On-demand Trrafic Light Control

Project Documentation

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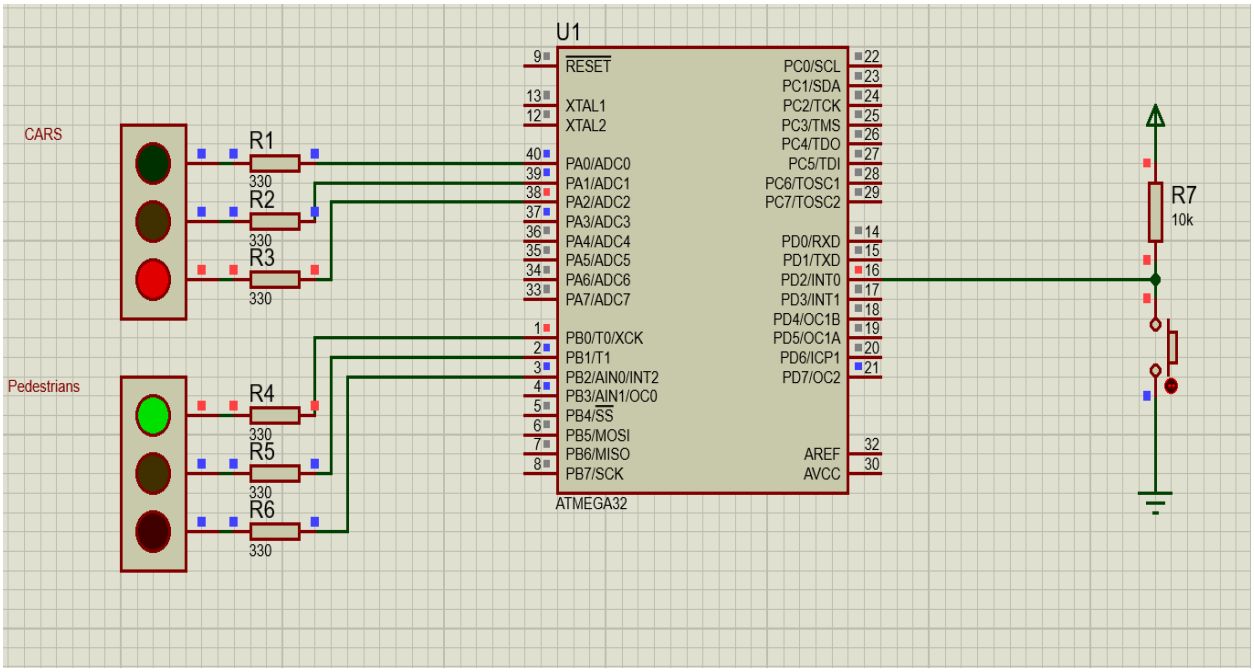
1. System Description:

1.1 System Overview



The system is consists of on-demand traffic light control and include pedestrian button

1.2 System Functionality

The System works on normal mode and when pedestrian pressed the button based on current state it would decide what to do . pedestrian should wait until car red led on and pedestrian green led is on.For more information look at FLOW CHART

2. System Design:

2.1 System Requirements:

The System consists of

1- AVR atmega32 (1MHZ)
2- 3 Led for Cars -→ Green , Yellow and Red
3- 3 Led for Pedestrian -→ Green , Yellow and Red
4- 6 Resistor 330 ohm
5- 1 Resistor 10K ohm
6- 1 push button

