



Summer Training presentation

Presented by Abdullah ghazal

Introduction

a system that allows you to monitor liquid levels in real-time all from a distance.



❖ Components:-



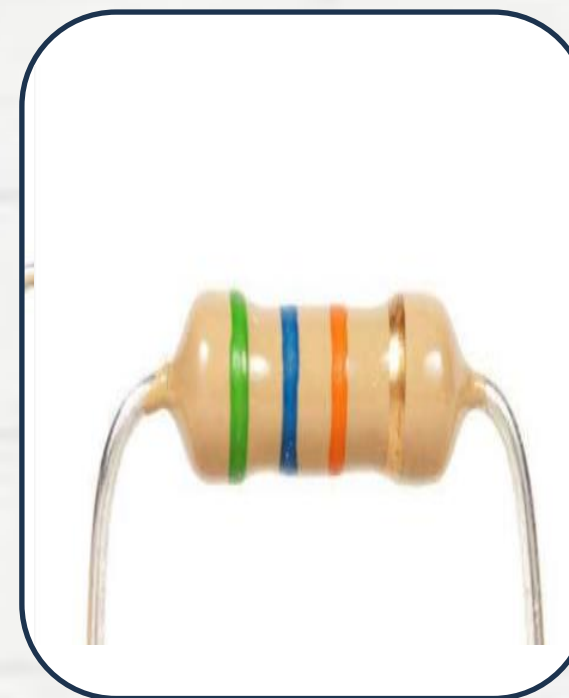
