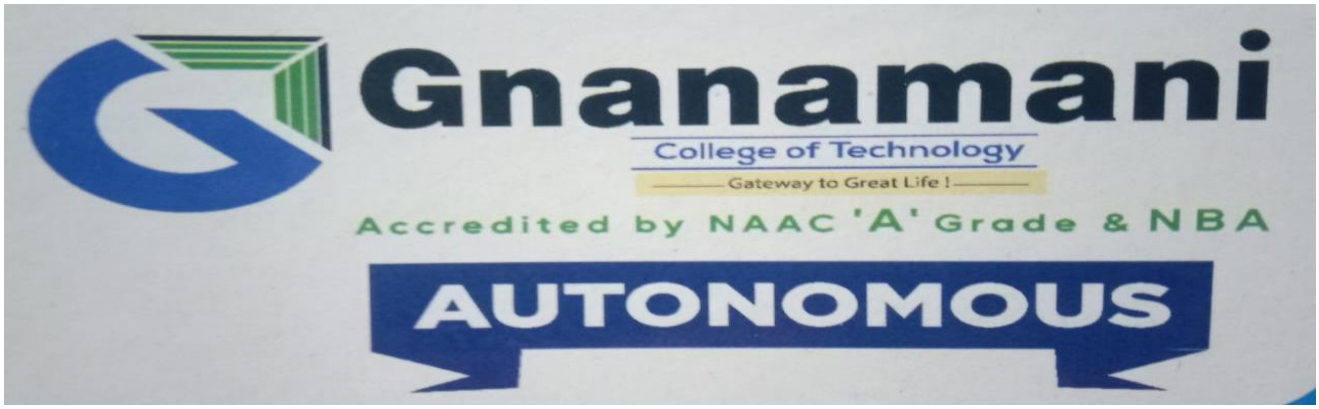


DEPARTMENT : BIO MEDICAL ENGINEERING

YEAR : THIRD YEAR

TOPIC : FLOOD MONITORING AND ALERTING SYSTEM

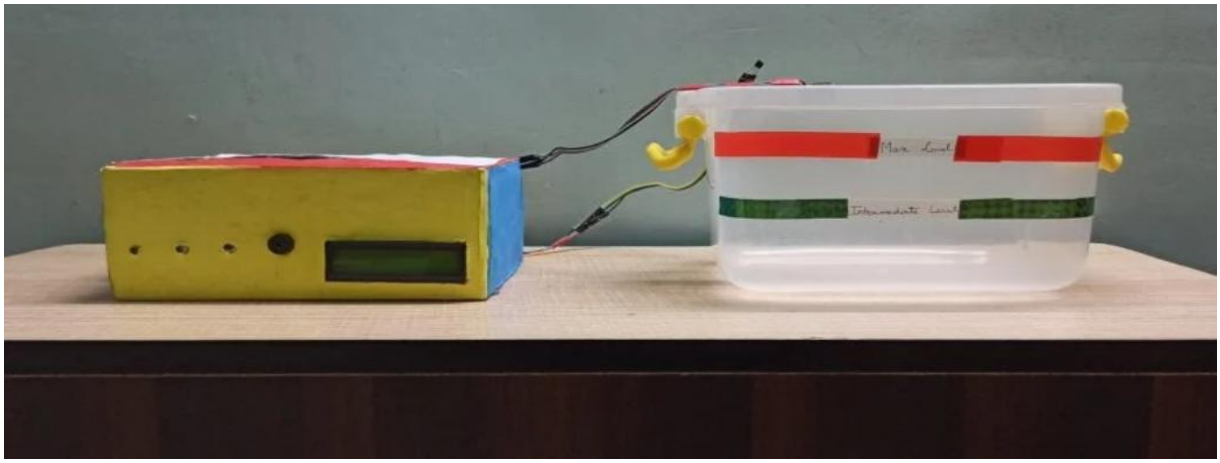
Team members :

1. **SANDHIYA.N**
2. **MONISHA.V**
3. **VISHNU PRIYA.S**
4. **RAMYAKRISHNAN.T**
5. **VANATHI.S**

by:

Monisha.v

Flood Monitoring And Alerting System



As we all know that Flood is one of the major well know Natural Disasters. When water level suddenly rises in dams, river beds etc.Alot of Destruction happens at surrounding places.It causes a huge amount of loss to our environment and living beings as well.So in these case ,it is very important to get emergency alerts of the water level situation in different conditions in the river bed.

