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Traffic Light System

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# Task Description

Our project aims to control the traffic light system flexibly to meet several conditions of traffic.

Components:

* 8051 Microcontroller
* Two light LEDs (Red & Green)
* Two Seven-Segments
* Push Buttons

The toggle period between the red and green light LEDs can be changed based on a predetermined number shown on the two seven-segments. This number called “Max” starts to count down until it reaches 00, then the green light LED turns OFF and the red light LED turns ON, the seven-segments will be reloaded again to “Max” and so on.

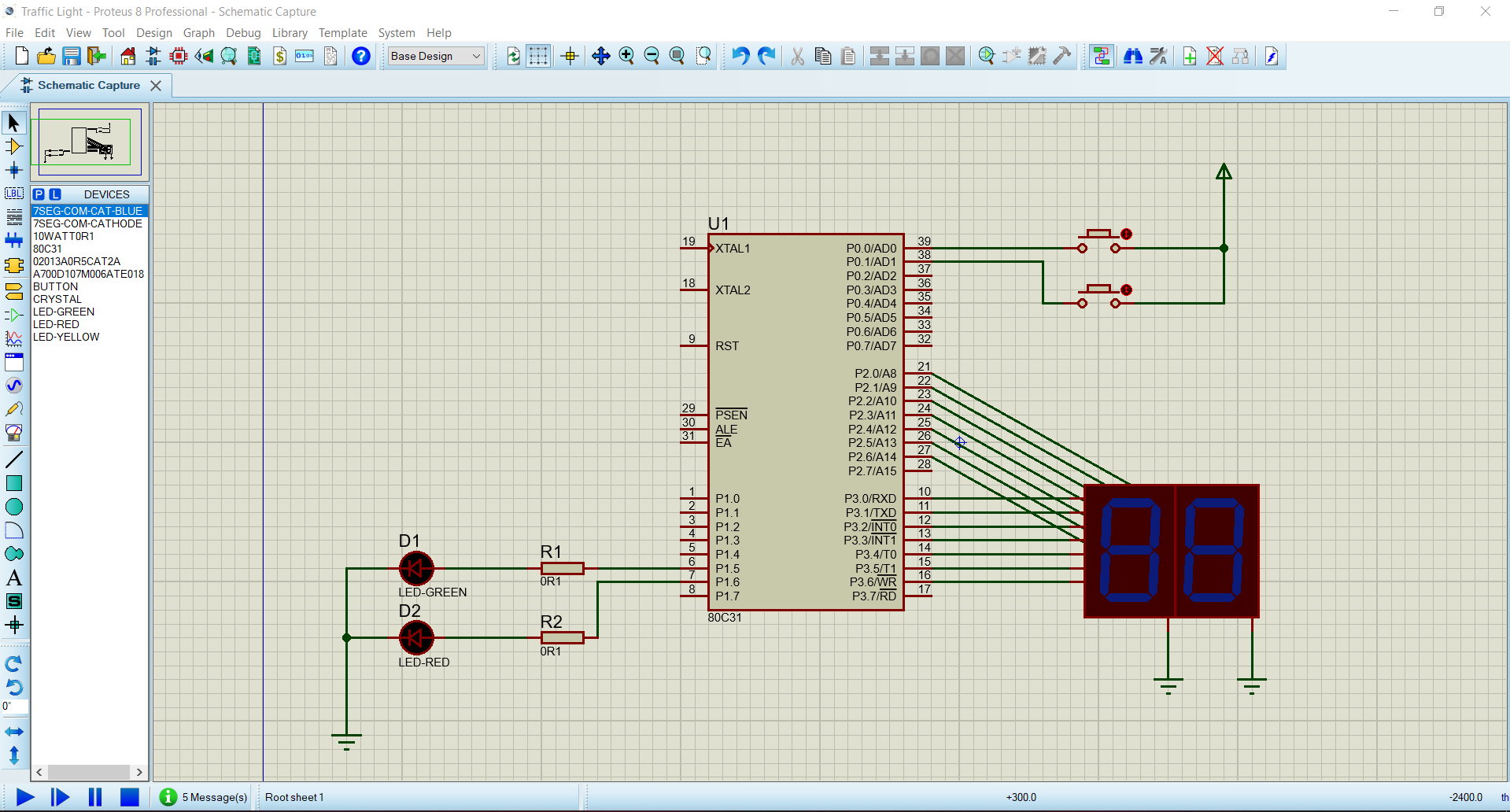
Users will have the ability to change this maximum number, also they can change the frequency of counting using push buttons.

