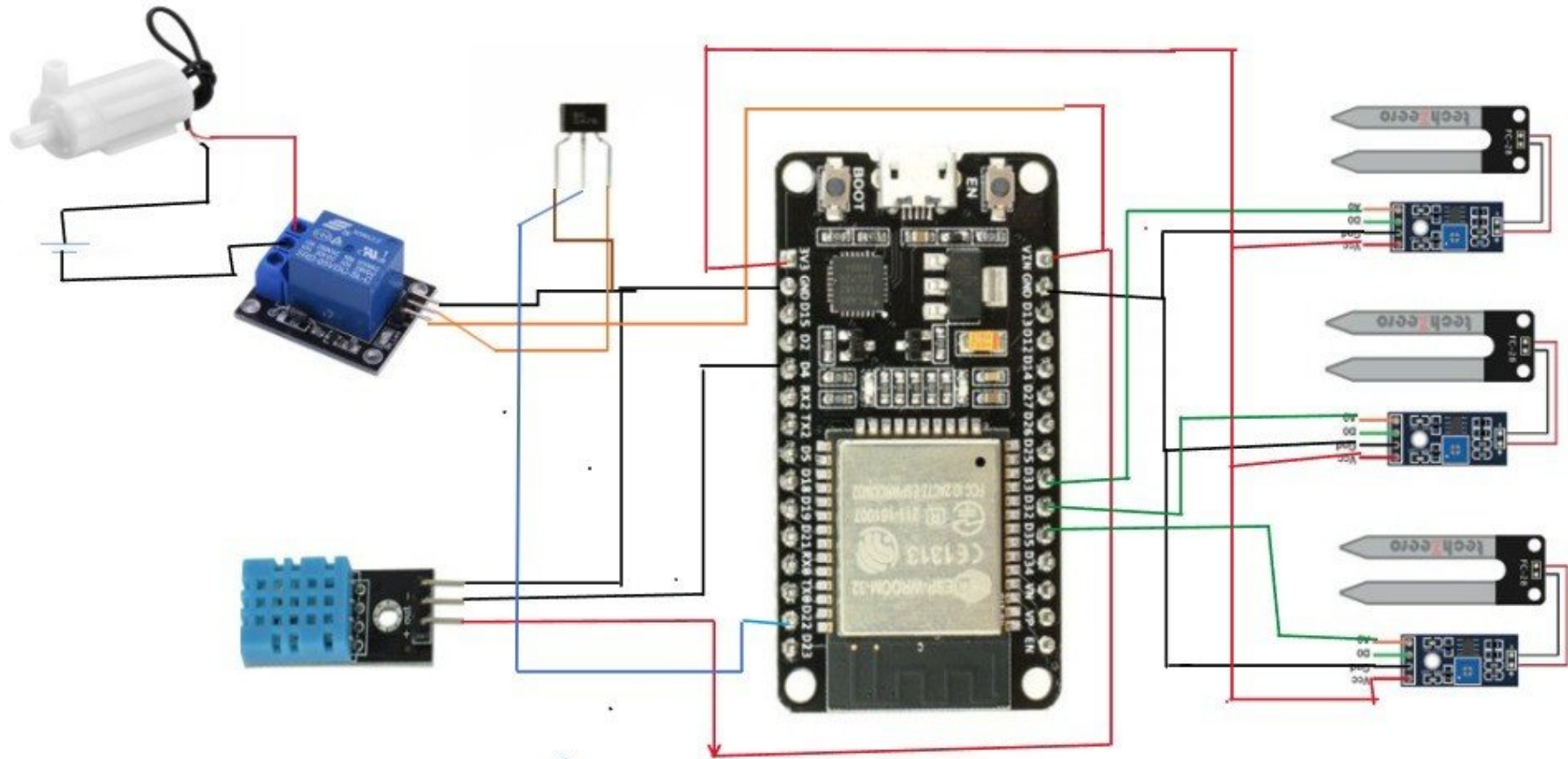