The purpose of this project is to sense the water level in river beds and check if they are in normal condition. If they reach beyond the limit, then it alerts people through LED signals and buzzer sound. Also it alerts people through Sms and Emails alerts when the water level reaches beyond the limit.

Things used in this project-

Hardware component-

1. Bolt-IoT wifi module
2. Arduino uno
3. Breadboard-400 tie points
4. 5mm LED:(Green, Red,Orange) and Buzzer
5. 16×2 LCD Display
6. LM35 Temperature Sensor
7. HC-SR04 Ultrasonic Sensor
8. Some Jumper Wires

- Male to Female jumper Wires-15 pcs
- Male to Male Jumper Wires-10 pcs
- Female to Female Jumper Wires-5 pcs

9. 9v Battery and Snap Connector

10. USB Cable Type B

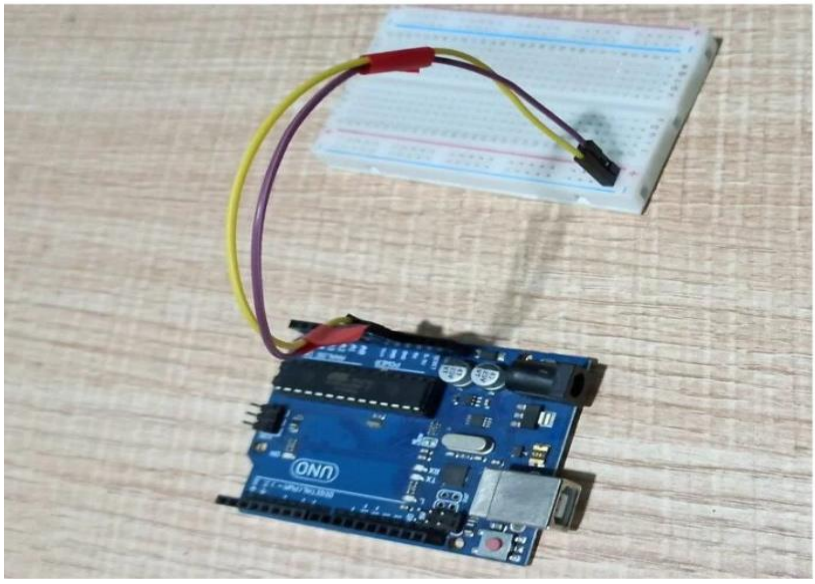
Hand tools and fabrication machines

1.Electrical Tape

2.Green Cello Taps

STEP:1 Connecting 5v and GND of Arduino to the Breadboard for Power connection to other components

STEP:2



- Connecting LED's

For Green LED

- VCC of Green Colour LED to Digital Pin '10' of the Arduino.
- GND of Green Colour LED to the GND of Arduino.

For Orange LED

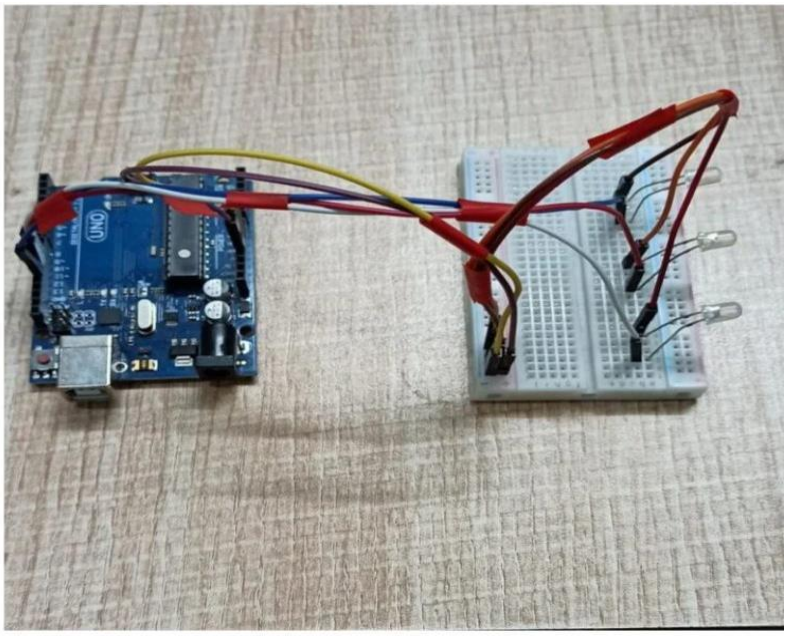
- VCC of Orange Colour LED to Digital Pin '11' of the Arduino.
- GND of Orange colour LED to GND of Arduino.

