

```

#include <LiquidCrystal.h>

int serialData;
int tim = 10; // Adjust the delay duration in seconds
unsigned long startTime = 0; // Variable to store the start time for non-
blocking delay
bool alertDisplayed = false; // Flag to track if the alert is displayed

// Initialize the library with the numbers of the interface pins
LiquidCrystal lcd(7, 8, 9, 10, 11, 12); // Adjust pin numbers as needed

void setup()
{
    Serial.begin(9600);
    lcd.begin(16, 2); // Set up the LCD's number of columns and rows
}

void loop()
{
    if (Serial.available() > 0)
    {
        serialData = Serial.read();

        if (serialData == '1' && !alertDisplayed)
        {
            displayAlert();
        }
    }

    // Update the alert display
    updateAlert();
}

void displayAlert()
{
    lcd.clear(); // Clears the LCD screen
    lcd.setCursor(0, 0); // Set the cursor to column 0, line 0
    lcd.print("Drowsiness Detected!"); // Display a fixed text message
    startTime = millis(); // Record the start time for non-blocking delay
    alertDisplayed = true; // Set the flag to true

    // Additional actions or logic related to the alert display can be added
    here
}

void updateAlert()
{
    if (alertDisplayed && millis() - startTime >= tim * 1000)

```

```
{  
  lcd.clear();           // Clears the LCD screen  
  alertDisplayed = false; // Reset the flag  
}  
}
```