system description

This system aims to make an on-demand traffic application which simulates the traffic system with an option for the pedestrian to push a button to allow him to interrupt the normal mode of the system and allow him to pass in the shortest of time.

system design

To build this system the following components are needed:

* AVR microcontroller.
* 6 leds
* Push button.
* 5 volt battery.
* 6 resistors 300 ohms.

And Microchip studio has been used to run the code of the project along with simulIDE to simulate it.

system flow chart or state machine

Diagram

Description automatically generated

system constraints

Only 2 constrains:

* Long press on the button has to be considered as one normal press.
* Multi presses on the button must be considered as only one press which is the first one.