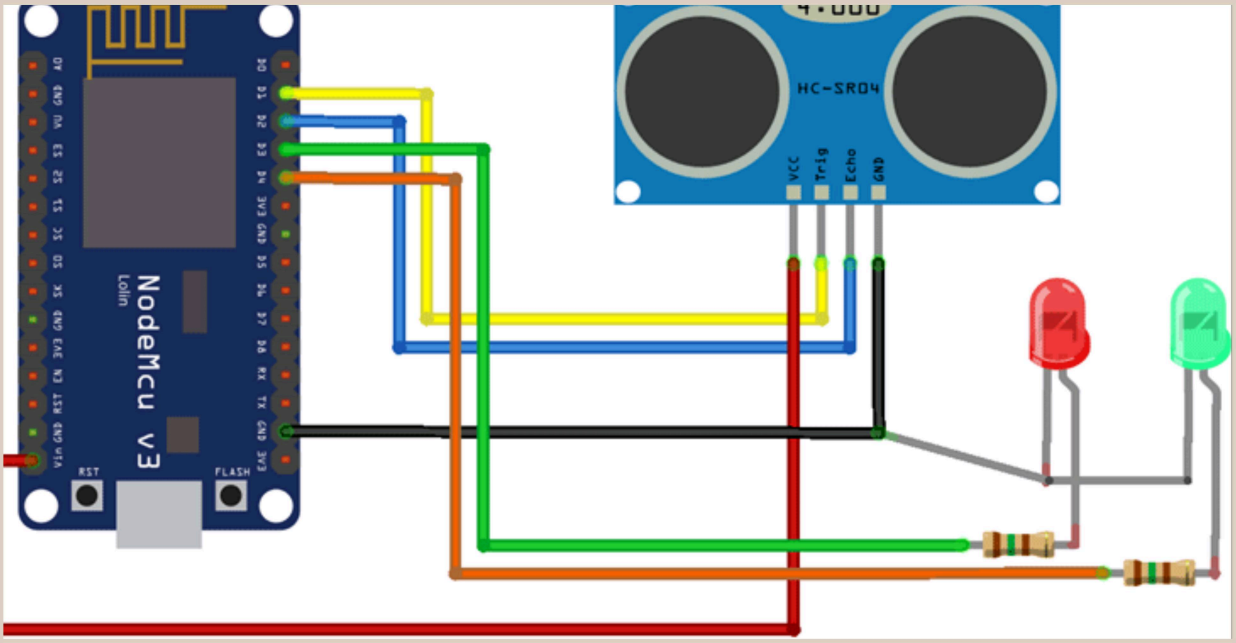
FLOOD MONITORING SYSTEM

Abstract:-

➡ Floods pose significant threats to human lives and property, necessitating the development of advanced monitoring systems for early detection and effective disaster management.
➡ Internet of Things (IoT) based flood monitoring system designed to provide real-time data collection, analysis, and alert mechanisms to mitigate the impact of floods.
➡ The proposed system employs a network of IoT sensors, such as water level sensors, weather stations, and cameras, to continuously gather data related to water levels, weather conditions, and flood-prone areas. This data is transmitted to a central server for analysis using advanced algorithms.

Block diagram:-



Components required:-

- ESP8266 NodeMCU
- Ultrasonic Sensor
- Power supply
- LEDs (Red & Green)
- Breadboard
- Jumpers

Python script:-

```
import random
import time
from twilio.rest import Client

THRESHOLD = 50
TWILIO_SID = 'your_twilio_sid'
TWILIO_AUTH_TOKEN = 'your_twilio_auth_token'
PHONE_NUMBER = '+1234567890'
TWILIO_PHONE_NUMBER = '+0987654321'


def simulate_sensor_data():
    return random.randint(0, 100)


    client = Client(TWILIO_SID, TWILIO_AUTH_TOKEN)
    client.messages.create(to=PHONE_NUMBER, from_=TWILIO_PHONE_NUMBER,
body=message)


while True:
    sensor_data = simulate_sensor_data()

    if sensor_data > THRESHOLD:
        message = f"Flood Alert! Water level is {sensor_data} above the threshold."
        send_flood_alert(message)


    time.sleep(600)
```

Modules used in python script:-

Time

Random

Twilio. Rest. Client.


THANK YOU