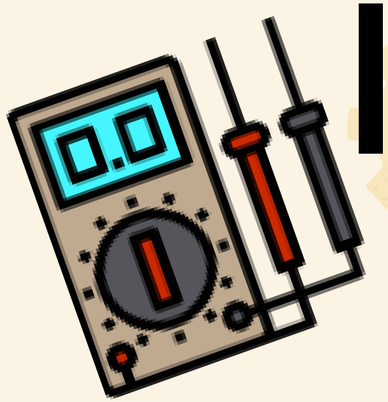
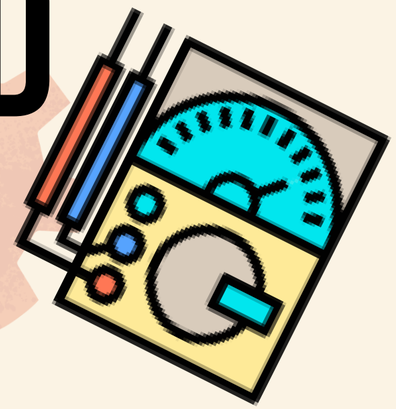


# INTERNET OF THINGS AND BIG DATA ANALYTICS




GROUP MEMBERS :

- SAMARAKOON S.M.D.H. IT20457952
- ARIYASINGHE P.A.D.N.I. IT20033828
- SAMARASINGHE S.A.K.S. IT20206246
- DAHANAYAKE U.S. IT20043650

PROJECT

# DESCRIPTION

-The main objective is to regulate the apparent temperature of a living room and provide warnings for extreme apparent temperatures

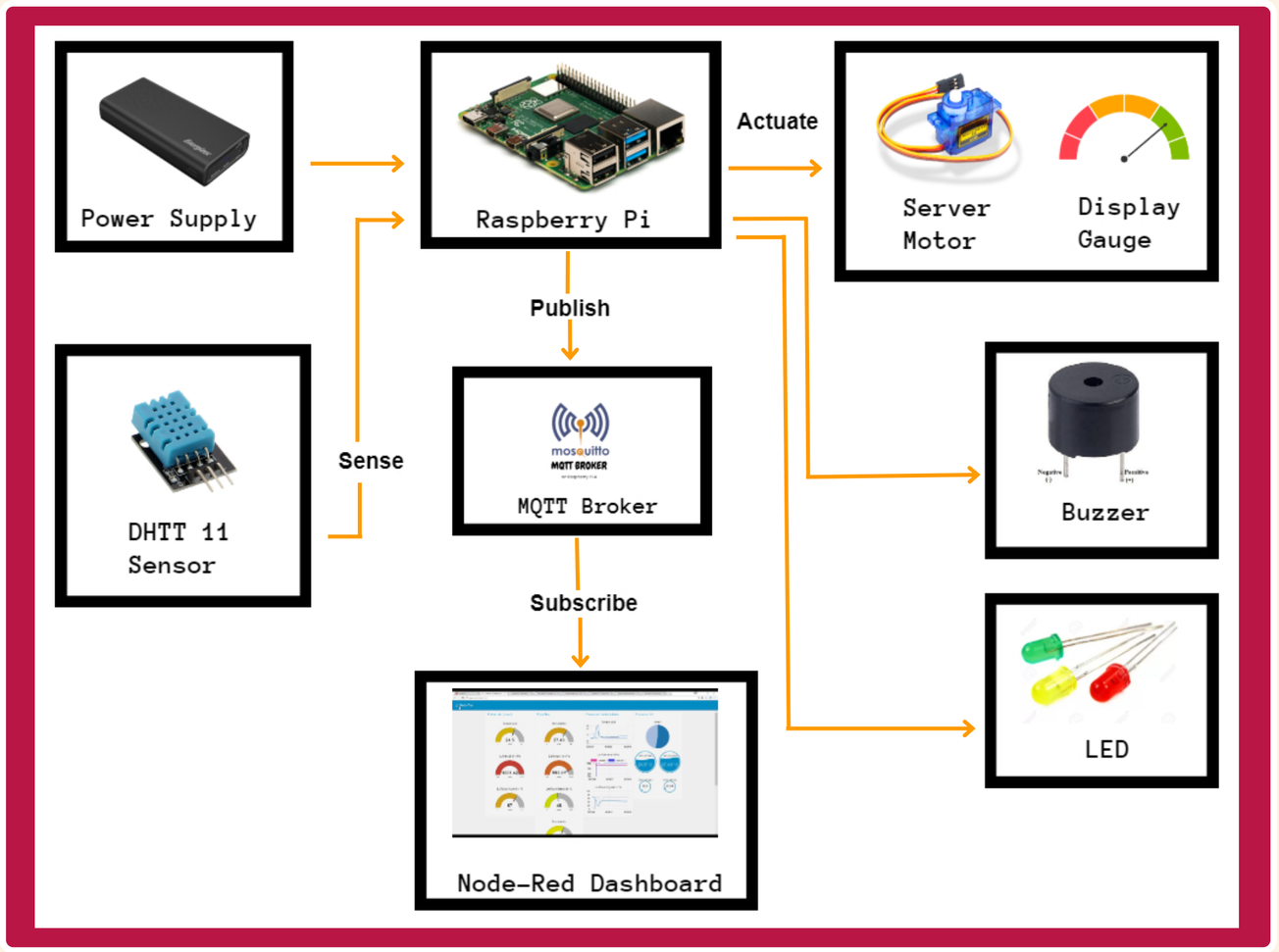
-Functionality:

