Systems & Biomedical Engineering Department

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Elevator System

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Task Description

Our project is a simple elevator system with outside buttons for going up and going down, of course except the ground and the last floor, and inside 5 buttons for each floor.

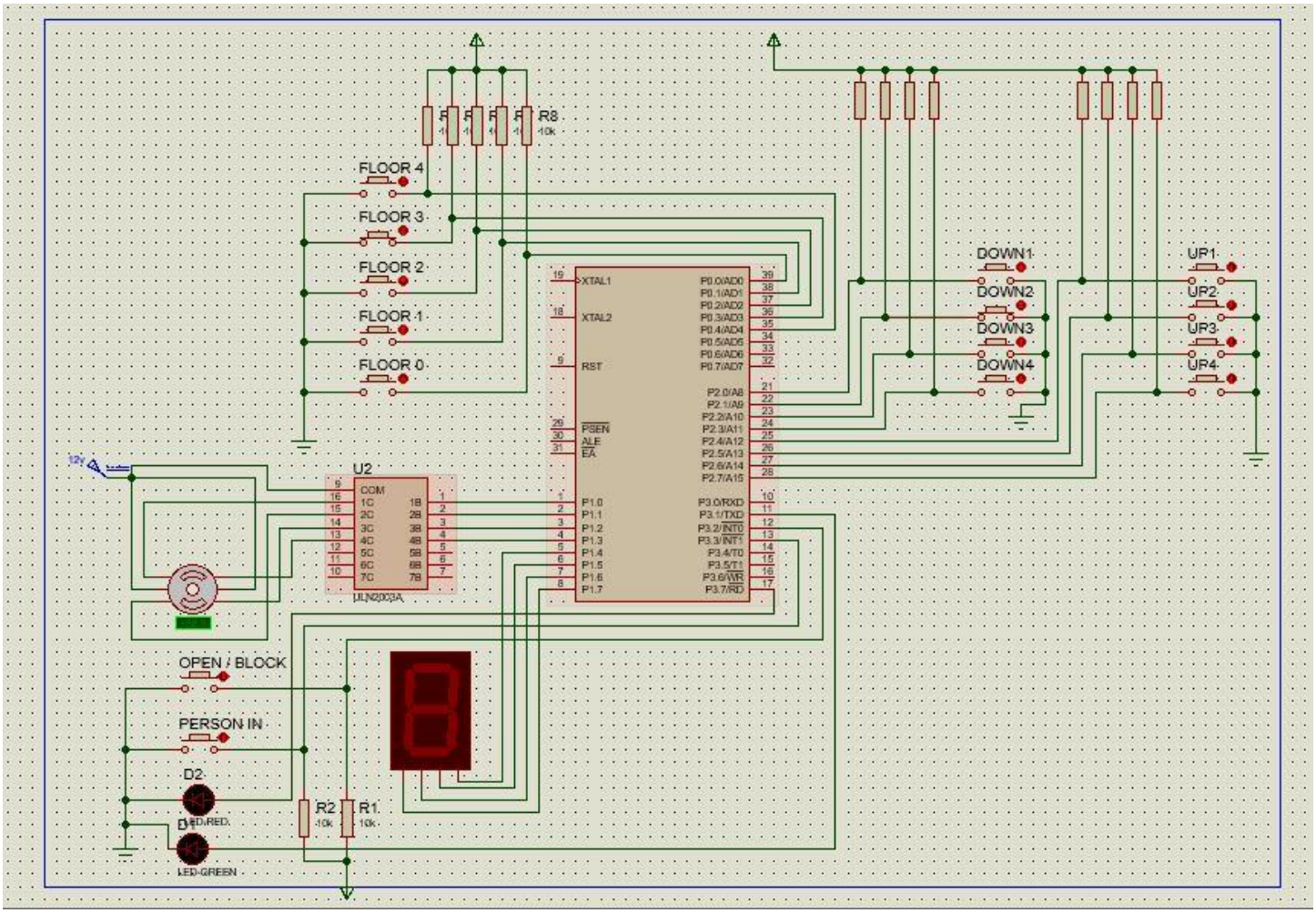
Components:

- 8051 Microcontroller
- One Red LED
- One Green LED
- One Seven-Segment
- Push Buttons
- Stepper Motor
- Resistors

