

Table of Contents

System description	2
System design	3
System flowchart.....	4
• Normal Mode:.....	4
• Pedestrian Mode:.....	5
System Constraints.....	6

System description

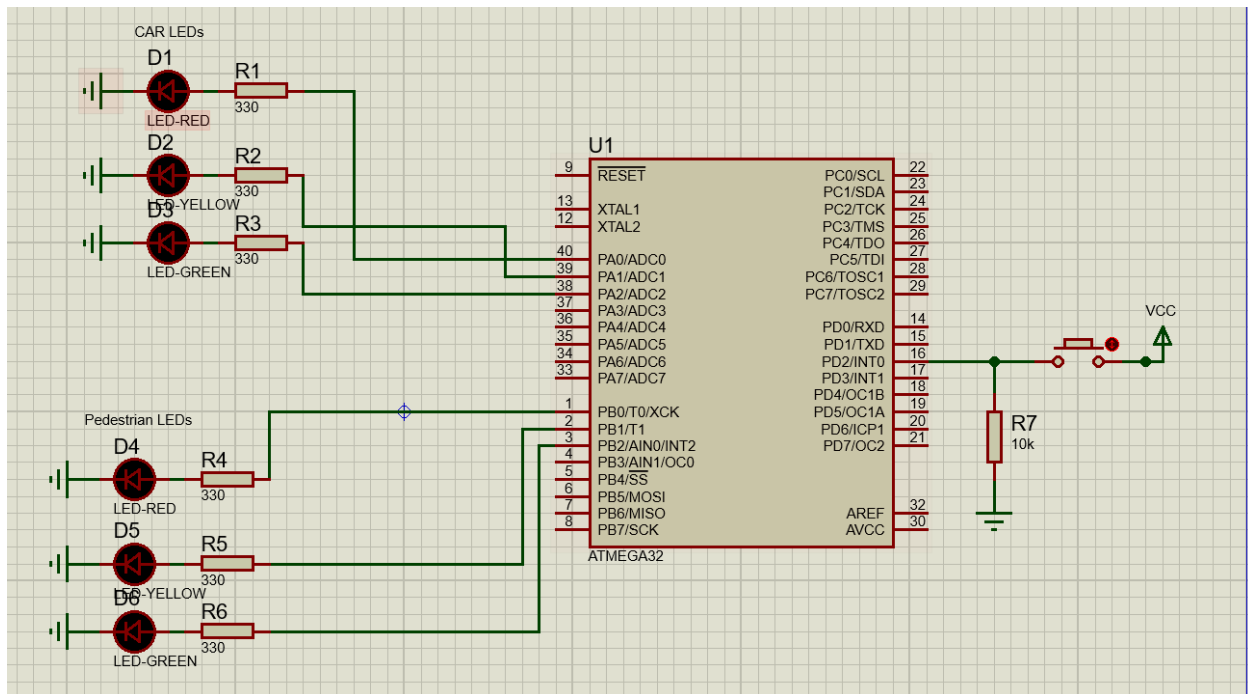
Traffic lights are signaling devices used to govern traffic flow and are placed at road intersections, pedestrian crossings, and other sites.

Typically, traffic signals consist of Using colors and symbols, three signals convey message to drivers and riders. We use on-demand traffic signals in our system. These systems prioritize pedestrians since they have the option to ask drivers to stop and let them pass at any time.

System design

System components:

- 6 LEDs representing the colors of the traffic signals.
- Current limiting resistors (330 ohm) for each LED.
- Push button with a 10K pulldown resistor.
- ATmega32a microcontroller.