2.2 Operating Environment:

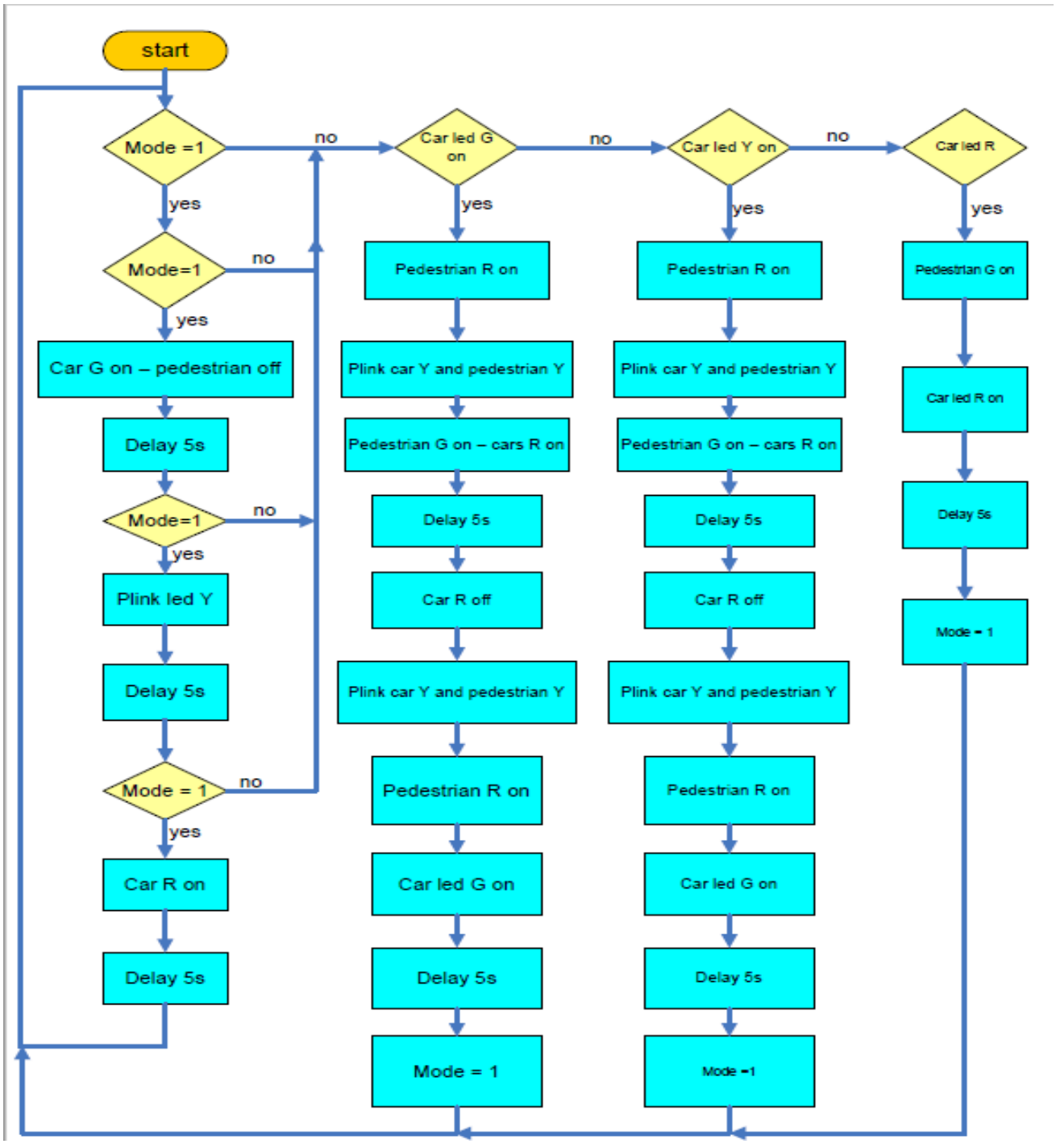
The System was tested on Proteus Simulator . It should be used in streets on the traffic light that have pedestrian button included to allow system functionality

2.3 Input & Output Formats:

Inputs -> Pedestrian push button

Outputs -> 6 led 2 green , 2 yellow and 2 red

3. Flow Chart


start
Mode =1
no
yes
Car led G on
no
Car led Y on
no
Car led R
yes
yes
yes
yes
Mode=1
no
yes
Pedestrian R on
Pedestrian R on
Pedestrian G on
Car G on – pedestrian off
Plink car Y and pedestrian Y
Plink car Y and pedestrian Y
Car led R on
Delay 5s
Pedestrian G on – cars R on
Pedestrian G on – cars R on
Delay 5s
Mode=1
no
yes
Delay 5s
Delay 5s
Delay 5s
Car R off
Car R off
Mode = 1
Plink led Y
Plink car Y and pedestrian Y
Plink car Y and pedestrian Y
Delay 5s
Pedestrian R on
Pedestrian R on
Mode = 1
no
yes
Car led G on
Car led G on
Car R on
Delay 5s
Delay 5s
Delay 5s
Mode = 1
Mode =1