ESP32-WROOM



UltraSonic Sensor



Green LED



220 Ω Resistor

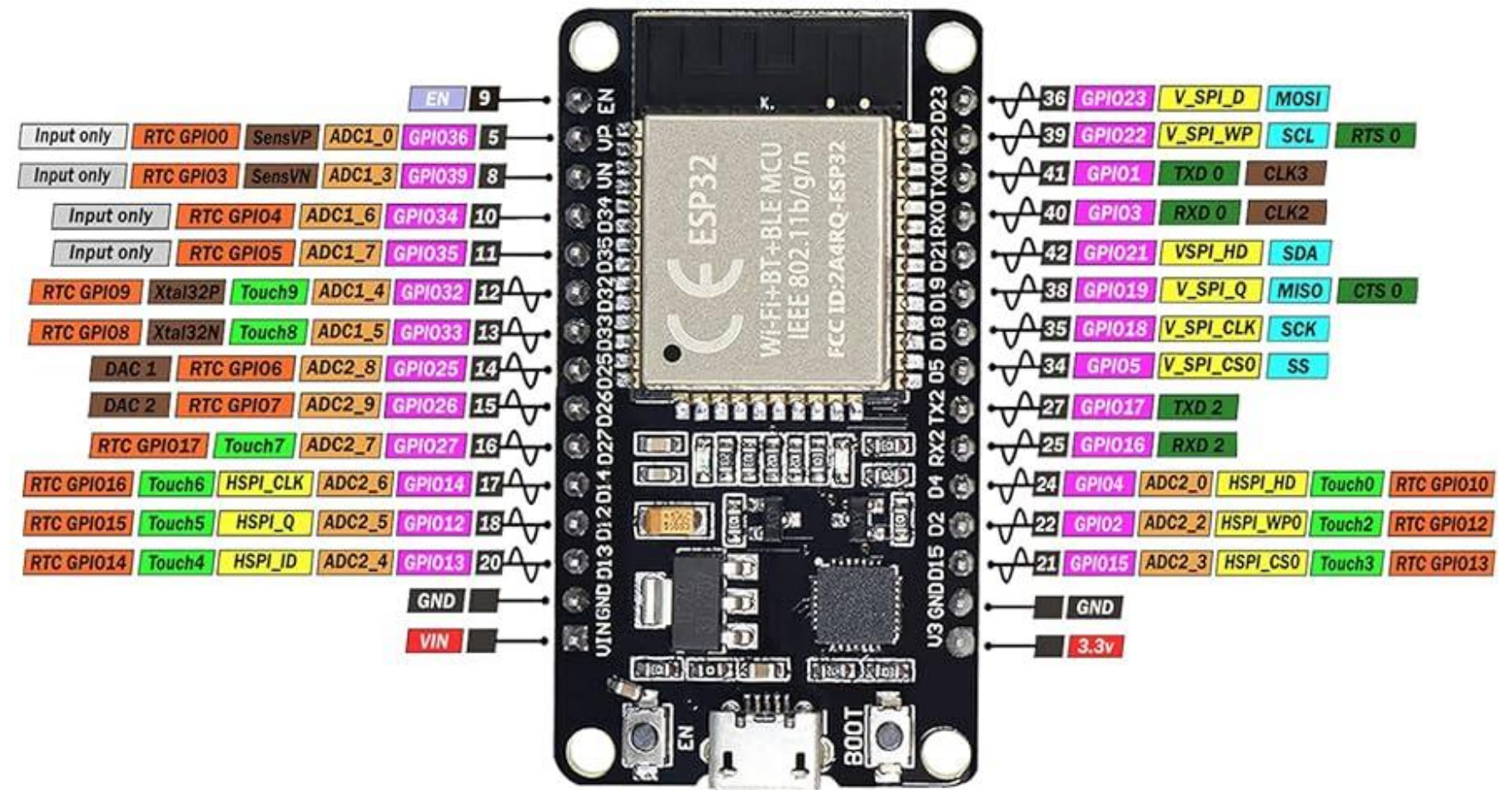


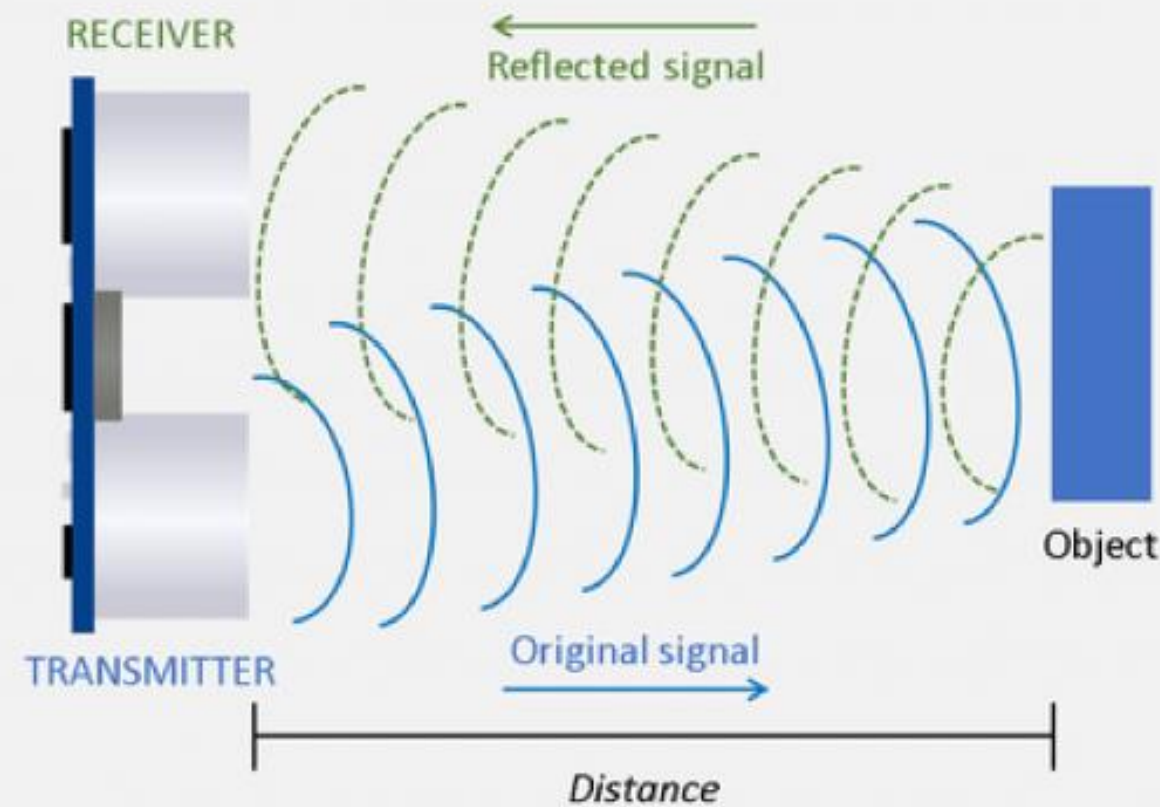
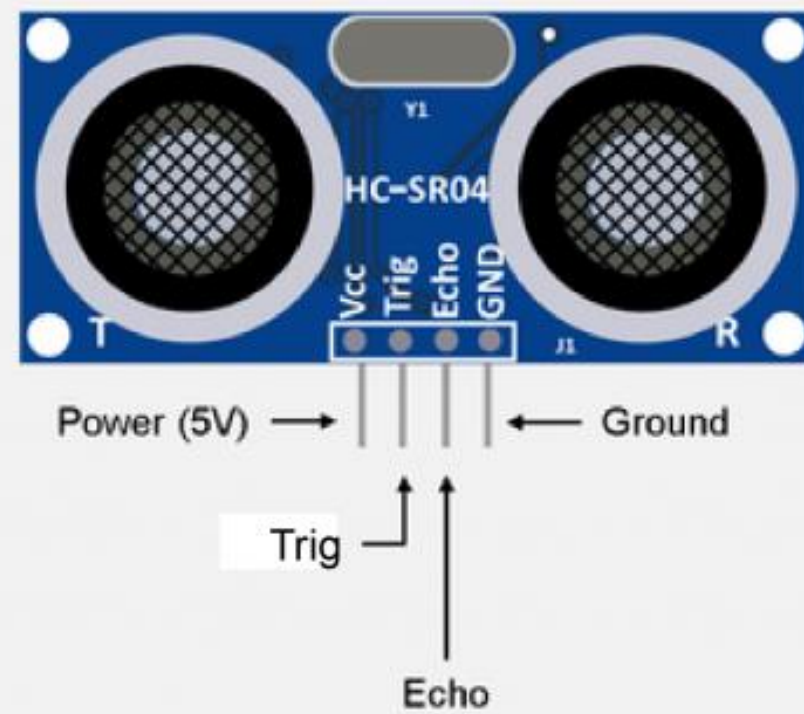
Buzzer