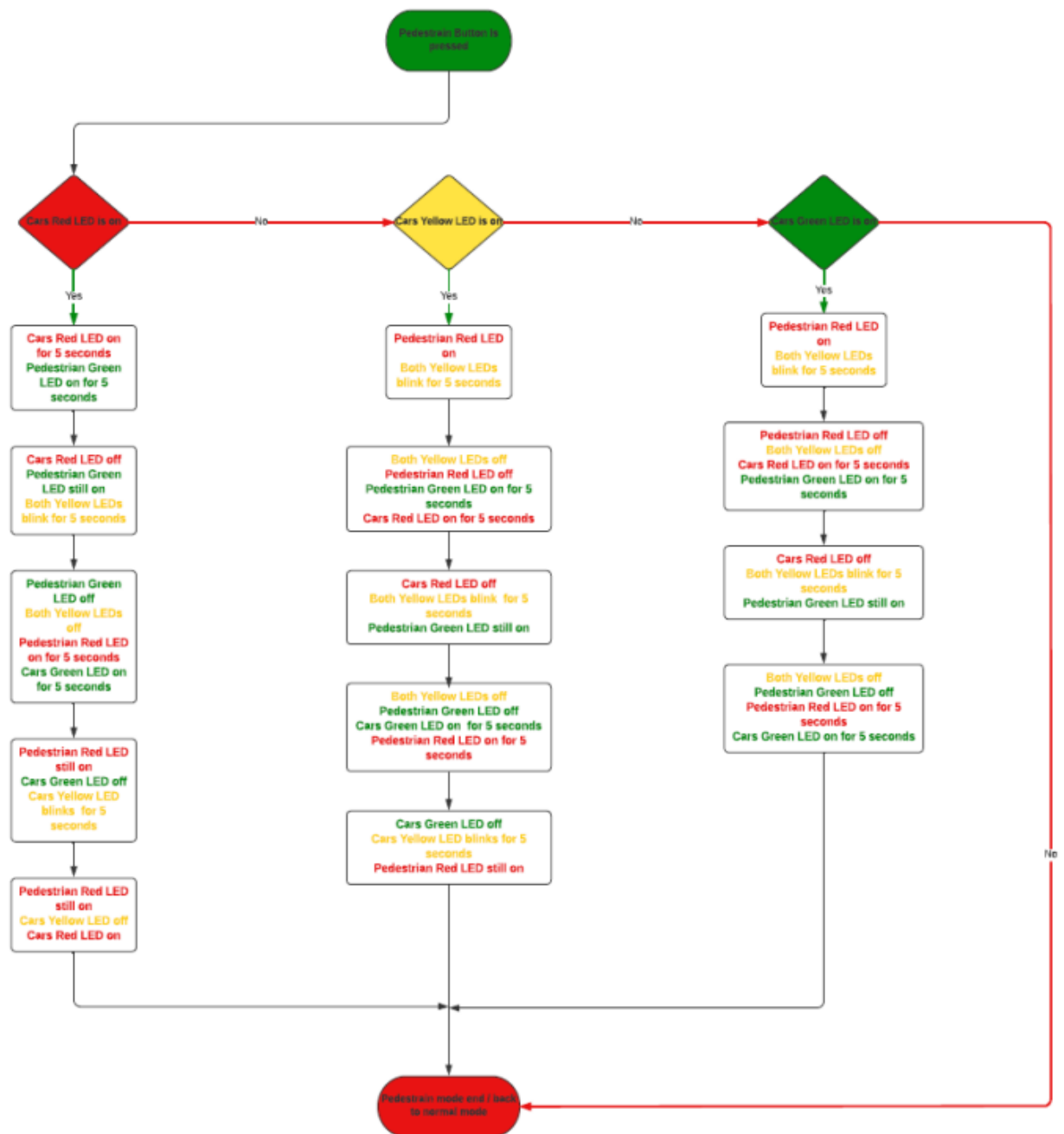


System flowchart

- Normal Mode:



- Pedestrian Mode:



System Constraints

1. If the button is pressed when the cars' red LED is blinking, the pedestrian green LED and the cars' red LED will be on for another 5 seconds. So the timing is reset.
2. If the button is pressed while the cars traffic is blinking yellow, both yellow LEDs will start blinking for another 5 seconds. The timing here is also reset.
3. When going back to normal mode, the LED that was on before going to pedestrian mode is turned on for the time left for it to remain on. The timing here is not reset.