TE A
Roll No: 17

Assignment No: 9

Nikita Bhosale

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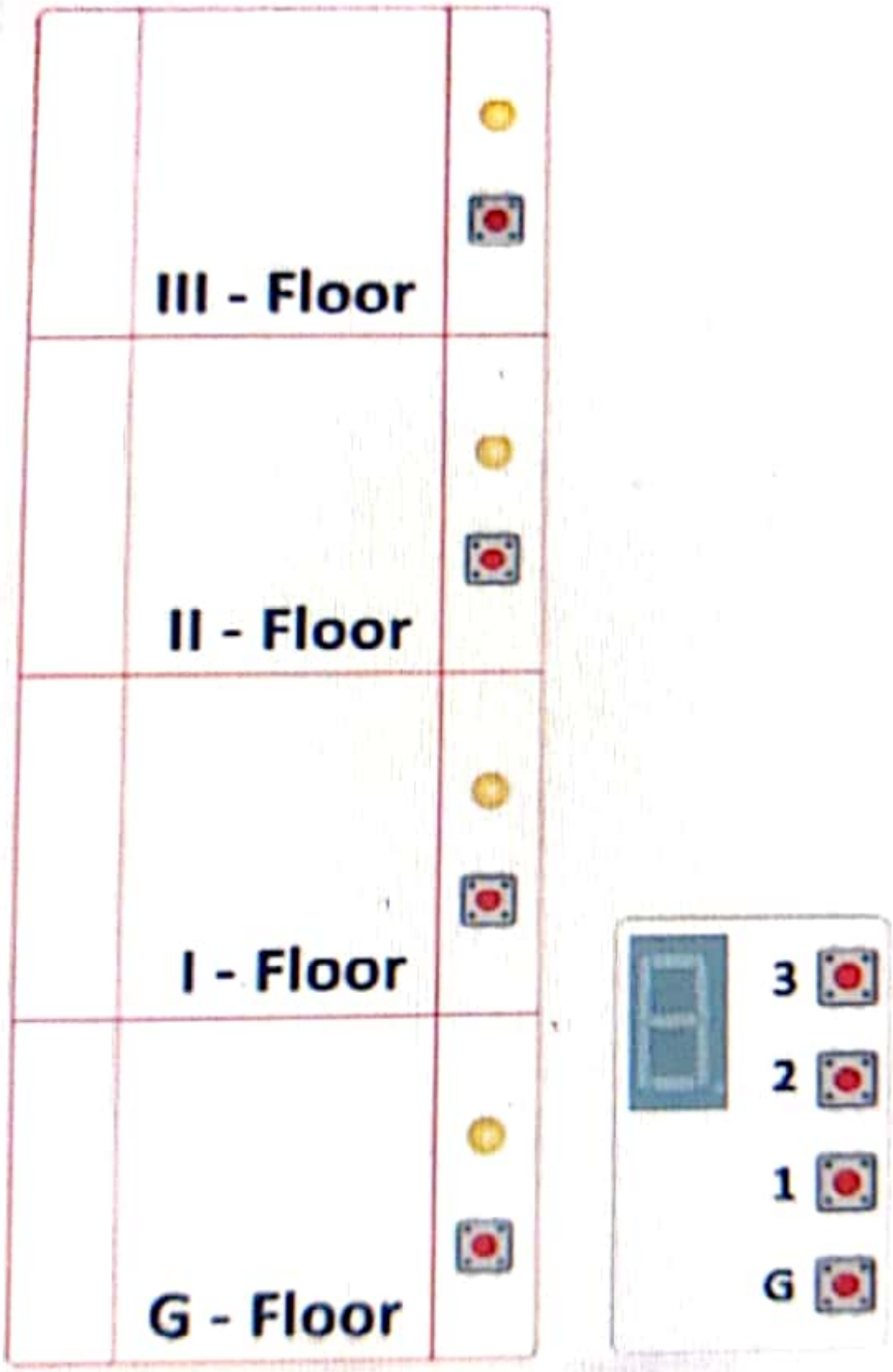
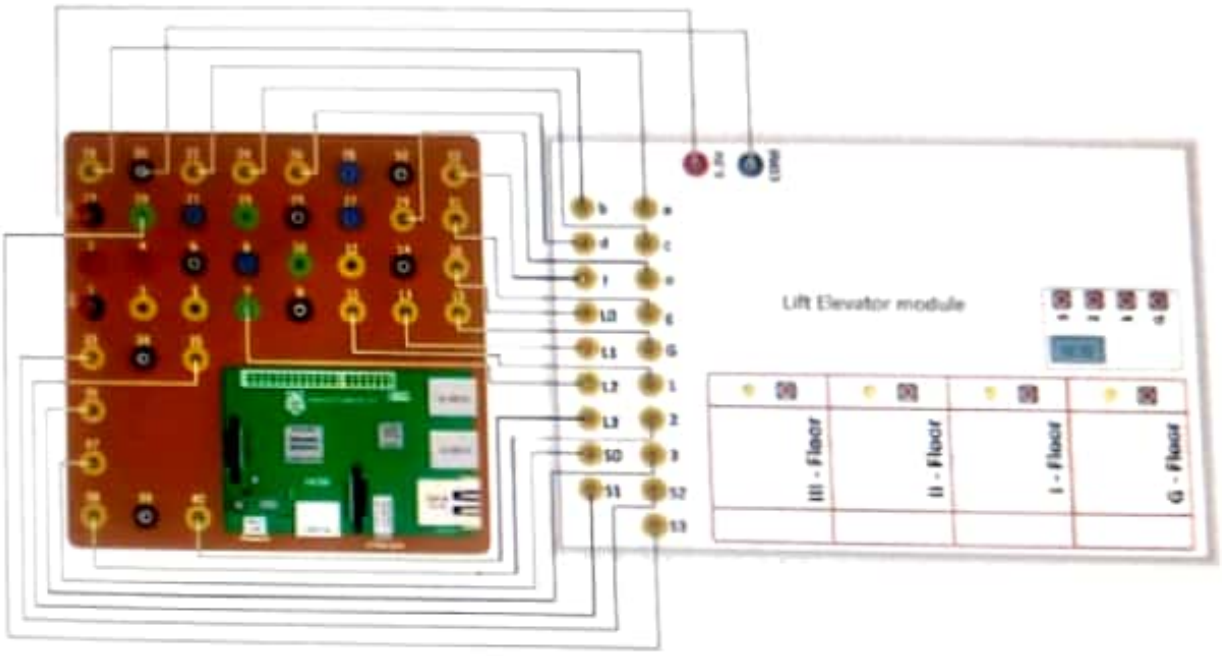
Aim: Wan application using Raspberry Pi Beagleboard to control the operation of h/w simulated lift ~~elevator~~ elevator simulation using Raspberry pi board