For Red LED

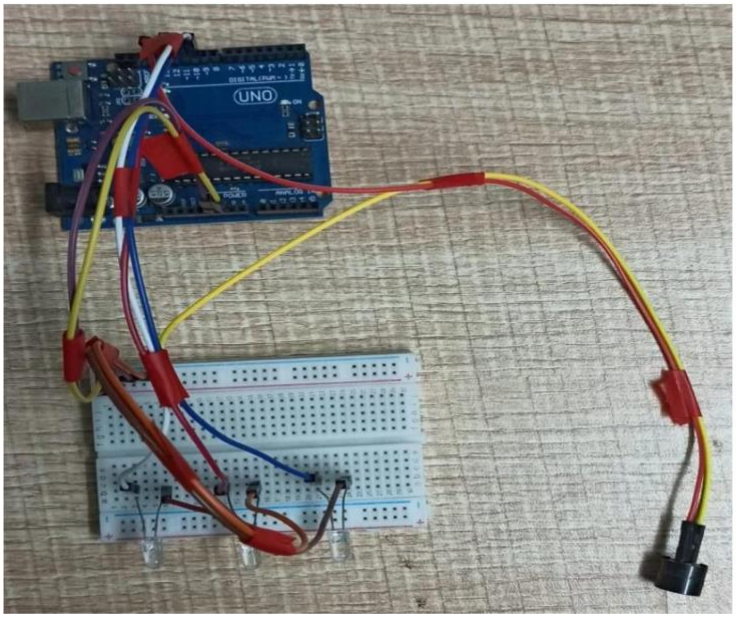
- VCC of Red colour LED to Digital Pin ‘12’ of the Arduino.
- GND of Red Colour LED to the GND of Arduino.

STEP:3

Connecting Buzzer

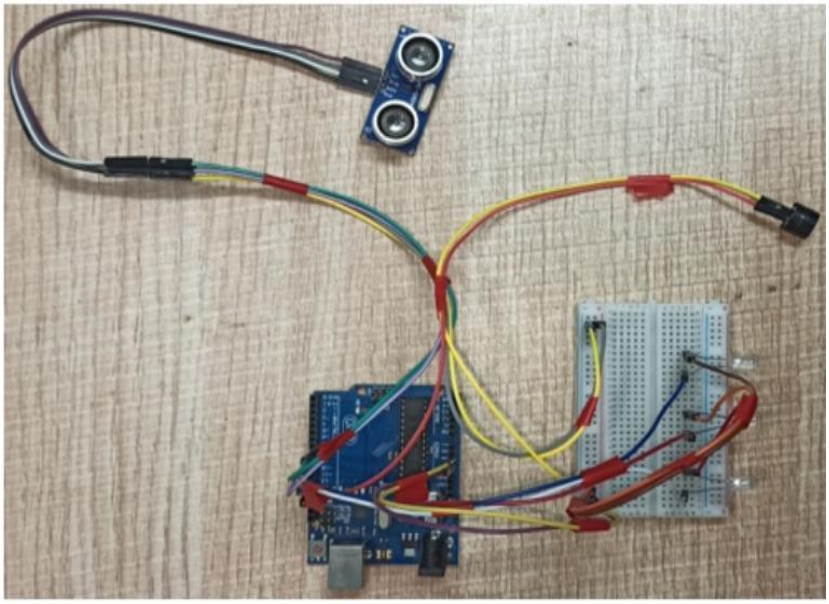


- VCC of Buzzer to Digital Pin ‘13’ of the Arduino.
- GND of Buzzer to the GND of Arduino



. Connecting HC-SR04 Ultrasonic Sensor

- VCC of Ultrasonic Sensor to 5v of Arduino.
- GND of Ultrasonic Sensor to GND of Arduino.
- Echo of Ultrasonic Sensor to Digital Pin ‘8’ of Arduino.
- Trig of Ultrasonic Sensor to Digital Pin ‘9’ of Arduino.



