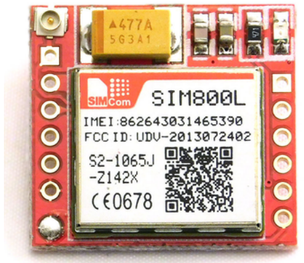
FLOOD MONITORING AND EARLY WARNING

PHASE 2

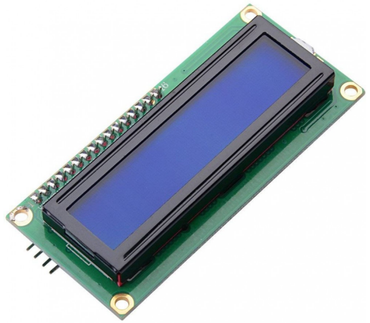
MICROCONTROLLER

We’ve choosed ESP8622 microcontroller beacuse, In a flood monitoring and early warning system, the ESP8266 microcontroller is used to collect data from water level and environmental sensors. It communicates over Wi-Fi, analyzes the data, and triggers alerts if water levels rise dangerously. This system can send alerts to authorities and residents, and it includes a user interface for real-time monitoring.

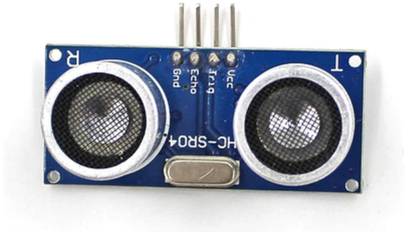
SENSORS AND OTHER COMPONENTS



GSM module (SIM800l)



LCD display



Ultrasonic sensor

Float Sensor

1.GSM module (SIM800l)

GSM SIM800L is a popular module that enables communication over GSM (Global System for Mobile Communications) networks. It Sends a text message and calls to the particular Mobile Number. and is necessary to put a valid sim card in the gsm module.

2.LCD Display

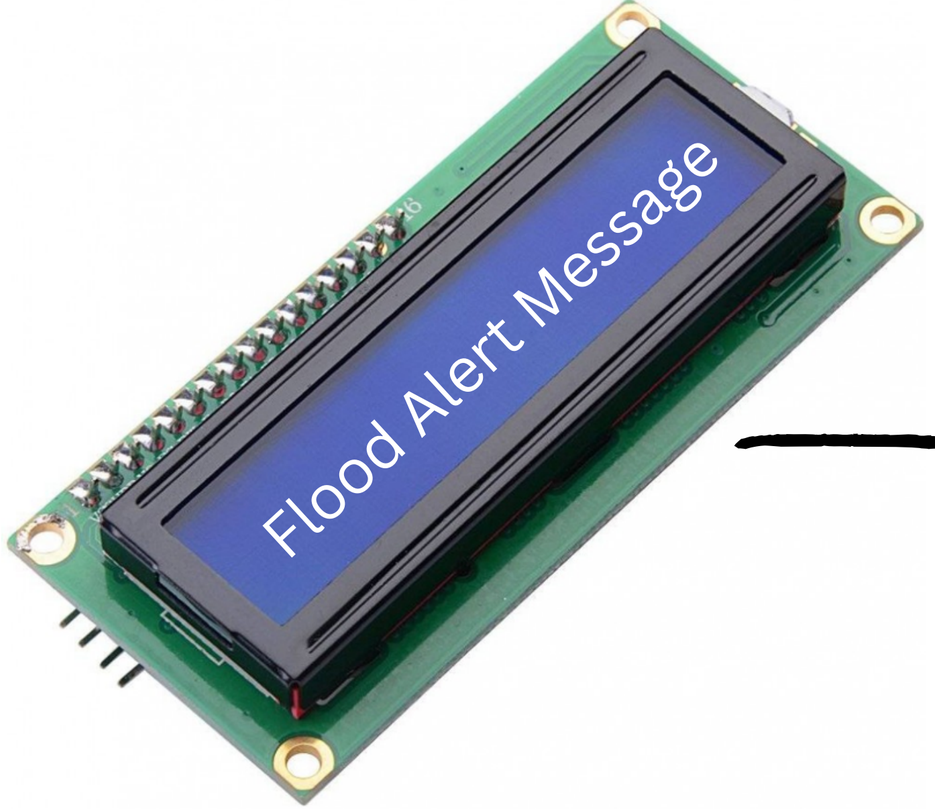
This is a basic 16-character by 2 lines Alphanumeric display. Black text on Green background. Utilises the extremely common HD44780 parallel interface chipset. Interface code is freely available.

3.Ultrasonic Sensor

Ultrasonic sensors find out the distance of the water level of the dam. And the Sensor mount on the top of the dam.

4.Float Sensor

Float sensors to detect Water levels. They consist of a float, on the water and when the water level increases the float mechanism goes to the Top and is given the alert information.



ALERTING AND COMMUNICATION

In a flood monitoring and early warning system, the alerting and communication system plays a crucial role in issuing timely warnings to authorities and residents. It uses various channels, including local alarms, SMS, email, mobile apps, social media, and more, to notify people about flood risks. Redundancy and automated response mechanisms enhance the system's reliability, while public education ensures that people know how to respond to alerts.

THANK YOU!