

# Traffic light system using atmega32

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## Videos path:

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# System Description

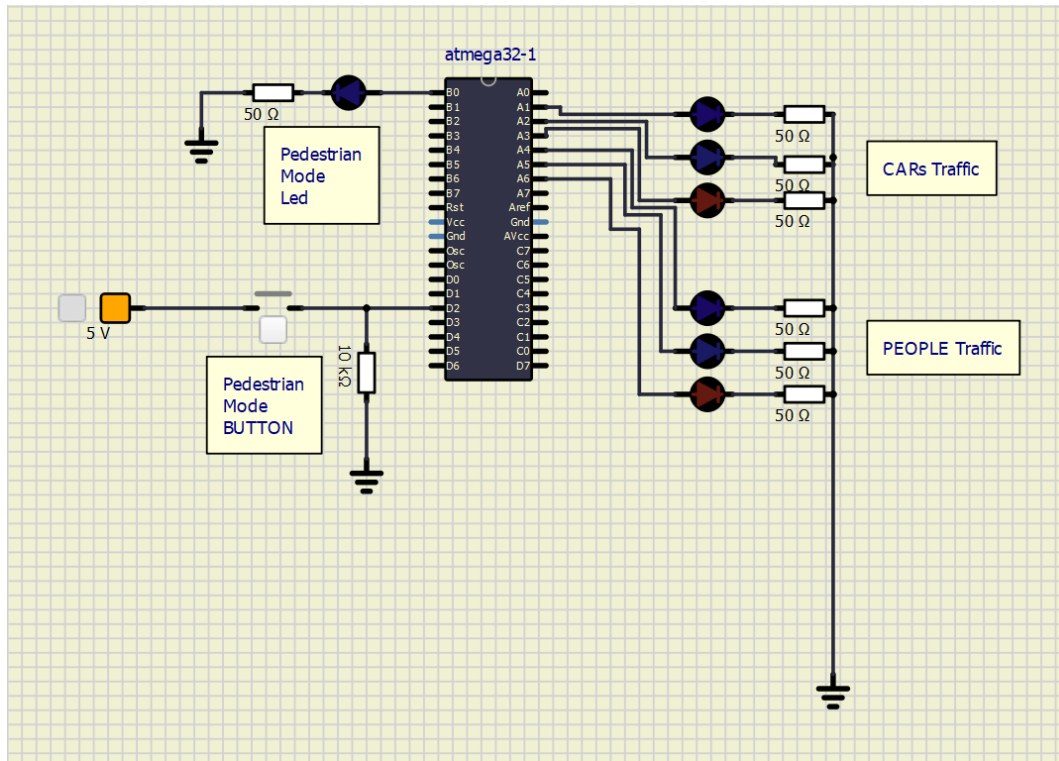
System is considered a simulation of a real traffic light system with pedestrian mode option. Mostly, the system priorities people to cross the road on pushing the button.

Modes:

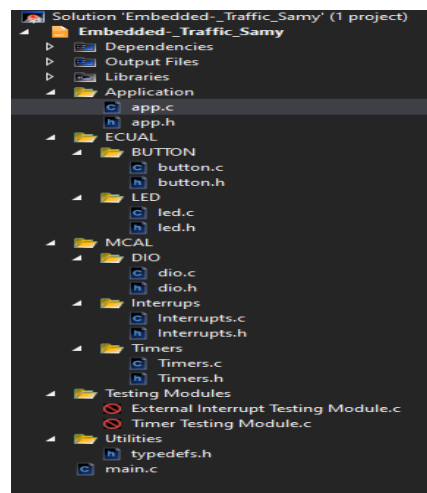
- 1- **Normal mode**: in which lights changes from (red) to yellow blinking then to green and vise-versa for car LEDs. On the other hand, people LEDs operates in the opposite logic of car ones.
- 2- **Pedestrian mode**: in which the system gives priority to people who wants to cross the road by accelerating the traffic light logic forward to let them pass on their green light.

# System design

Hardware:



Software:



# System state machine

I recorded video to describe this table which represent different states of the system.

Video name:

**04 App Start() Function Code Flow Logic 1.m4v**

normal mode		pedestrian interrupt mode
①	CR PG 5s	Do nothing P-mode = 1 P-press = 1
②	CRY PGY 5s	① → ② → Return ③ 5s 5s P-mode = 1 P-press = 1
③	CG PR 5s	④ → ① → ② → Return ③ 5s 5s 5s P-mode = 1 P-press = 1
④	CGY PRY 5s	Do nothing P-mode = 1 P-press = 1