn upper LED on
Button 1 = 1	Motor = -1, LED 1 = 1	Lower button is pressed causing elevator to move down and turn lower LED on
first = 1 and second = 0	Motor = 0, LED 1 = 0, LED 2 = 0	Elevator is at rest on first floor as seen by lower sensor, everything off.
first = 0 and second = 1	Motor = 0, LED 1 = 0, LED 2 = 0	Elevator at rest on 2nd floor as seen by upper sensor, everything off
first = 0 and second = 0	Motor = -1 or 1, LED 1 = 0 or 1, LED 2 = 0 or 1	Elevator is moving either up or down so LED 1 or LED 2 is also on.

2.



Components to System:

MOTOR:  
STOP 0  
UP 1  
DOWN -1

SENSOR:  
PRESENT 1  
NOT PRESENT 0

LED:  
ON 1  
OFF 0

BUTTON:  
PRESSED 1  
NOT PRESSED OR  
SENSOR DETECTS ELEVATOR 0

## 3. STATE LOGIC:

S1: first/second = 0,  
S3: first/second = 0.