



# DRIVER DROWSINESS SAFETY SYSTEM

Department of Electronics & Computer Science - Third Year (Sem V)

**Problem Statement : Driver drowsiness is a major cause of road accidents. There is a need for a system that can detect when a driver is falling asleep and take action to prevent accidents.**

- **Proposed Solution / Objective**

To design a safety system using Arduino that detects driver drowsiness and initiates alerts and vehicle control actions to prevent accidents.

- **If the driver is sleepy:**

A buzzer alerts the driver.  
If there's no response, a red LED turns on after 5 seconds.  
After another 5 seconds, the vehicle (motor) gradually stops.

- **If the driver is awake:**

A green LED indicates a safe driving condition.

- **Scope & Application**

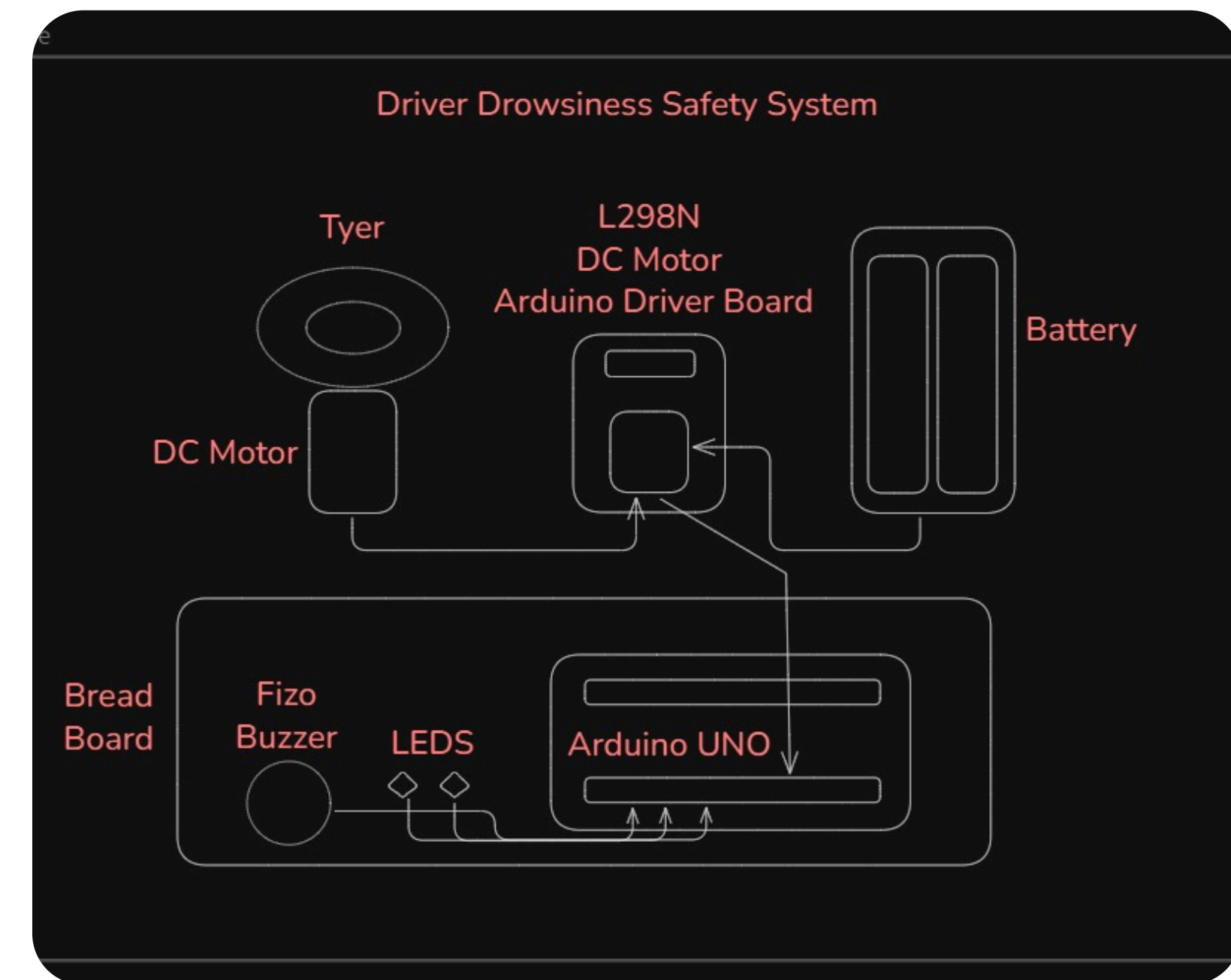
Can be implemented in cars, buses, and trucks to enhance driver safety.  
Useful for long-distance driving, especially during nighttime.  
Can be expanded with sensors like eye blink detection or camera modules for real-world use.

- **Tools / Technologies to be used**

1. Arduino UNO
2. L298N Motor Driver Module
3. DC Motors (tyres)
4. Breadboard
5. LEDs (Red, Green)
6. Fizo Buzzer
7. Battery pack
8. Jumper wires

- **Expected Outcome / Deliverables**

A working prototype that simulates driver drowsiness detection and vehicle control.  
Demonstrates the sequence of alerting and stopping using buzzer, LEDs, and motor.  
Enhances road safety awareness and demonstrates practical application of embedded systems in vehicles.



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