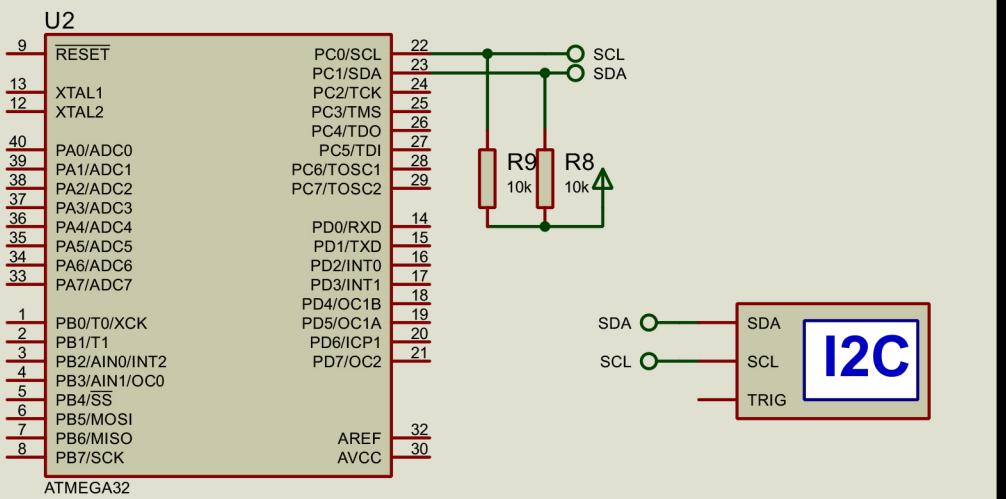
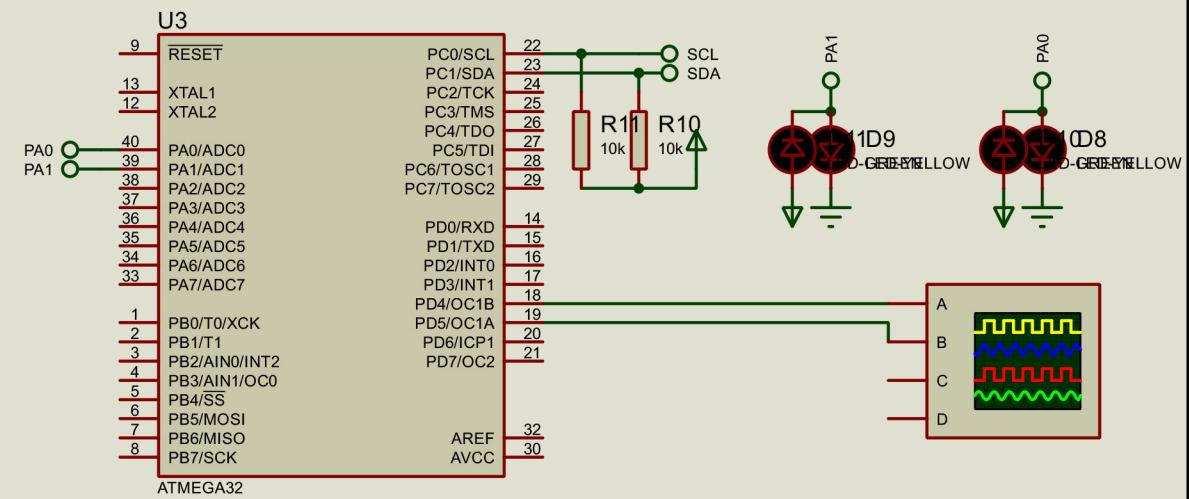