STEP:5

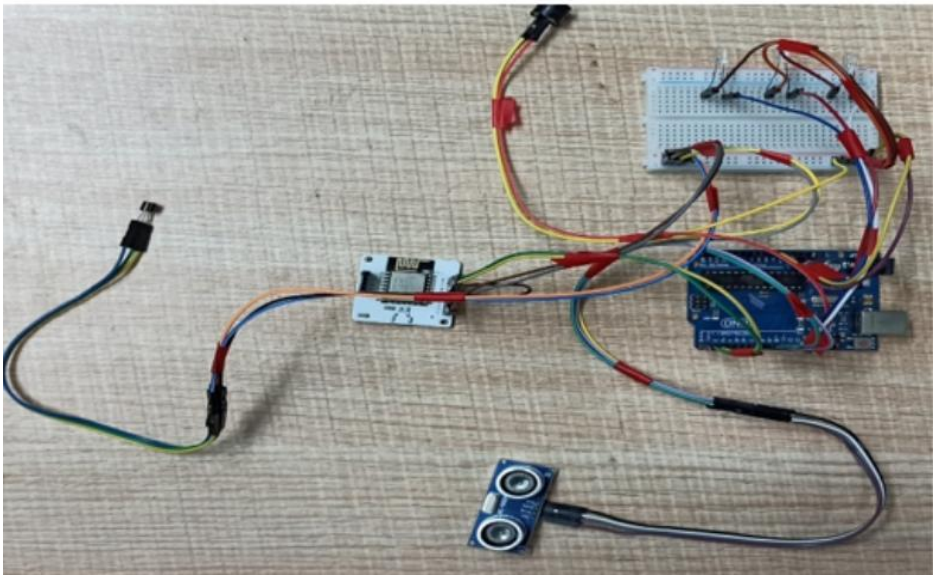
Connecting Bolt WiFi Module

- 5v of Bolt WiFi Module to 5v of Arduino.
- GND of Bolt WiFi Module to GND Arduino.
- TX of Bolt WiFi Module to RX of Arduino.
- RX of Bolt WiFi Module to TX of Arduino

STEP:6

Connecting LM35 Temperature Sensor

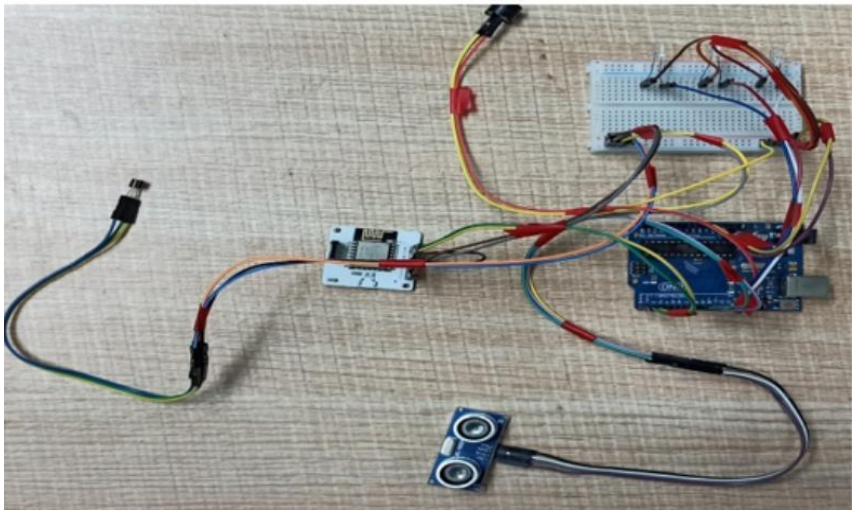
- VCC of LM35 to 5v of Bolt WiFi Module.
- Output Pin of LM35 to Pin ‘A0’ of Bolt WiFi Module.
- GND of LM35 to GND of Bolt WiFi Module.



