

# Traffic light control

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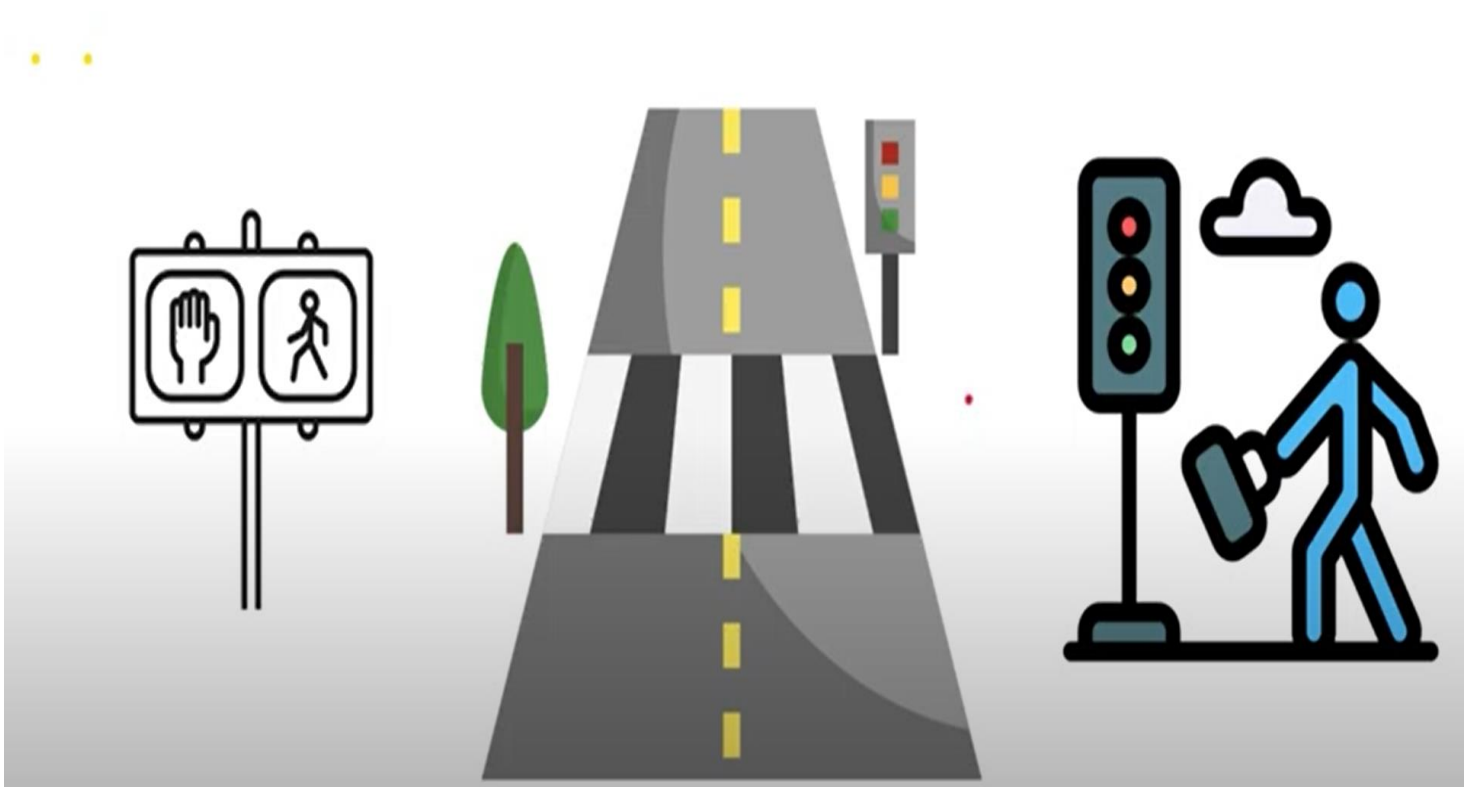


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## System description

Traffic lights are signaling devices positioned at road intersections or at pedestrian crossings to control flow of traffic .

It consists of three lights (red ,yellow ,green).