Elevator's each floor has two buttons one for going up, and one for going down except for the ground and last floor have one button only. There are 5 buttons inside the elevator, one for each floor. Whenever the elevator's door is open it waits 5 seconds before it close again and the green LED is ON. You can also open the door again if you pressed on the button again. The elevator saves the requests of all the buttons, even when it's going up and someone form outside pressed down button it will go to its first destination and then back for the down call. The current floor is shown on a seven segment. There's a button should be pressed whenever anyone enters the elevator and when it's pressed more than four times which means the number of persons in the elevator exceeds four, a red LED is ON.

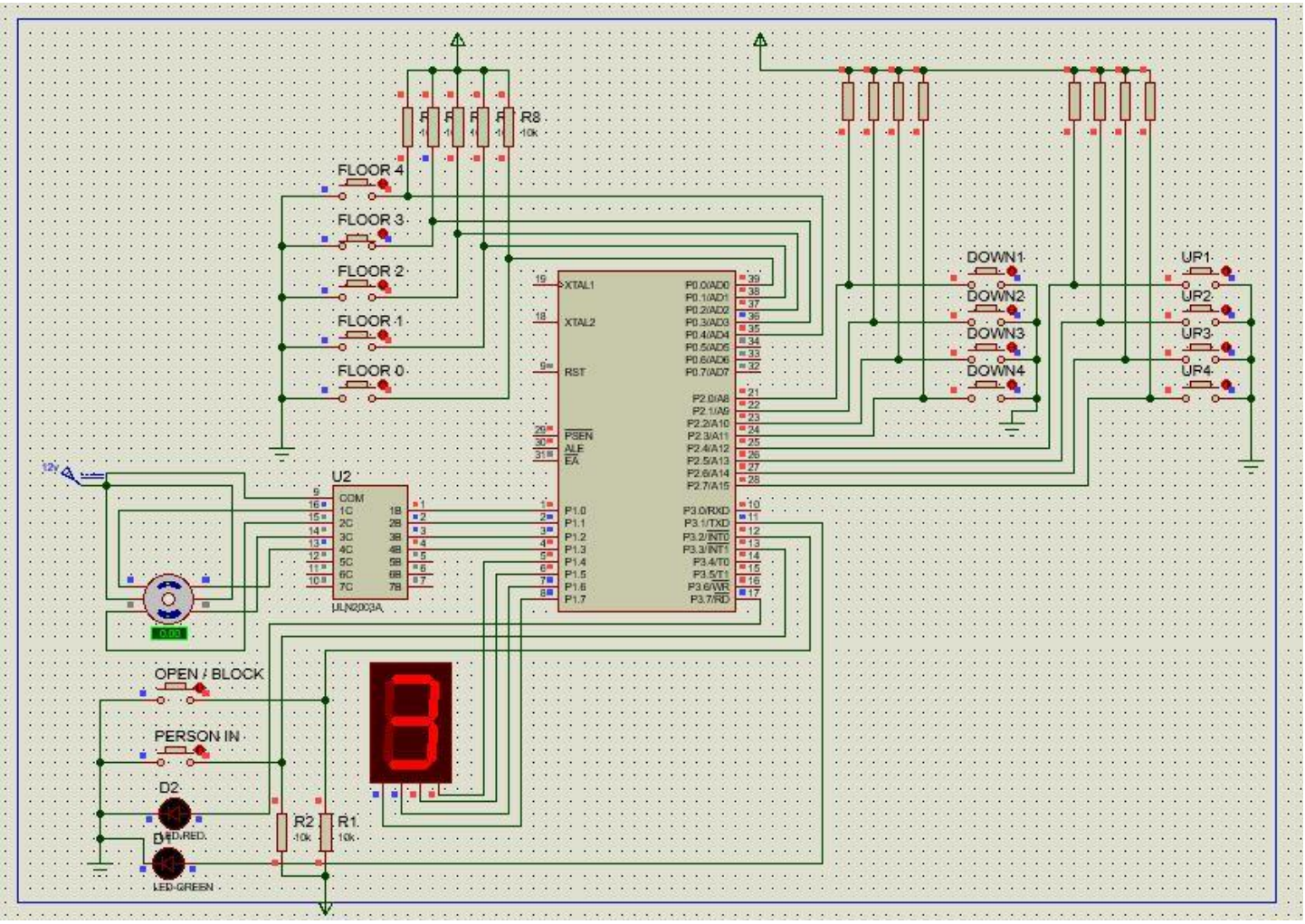
Schematic Diagram

OFF State

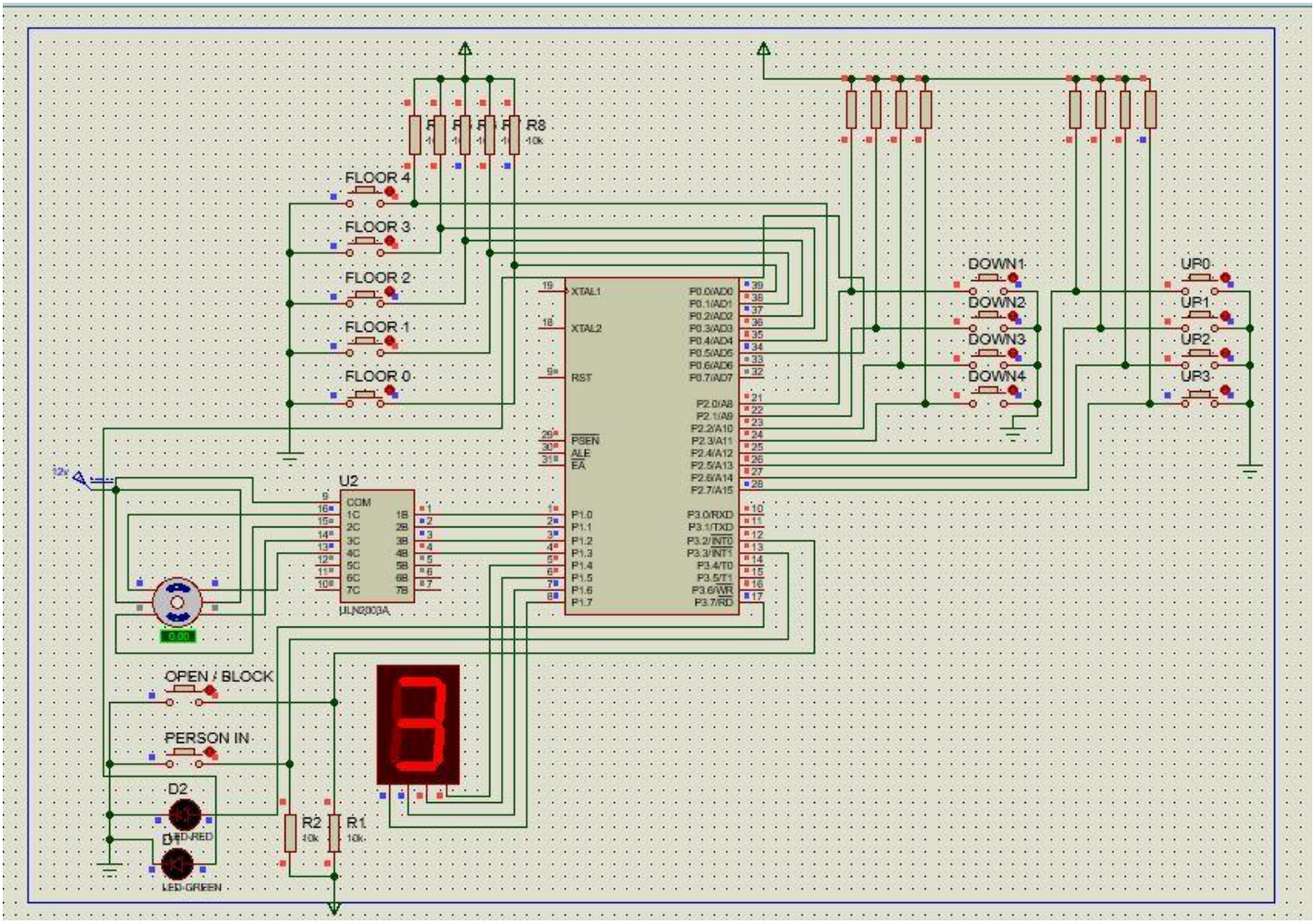


ON State

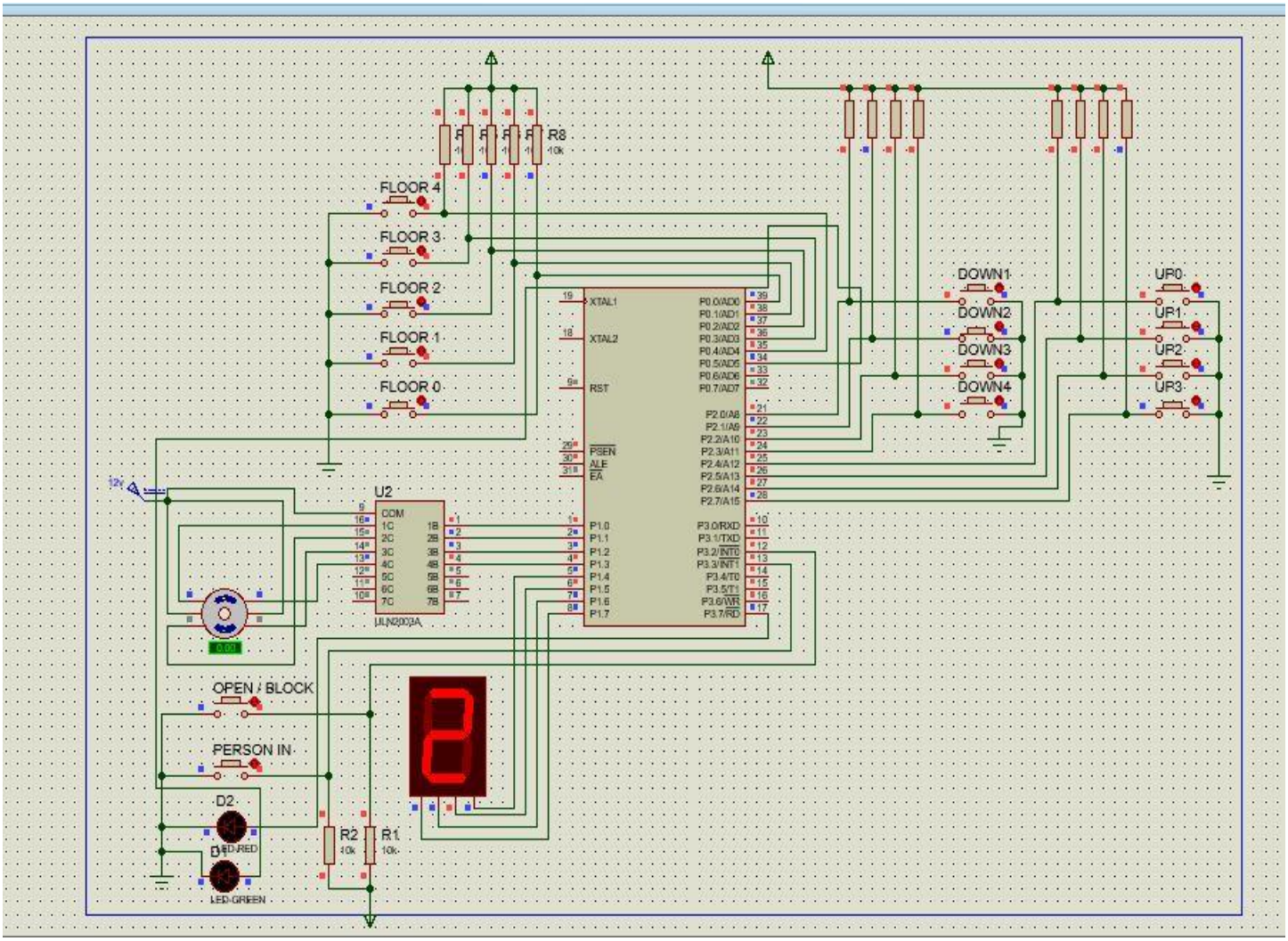
Floor 3 from inside buttons



Floor 3 from the up button



2nd Floor from the down button



GitHub Repository

https://github.com/Abdullah-Alrefaey/Electronics-Tasks