ENGINEERING CLINICS:ECS-1001

ALCOHOL DETECTOR WITH ENGINE LOCKING SYSTEM

Team Members

Abhijit Bose Das-20BCE7142
Madhyam Patra-20BCE7067
Binit Nayak-20BCE7420
Sneha Dabbiru-20BCI7172
Sriya Setty Nukala-20BCI7020
Shubham Kumar-20BES7047

Problem Statement..

We have seen much news of accidents caused due to drunk and drive. We have designed a GPS tracker and alcohol detector project to solve the said problem. The project is actuated by switching on the vehicle with the help of the ignition key. This would actuate the working circuit and make the entire unit in a vigilant mode. Alcohol detection is performed in real-time by the alcohol sensor, the microcontroller, and the Analog to digital converter circuit. Thus there is never a situation when the system is in a shadow or a sleep state.

Required Components-

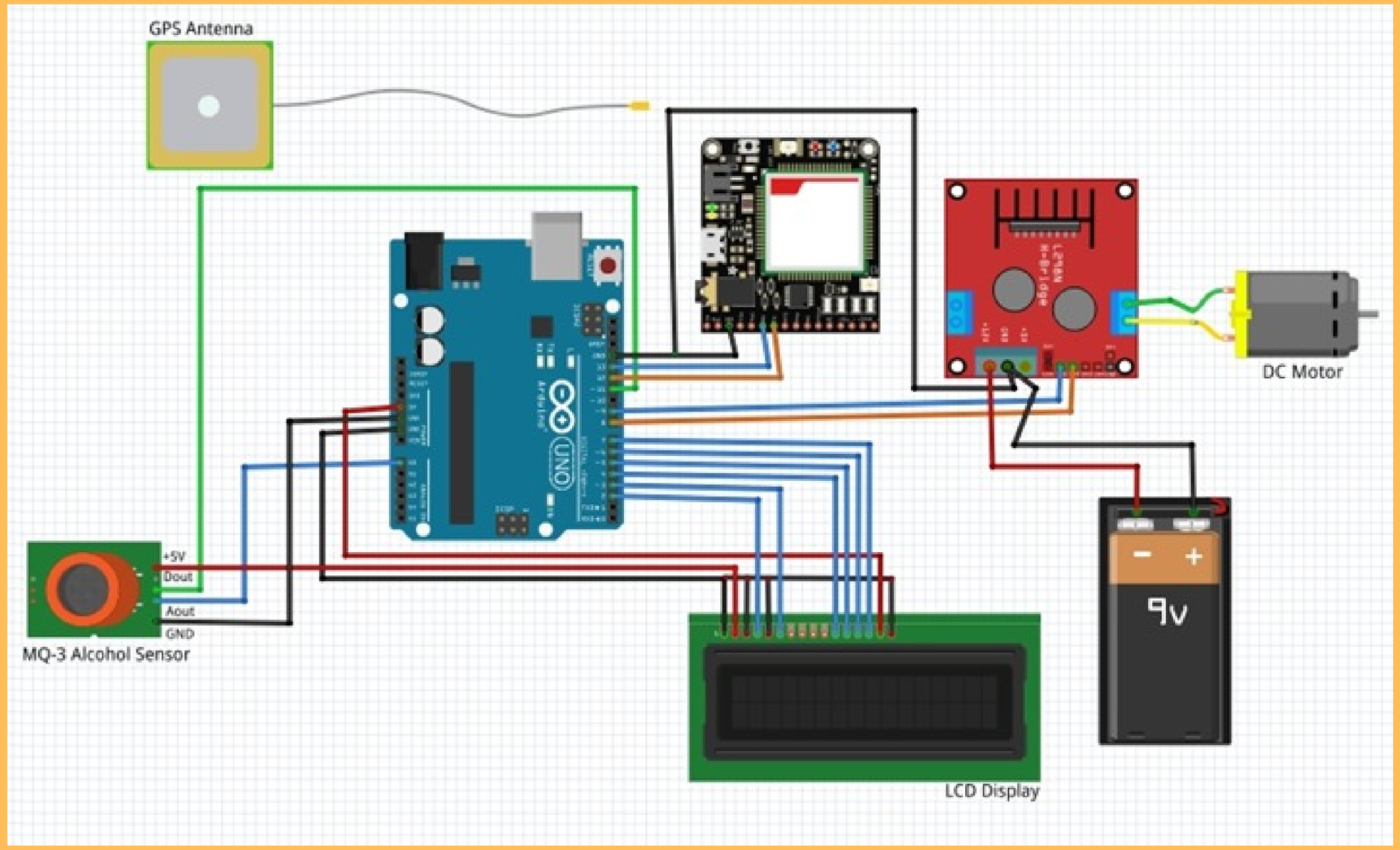
- Arduino Uno
- Alcohol Sensor
- GSM/GPS Module
- DC Motor
- Motor Driver IC
- Plastic Fan
- LCD
- Vtg Regulator IC
- Resistors
- Capacitors