STEP:7

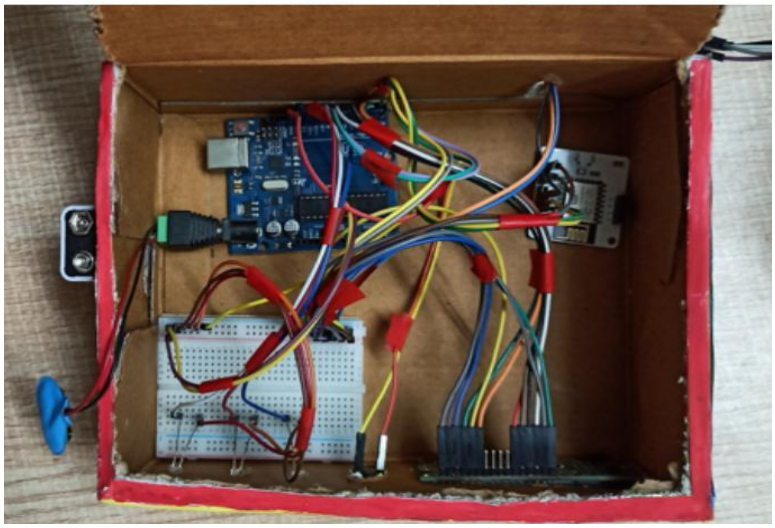
Connecting 16×2 LCD Display

- Pin 1,3,5,16 of 16×2LCD to GND of Arduino.
- Pin 2,15 of 16×2LCD to 5v of Arduino.
- Pin 4 of 16×2 LCD to Digital Pin ‘2’ of Arduino.
- Pin 6 of 16×2 LCD to Digital Pin ‘3’ of Arduino.
- Pin 11 of 16×2 LCD to Digital Pin ‘4’ of Arduino.
- Pin 12 of 16×2 LCD to Digital Pin ‘5’ of Arduino.
- Pin 13 of 16×2 LCD to Digital Pin ‘6’ of Arduino.
- Pin 14 of 16×2 LCD to Digital Pin ‘7’ of Arduino.

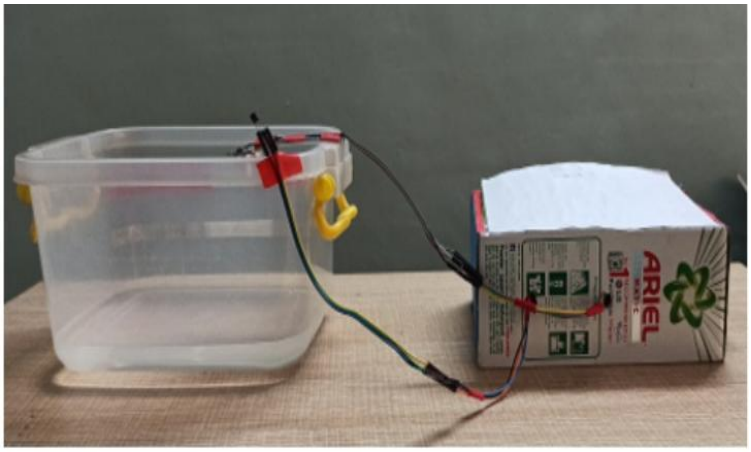
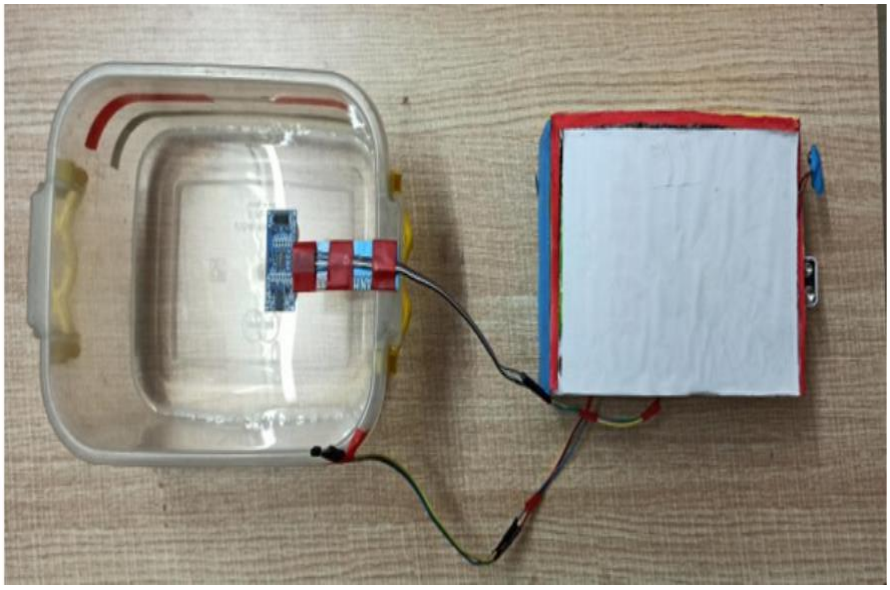


After doing the hardware connection put all the hardware components in one box .

Also attach LM35 Temperature Sensor on the side of the container.



Also attach Ultrasonic Sensor on the top of the container.



Also attach Ultrasonic Sensor on the top the container.