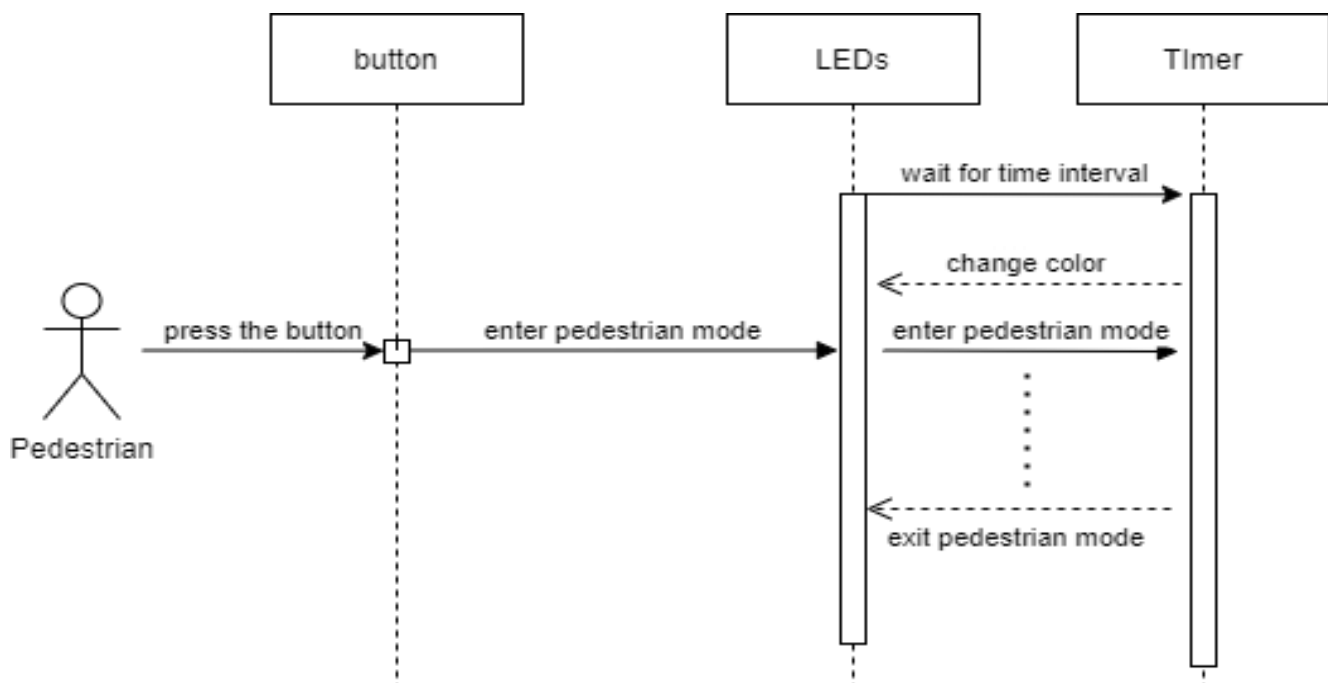
Crosswalk buttons are added so a pedestrian can cross the road .

## System design

System components :

- Traffic light for the cars. (three LEDS :red , yellow, green)
- Traffic light for pedestrian .
- a push button.
- Timer.

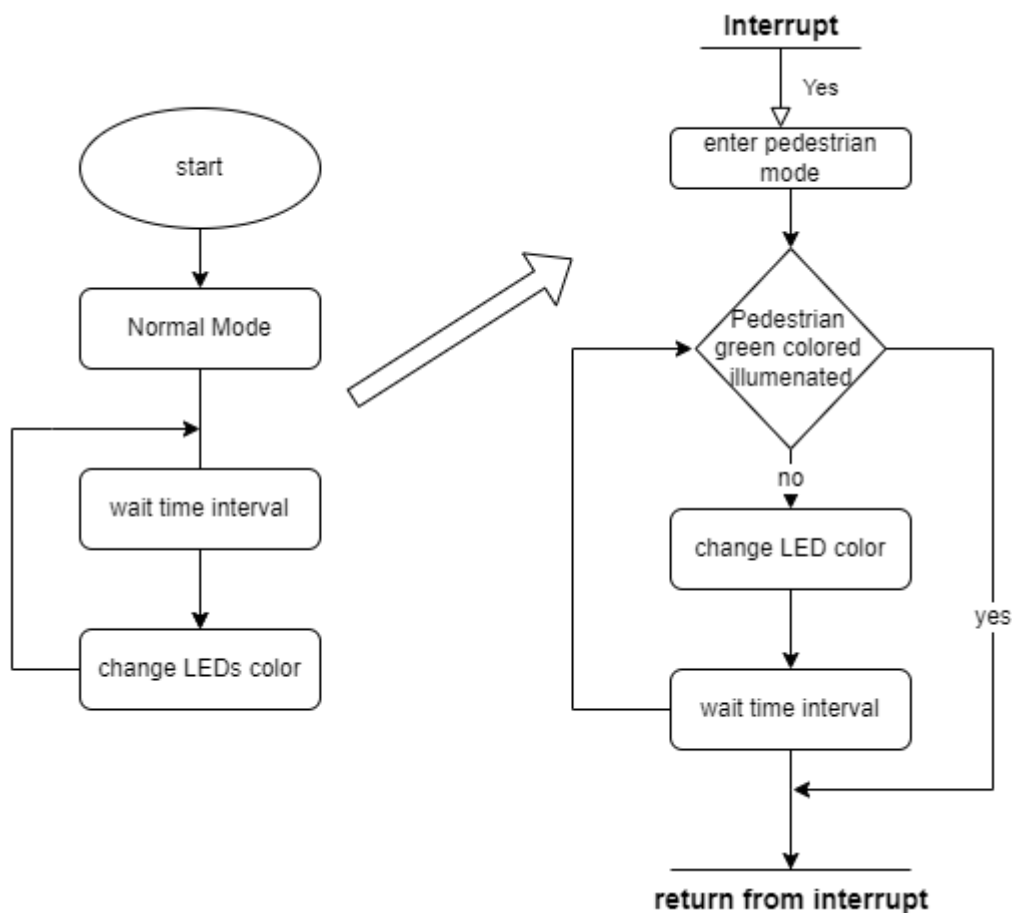
Sequence diagram



## System flow chart

- at beginning the system enters normal mode and illuminates the car green led and the pedestrian red led for 5 seconds then turn pedestrian's red led and car's green led off and blink yellow LEDs for 5 seconds. Then turn pedestrian's green and car's red on.
- If the button is pressed traffic lights enter pedestrian mode.

If the pedestrian's green led is on do nothing and exit pedestrian mode ,if not blink the yellow LEDs for 5 seconds then turn pedestrian's green on and finally exits pedestrian mode



## **System constraints**

- 1- Long press on the button will be ignored
- 2- Double press on the button the second one will be ignored
- 3- After returning from pedestrian mode press will be ignored till car green led is illuminated