- Cables and Connectors
- Diodes
- PCB
- LED
- Transformer/Adapter
- Push Buttons
- Switch
- IC
- IC Sockets

Approximate Budget

Approximate budget calculated till now: Rs. 2500

≡ Circuit Diagram



Description of the Project

In the GPS-based drunk and drive detection project, the system generates an alarm once the level of alcohol is measured above a set threshold value. At the same time engine, locking is done with the help of deactivating the Relay and DC motor. Also, it reads data from the GPS unit which gives the position of the vehicle to the microcontroller. Then the microcontroller sends SMS to the handheld mobile phone with the help of a GSM modem. The user can click on the link in the received SMS. The integration of the GPS tracker with Google Maps would ensure that the position of the offender is given out on the maps readily to ensure the easy location and possible further action.

ADVANTAGES

- Handy and portable
- Easy and efficient to use
- Quick and accurate
- Low price

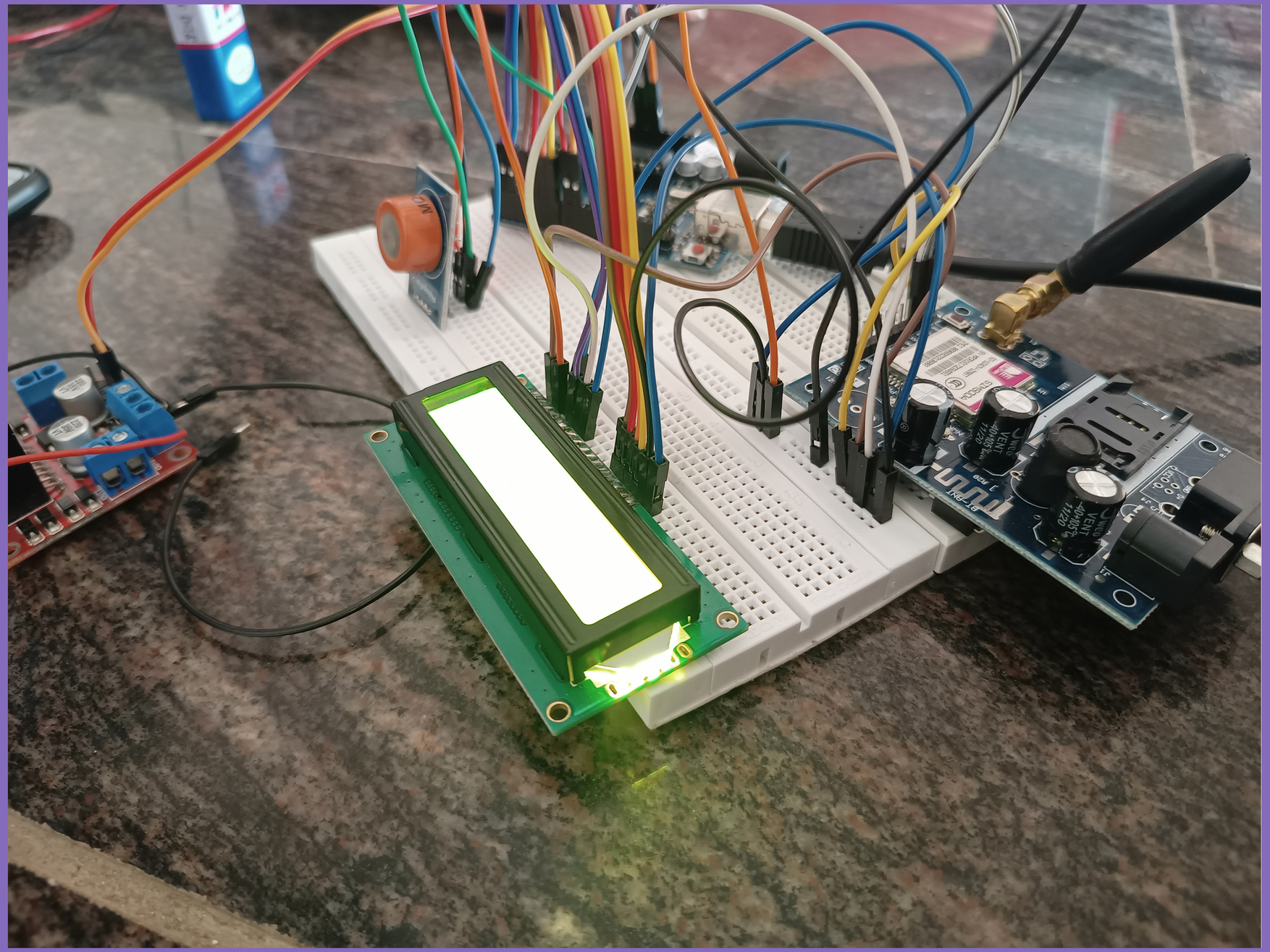
Plan Of Action

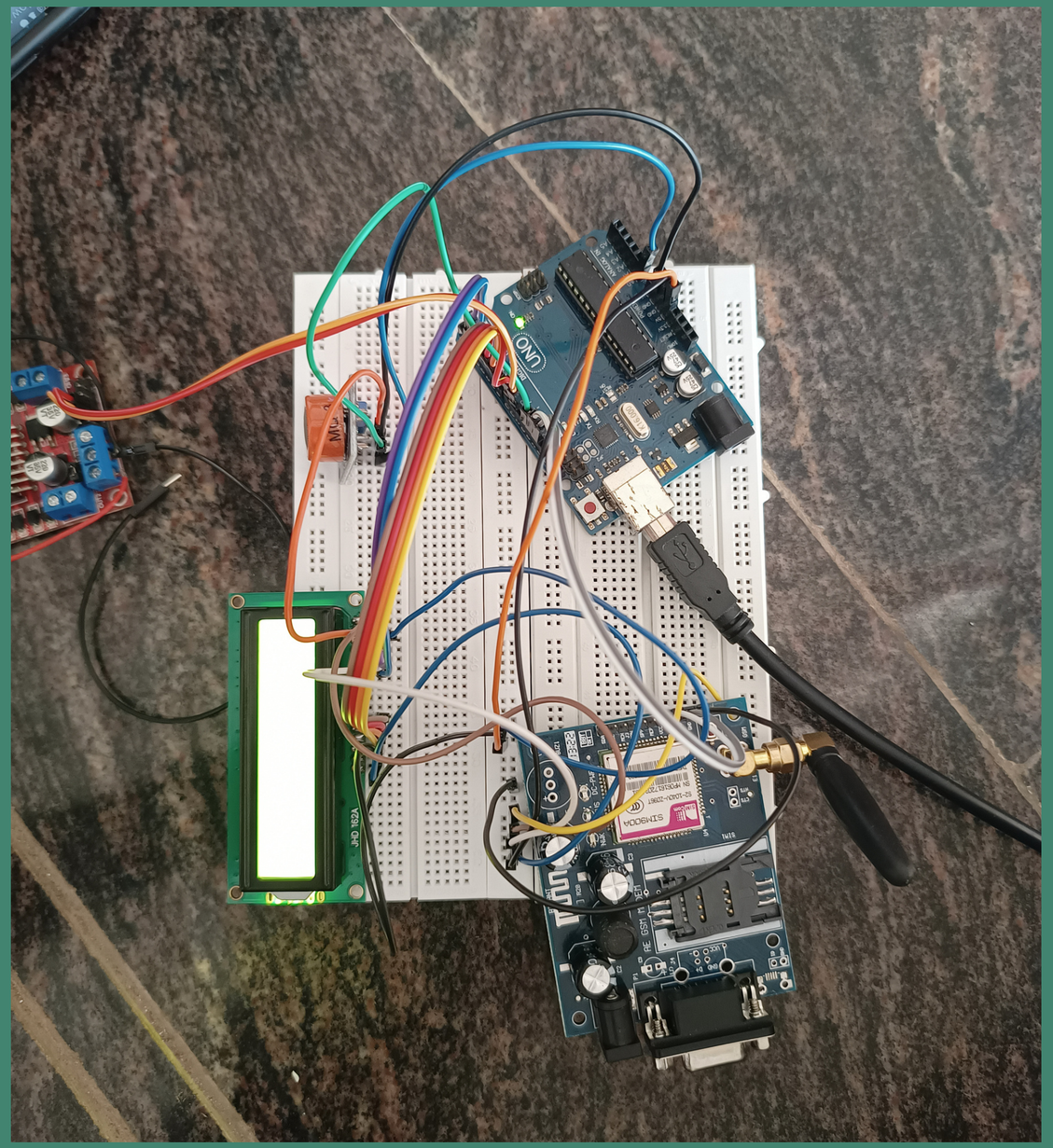
- Gathering components required for the project
- Circuit design
- Working on embedded C code for the software part
- Assembling all the components

Timeline of Progress

We developed a number of solutions in accordance with the problem statement, after which we began assembling all the project's necessary components. Then we got on to finalise the circuit design.