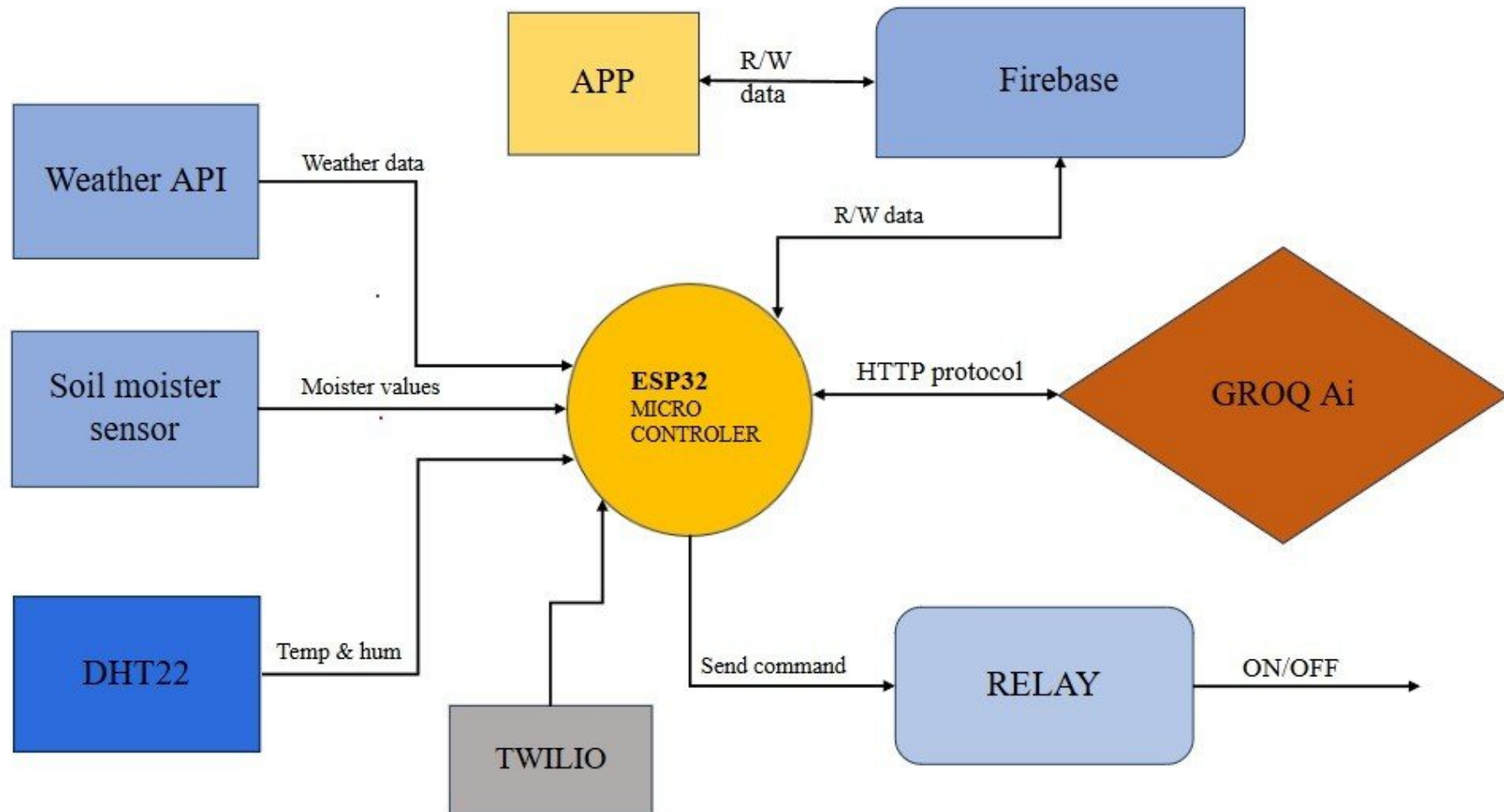