- Detect current temperature and humidity reading and calculate Heat Index
- Compare to pre-set thresholds
- Control Gauge, LED bulbs and buzzer accordingly

| Temperature Readings | Thresholds |
|---|---|
| Greater than 80℉ (26.667℃) | Caution |
| Greater than 90℉ (32.22℃) | Extreme Caution |
| Greater than 103℉ (39.44℃) (Danger) | Danger |
| Greater than 125℉ (51.667℃) | Extreme Danger |

OVERALL

# ARCHITECTURE



# HARDWARE

-Temperature sensor

-LED bulbs

-Buzzer

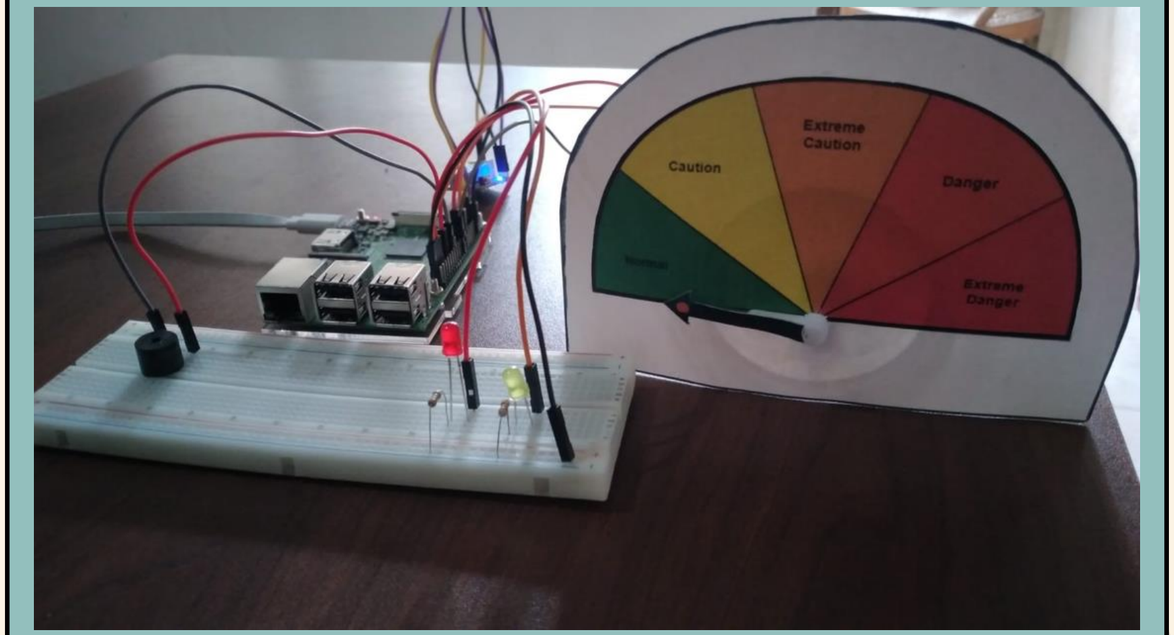
-Micro-controller

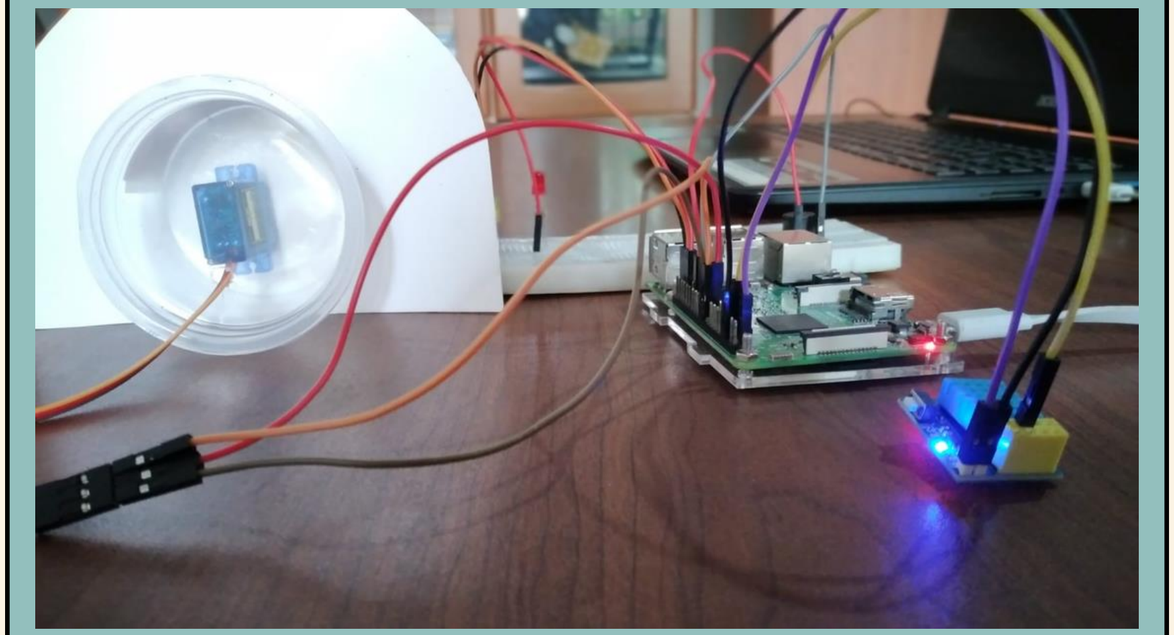
-Other required hardware

- Raspberry Pi
- Jumper wires
- Breadboard
- Lan Cable

COMPLETE

# SETUP



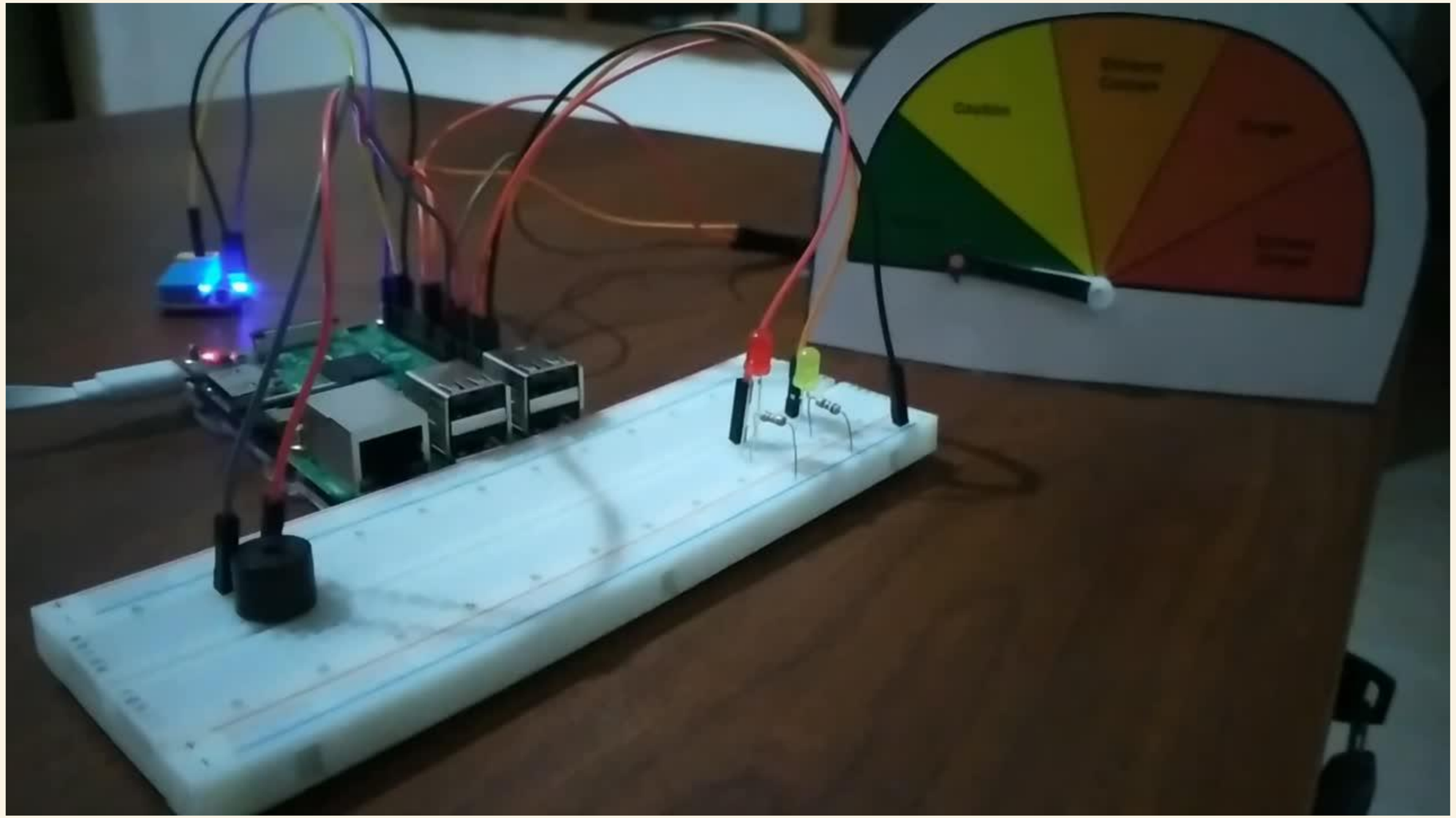



# NODE RED

# DASHBOARD

SYSTEM

# IMPLEMENTATION



COST

# BREAKDOWN

| Item Name | Cost (LKR) |
|---|---|
| 830 Tie Points Breadboard | Rs. 400.00 |
| Frasers 9 Steering Gear SG90 9g Towerpro Servo 25cm | Rs. 590.00 |
| DHT 11 v1.0 Sensor | Rs. 500.00 |
| Micro SDHC Card 8GB | Rs. 1800.00 |
| Other | Rs. 820.00 |
| **Total** | **Rs.4110.00** |

# MEMBER CONTRIBUTION

| Student ID | Student Name | Component |
|---|---|---|
| IT20457952 | Samarakoon S.M.D.H. | Hardware Implementation |
| IT20033828 | Ariyasinghe P.A.D.N.I. | Data Visualization |
| IT20206246 | Samarasinghe S.A.K.S. | Humidity Prediction |
| IT20043650 | Dahanayake U.S. | Node-Red and MQTT Implementation |

# THANK YOU !