WORK PROGRESS-






Alert!Alcohol De
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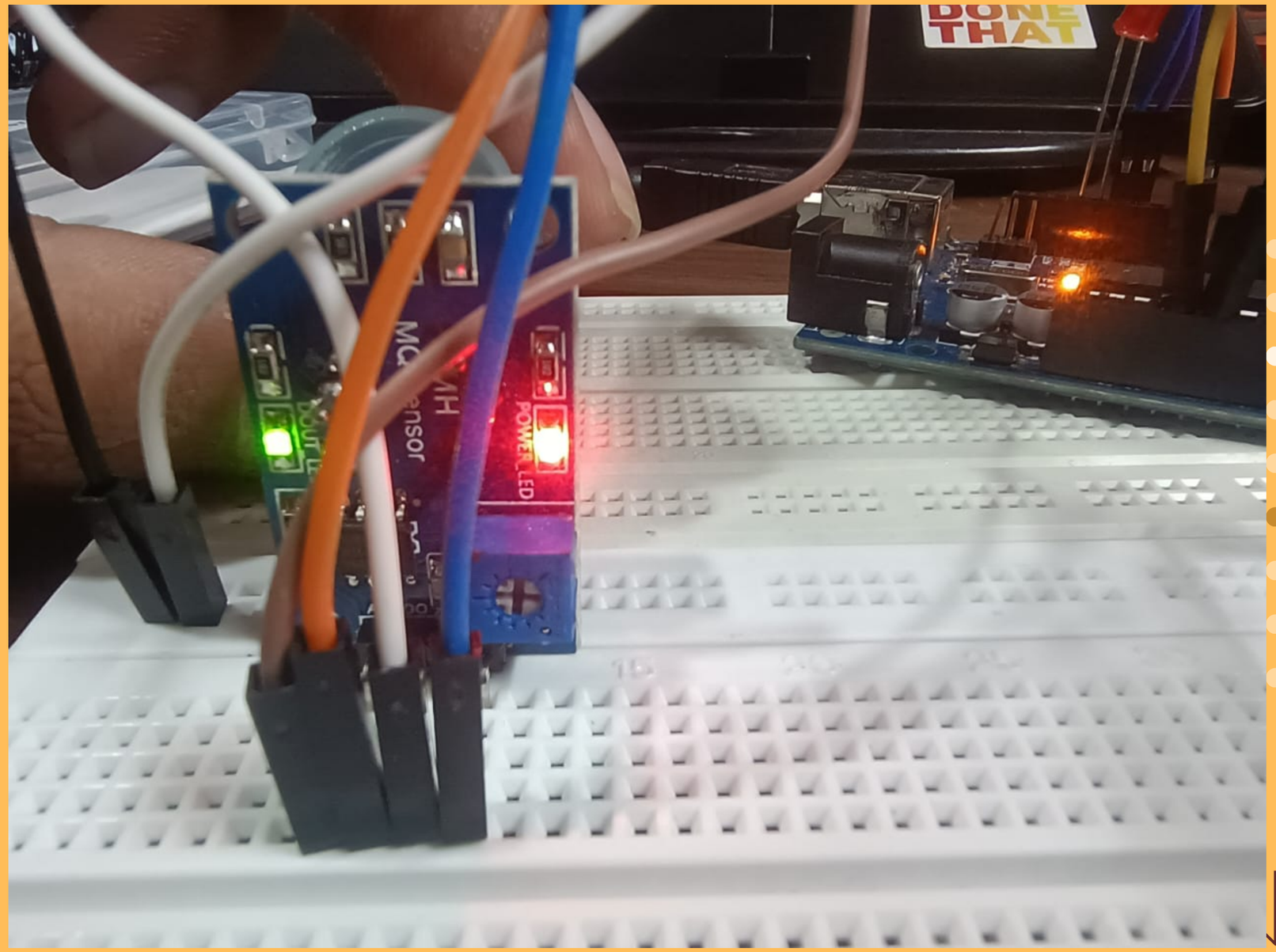
detecting Alcohol-



THANK YOU!