System Architecture Overview



Decision Flow Diagram





57575711



Unread

Sent from your Twilio trial account - Hi

Sent from your Twilio trial account -
Water Not Required

Sent from your Twilio trial account -
Water Not Required

Sent from your Twilio trial account -
Weather Analysis Decision: Water Not
Required
Available Moisture: 500.5
Required Moisture: 450.0

Sent from your Twilio trial account -
Weather Analysis Decision: Water Not
Required
Available Moisture: 500.5
Required Moisture: 450.0
Temp: 29.32°C, Humidity: 50%,
Weather: broken clouds

9:21 AM • JIO 4G



Text mess...





57575711



Required

Sent from your Twilio trial account -
Sent from your Twilio trial account -
Decision: Water Not Required
Temperature: 31.84°C
Humidity: 21%
Available Moisture: 500.50
Required Moisture: 450.00

Sent from your Twilio trial account -
Sent from your Twilio trial account -
Decision: Water Not Required
Temperature: 31.84°C
Humidity: 21%
Available Moisture: 500.50
Required Moisture: 450.00

Sent from your Twilio trial account -
Sent from your Twilio trial account -
Decision: Water Required
Temperature: 31.84°C
Humidity: 21%
Available Moisture: 50.50
Required Moisture: 450.00

11:34 AM • JIO 4G



Text mess...



https://esp32-rtdb-30f4a-default-rtdb.firebaseio.com



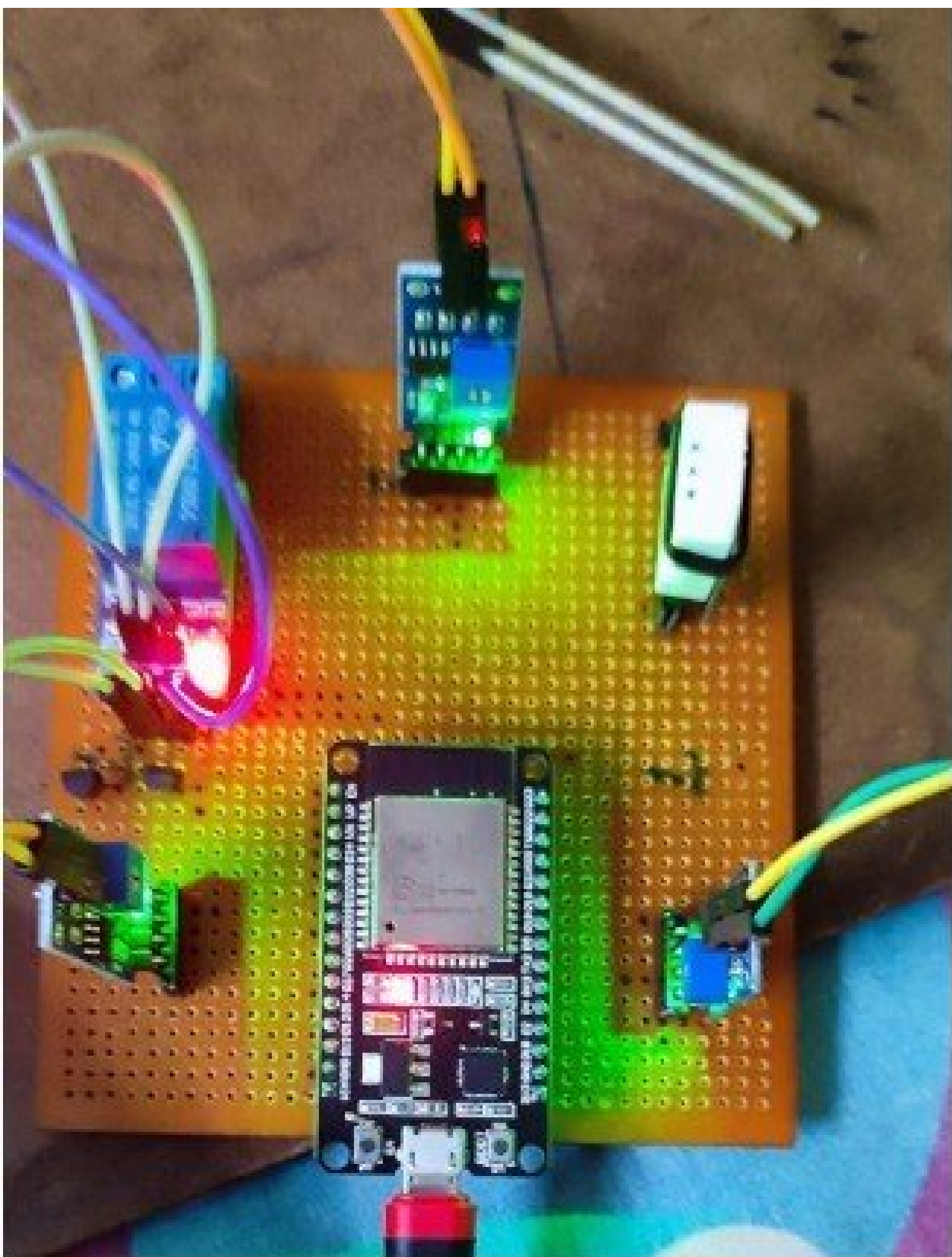
Your security rules are defined as public, so anyone can steal, modify or delete data in your database

