

ON DEMAND TRAFFIC LIGHT



15/09/2022

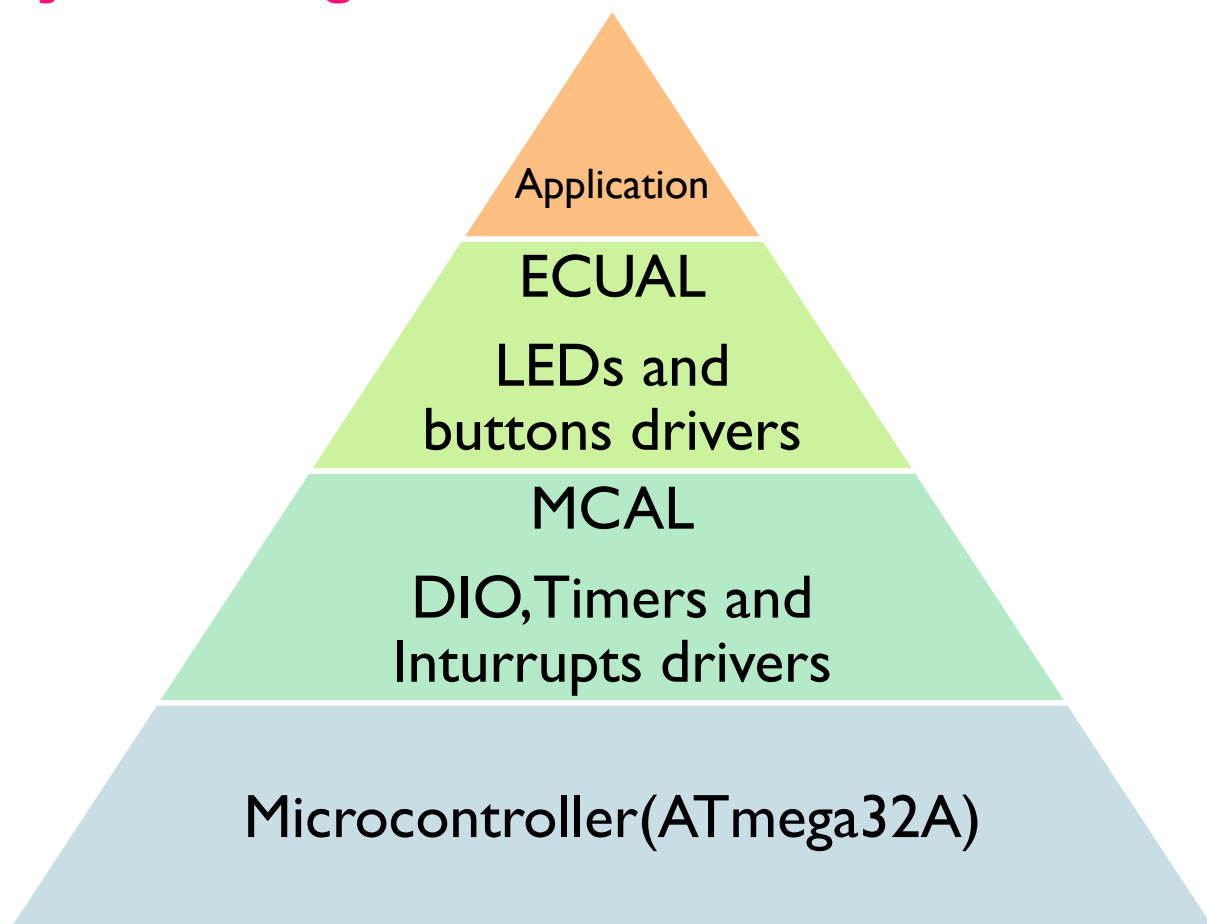
Eyad Hossam Mohamed

Overview

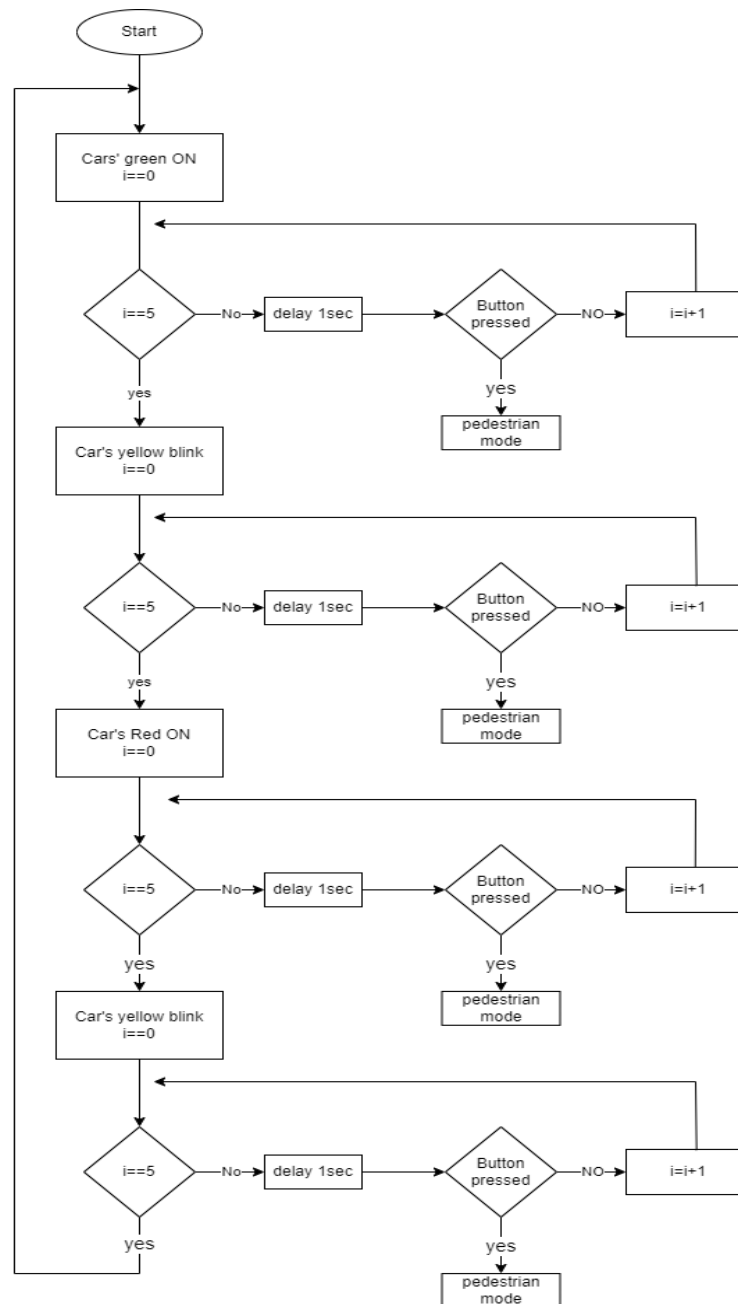
Project requested consists of microcontroller -ATmega32A-, 6 LEDs, a button and timer. It was required to make a driver for each device then making an application to achieve the behavior of an on-demand traffic light that would have two modes:

1. Normal mode:
Cars' lights turn on/off in sequence (green-yellow-red-yellow) while the pedestrian lights are off.
2. Pedestrian mode:
Pedestrian lights turn on upon the press of a button which would happen in a proper manner to allow pedestrians cross the street safely.

System design



System flow charts



System constrains

Pedestrian lights are off while system is in “normal mode”