#include <Servo.h>

#define IR\_SENSOR\_PIN 7

#define YELLOW\_LED\_PIN 2

#define RED\_LED\_PIN 3

#define BUZZER\_PIN 4

#define SERVO\_PIN 9

Servo motorServo;

bool eyesClosed = false;

void setup() {

pinMode(IR\_SENSOR\_PIN, INPUT);

pinMode(YELLOW\_LED\_PIN, OUTPUT);

pinMode(RED\_LED\_PIN, OUTPUT);

pinMode(BUZZER\_PIN, OUTPUT);

motorServo.attach(SERVO\_PIN);

}

void loop() {

int irValue = digitalRead(IR\_SENSOR\_PIN);

if (irValue == LOW) {

// Driver is closing eyes

digitalWrite(YELLOW\_LED\_PIN, LOW);

digitalWrite(RED\_LED\_PIN, HIGH);

digitalWrite(BUZZER\_PIN, HIGH);

if (!eyesClosed) {

// Gradually stop the servo motor

for (int i = 180; i >= 0; i -= 10) {

motorServo.write(i);

delay(20);

}

eyesClosed = true;

}

} else {

// Driver has eyes open

digitalWrite(YELLOW\_LED\_PIN, HIGH);

digitalWrite(RED\_LED\_PIN, LOW);

digitalWrite(BUZZER\_PIN, LOW);

if (eyesClosed) {

// Automatically start the servo motor continuously

for (int i = 0; i <= 180; i += 5) {

motorServo.write(i);

delay(20);

}

eyesClosed = false;

}

}

}