GateWay

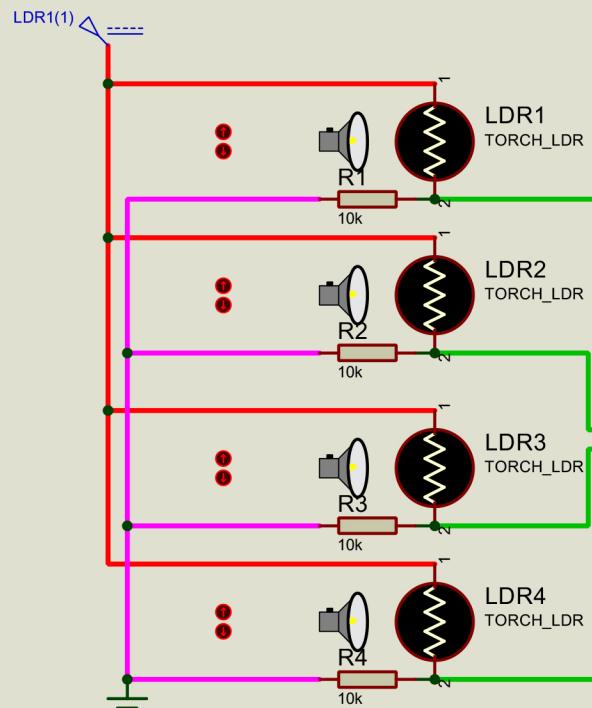


Motion

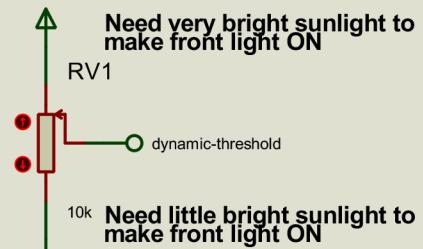


Lighting ECU - DGAS Project

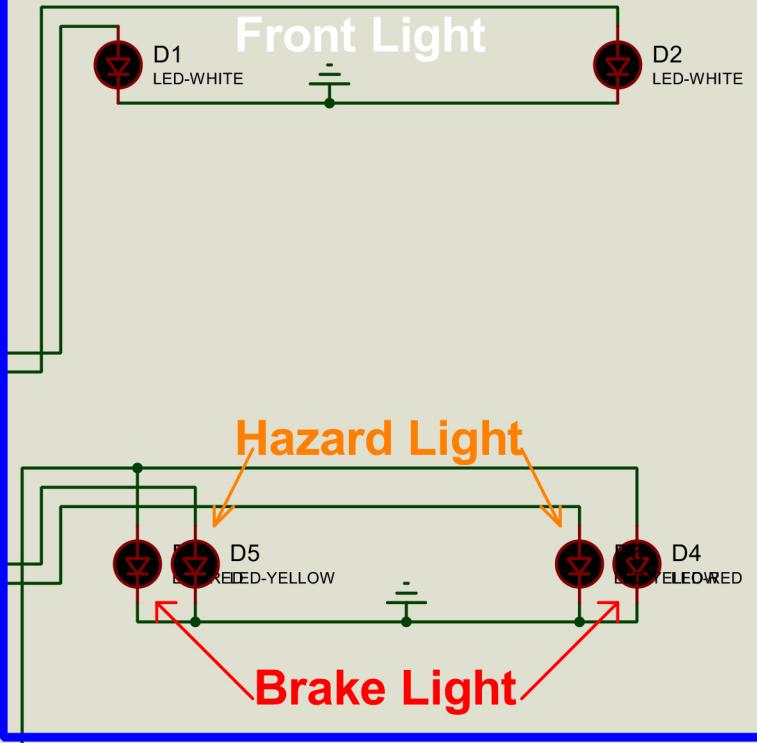
Light Sensors



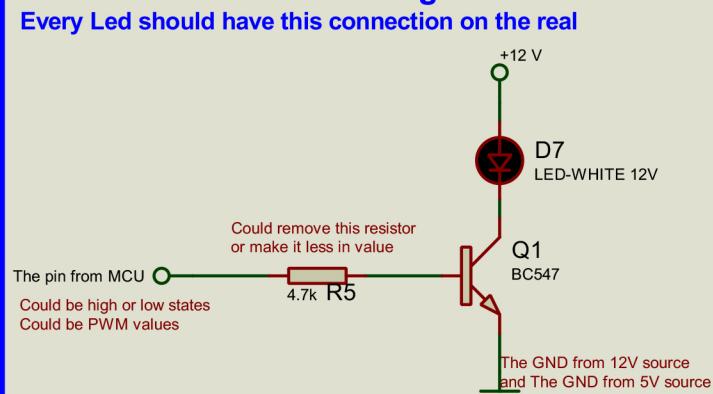
Change Lighting Threshold



Vechile Lighting Area



Control the 12V-LED through the mcu



Programmer to MCU

Programmer	ATmega32A
5V	VCC
GND	GND
10	RESET(Pin 7)
11	MOSI (Pin 6)
12	MISO (Pin 7)
13	SCK (Pin 8)

Note: Add a 10 μ F capacitor between programmer RESET and GND to prevent auto-reset.

Description:

The Lighting ECU in the Drowsy Guard Autopilot System (DGAS) is responsible for managing the vehicle's lighting system, ensuring optimal visibility and safety. It features adaptive lighting controlled by a potentiometer resistor, allowing real-time manual adjustment of brightness and responsiveness. This ECU also integrates automatic headlight control, high-beam assistance, and dynamic lighting adjustments based on driving conditions. By interacting with other system components, it enhances driver awareness and improves road safety, particularly in low-light or hazardous environments.

Credit:

- | | |
|-------------------|------------------|
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| 2- Loay El-Zayat | 5- Ahmed Reda |
| 3- Ayman AboHamed | 6- Amr Ali |