The push button related to P0.0 is responsible of the frequency, it counts one second by default and when pressed it will increase the frequency.

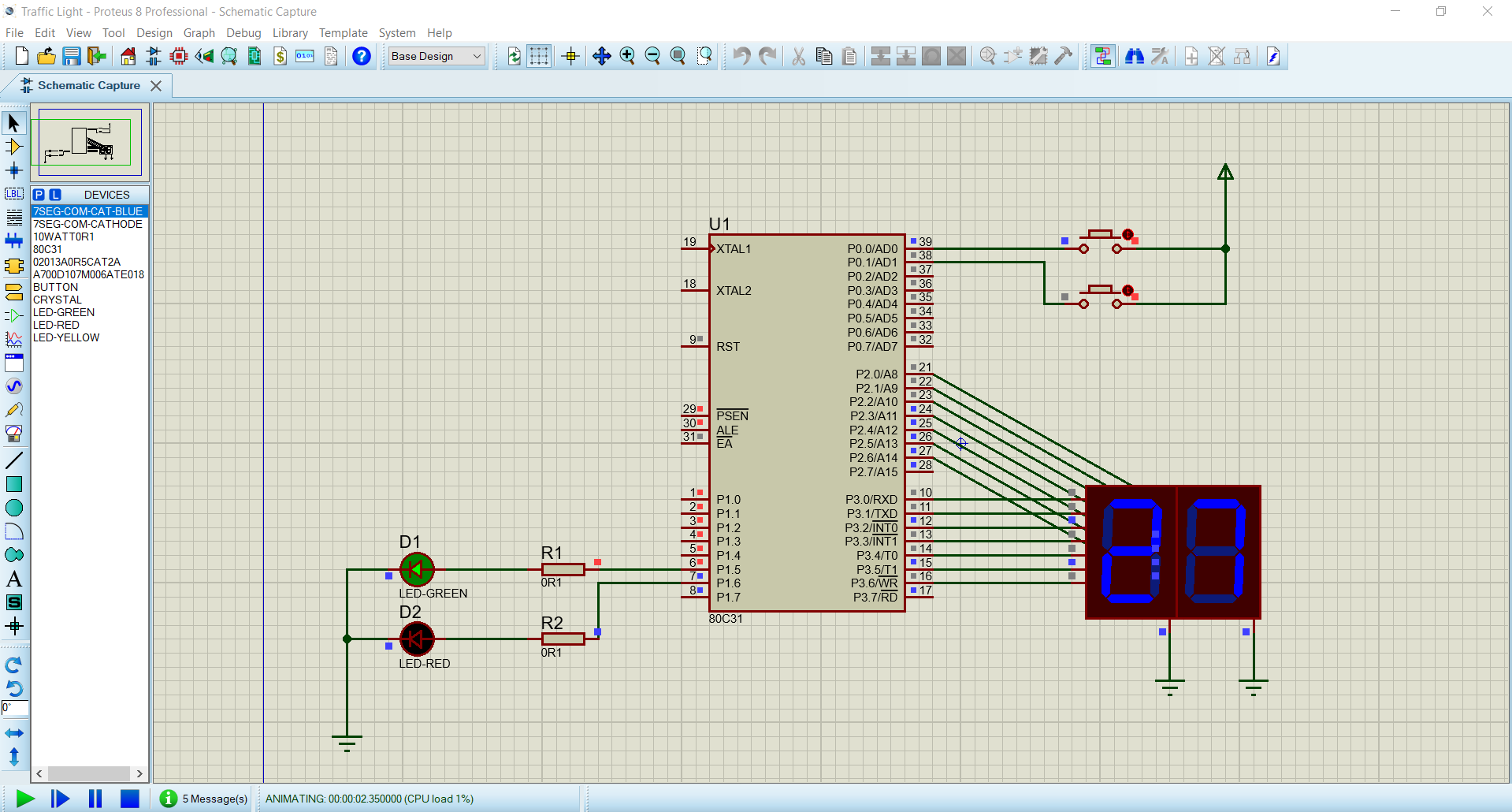
The second push button related to P0.1 is responsible about the maximum number, its default is to count from 30 and if pressed it will start from 60.

# Schematic Diagram

**OFF State**



**ON State**



# Code