Theory:

(1) Lift elevator module has 2 parts.
- moving parts inside the lift and stationary parts outside the lift at each floor to all the lift
- In the simulation module we have considered 4 floors of building
- So the moving part contains 4 push buttons one button is for each floor
- The moving part contains the seven seg display indicating the current floor no while lift is moving.
- By pressing one of these buttons user indicate the destination floor
- At each floor the stationary part contains a button for calling the lift
- When lift is called by any floor the lift starts moving towards the particular floor when it reaches there door is opened
- In our module this situation is indicated by LED ON.
- In real lift as soon as the entering users get finished the door is closed and the lift starts moving towards the destination
- In our module this situation is indicated by LED off





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(2) Safety Precaution:
- First make all connection as given below.
- Power supply

(3) Steps for assembling the circuit:
- connect all the pins of lift elevator module to pins of Raspberry pi module as shown in above figure

(4) Procedure:-
- write the Prog as per given algorithm.
- save program
- Run code using run module

(5) Algorithm:-
- Import GPIO and time libraries
- Set GPIO mode as per board
- Declare 4 push button pin of stationary part
- Declare 4 LED pin at each floor for detection.
- Declare 4 push button pin of moving part
- Declare 7 pin of 7 segment display
- set push button pin as i/p
- set 7 segment pin & LED pin as o/p
- Store the value of each digit of 7 segment
- In while loop if button 1 is pressed lift at floor 1 and LED of floor 1 get ON for 5 sec then goes off
- The 7 seg display displays the floor no of destination
- Observe the o/p on LED and 7 segment display

Conclusion:- Thus we have created an simulated lift elevator using Raspberry pi board.