[Learn more](#)

[Dismiss](#)

https://esp32-rtdb-30f4a-default-rtdb.firebaseio.com/

```
└─ ESP32
  └─ mode: "auto"
  └─ relayStatus: "OFF"
  └─ sensors
    └─ humidity: 2147483648
    └─ soil1: 0
    └─ soil2: 0
    └─ soil3: 0
    └─ soil_moisture: 0
    └─ temperature: 33.9
  └─ statusMessage: "Moisture: 0.00 | Temp: 33.40°C | Humidity: 72% | Mode: auto | Weather: | AI Decision: Watering ON | SMS sent successfully!"
└─ On_off_switch
  └─ relayStatus: "OFF"
```



```

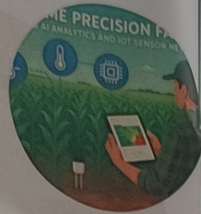
Firebase is ready!
Moisture: 0.00 | Temp: 33.30°C | Humidity: 70%
Mode: auto
Weather Response:
{"coord":{"lon":77.5946,"lat":12.9716},"weather":[{"id":800,"main":"Clear","description":"clear sky","icon":"01d"}],"base":"stations","main":{"temp":32.35,"feels_like":30.51,"temp_min":32.35,"temp_max":32.35,"pressure":1015,"humidity":70},"visibility":10000}
Groq Response:
{"id":"chatcmpl-e6ac59fd-8ae2-408c-b493-e1bb3fab22b7","object":"chat.completion","created":1744880317,"model":"llama-3.3-70b-versatile","choices":[{"index":0,"message":{"role":"assistant","content":"AI Decision: Watering ON\nSMS sent successfully!"}}]}

```


DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

BATCH NO:5

REAL-TIME PRECISION
FARMING USING AI
ANALYTICS AND IOT
SENSOR NETWORKS



Guide:

Mrs.V.Nirmala BE,MTech

Hod:

Dr.G.AnandBabu
BE,MTech

Members:

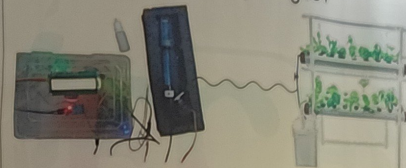
Raddy



ELECTRONICS & COMMUNICATION ENGINEERING

BATCH-06
HYDRO GREENS

" Smart GreenHouse Monitoring System With
Hydroponics By Using IOT "



GUIDE:

Mrs.VADDADI NIRMALA M.Tech,
Asst.Prof

TEAM

A.RAMAYAN
CH.HEMANT
PAVAN KUMAR
K.SAI MANIKAN



LIST OF I

1. Identifying dif
ing prac