# SMART BUS

Tasfia Tabassum - 180042118
Farzana Tabassum - 180042119
Sabrina Islam - 180042122

# PROBLEM STATEMENT

- Unavailability of seats ; Overcrowding
- Public entering crowded bus due to door being open
- Fanning system being uncontrolled throughout all seasons
- Tardy operations of lighting system
- Vehicles getting too close to each other creating possibilities of accident
- Bus drivers being inebriated to drive safely

# PROJECT PROPOSAL

We will be implementing a SMART BUS system.

The smart public bus that has -

- Unoccupied Seat Count
- Smart door
- Automated Cooling System
- Collision Avoidance System
- Alcohol detection
- Smart Lighting System
- Facial Recognition System (optional)

# SOCIAL IMPACT

- Have peace of mind while travelling.
- Won't have to worry about seat availability or bus being crowded.
- Reduce the risk of getting sick due to too much heat.
- Reduce security concerns at night.
- Decrease the rate of accidents.
- Accountability of any incident

# FEATURES

## 1. Unoccupied Seat Count

Total number of unoccupied seats will be visible in front of the door

## 2. Smart door

The door will automatically open when sensing a presence of a passenger. The door will not open if the bus is full.

## 3. Automated Cooling System

Turn on the fan based on the temperature

## 4. Collision Avoidance System

Detection of a collision with other vehicles or any other objects in order to notify the driver beforehand

# FEATURES CONT.

## 6. Smart Lighting System

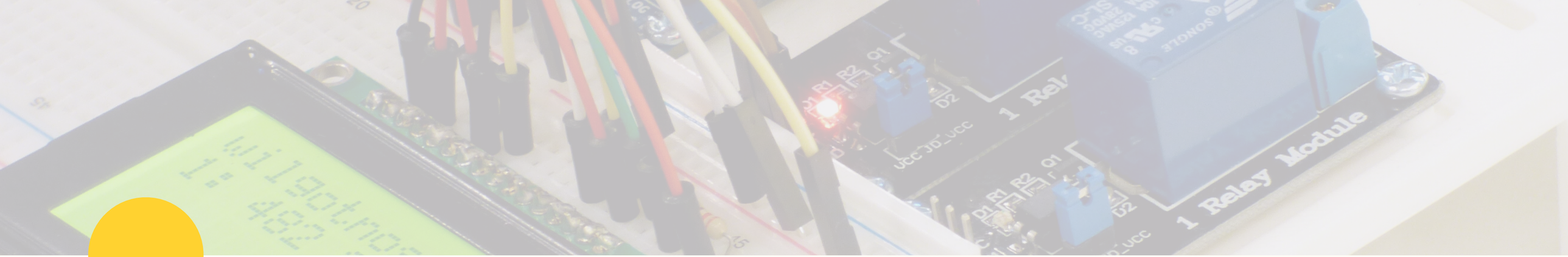
Automatic turning on light based on day-night indicator

## 5. Alcohol Detection

A system that stops the motor in case of excess amount of alcohol is detected.

## 7. Facial Recognition System (optional)

A system that starts the motor only after recognizing the designated driver




# COMPONENTS AND SENSORS

01 GAS SENSOR

02 ARDUINO UNO

03 LCD 16 X 2 I2C

04 MICRO SERVO

05 PUSHBUTTON

06 RESISTOR

07 LED

08 DC MOTOR

09 PIEZO

10 ULTRASONIC DISTANCE SENSOR

11 PIR SENSOR