ESP32-WROOM:-

The heart of our project, handling the data processing and wireless capabilities.

ESP32 30PIN PINOUT



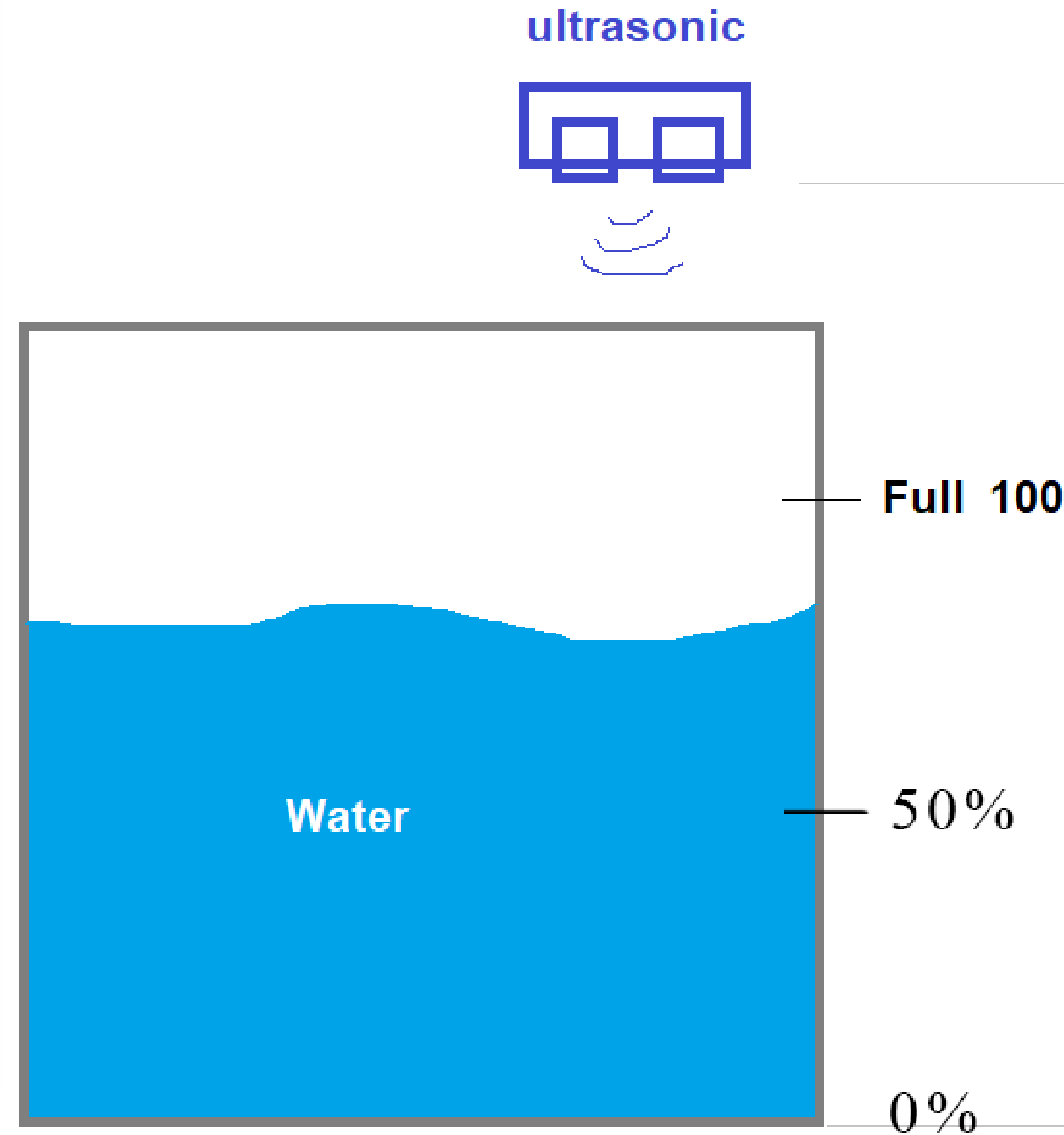


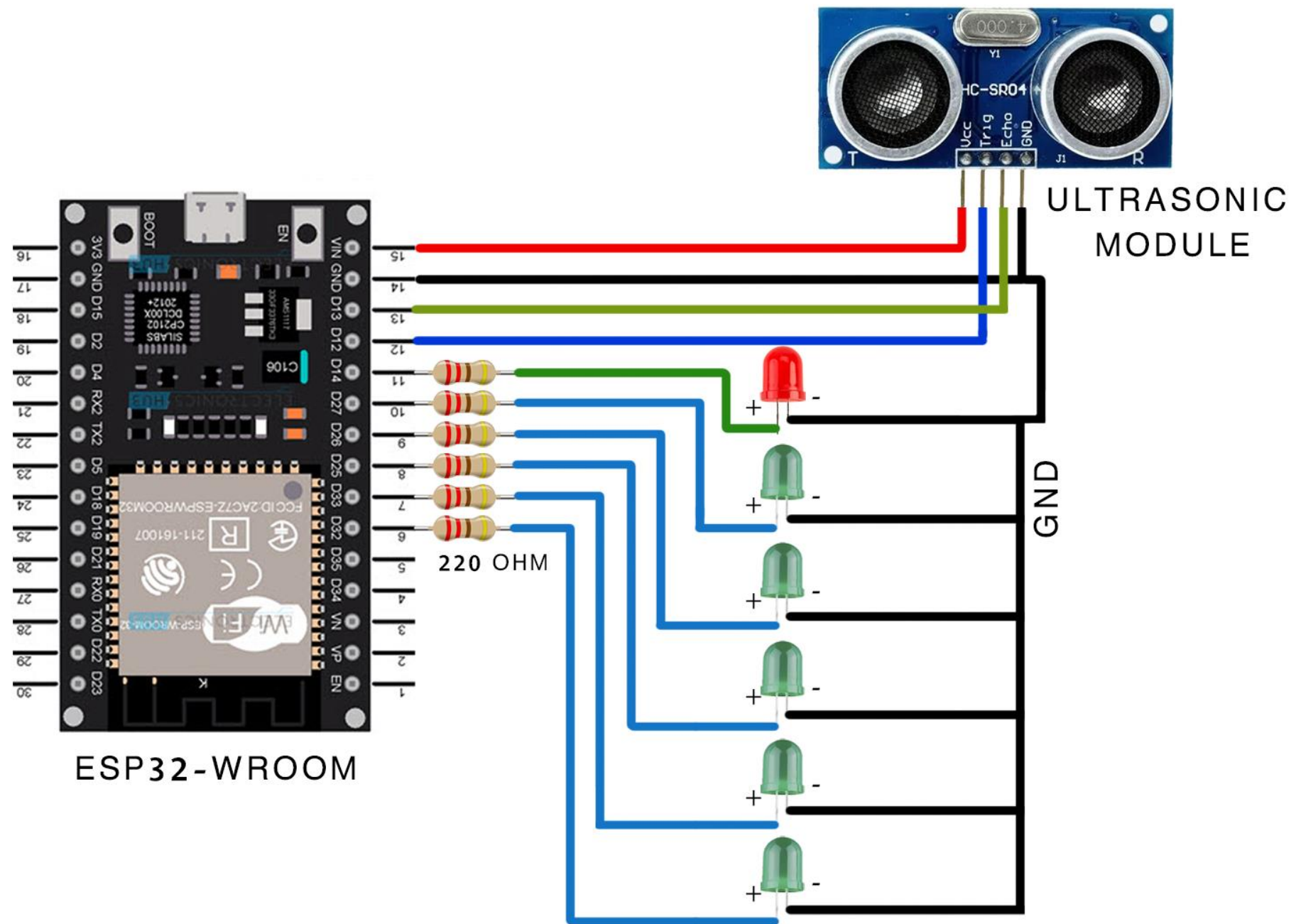
Ultrasonic Sensor:-

is a device that can measure the distance to an object by using sound waves.

By recording the elapsed time between the sound wave being generated and the sound wave bouncing back, it is possible to calculate the distance between the sonar sensor and the object.

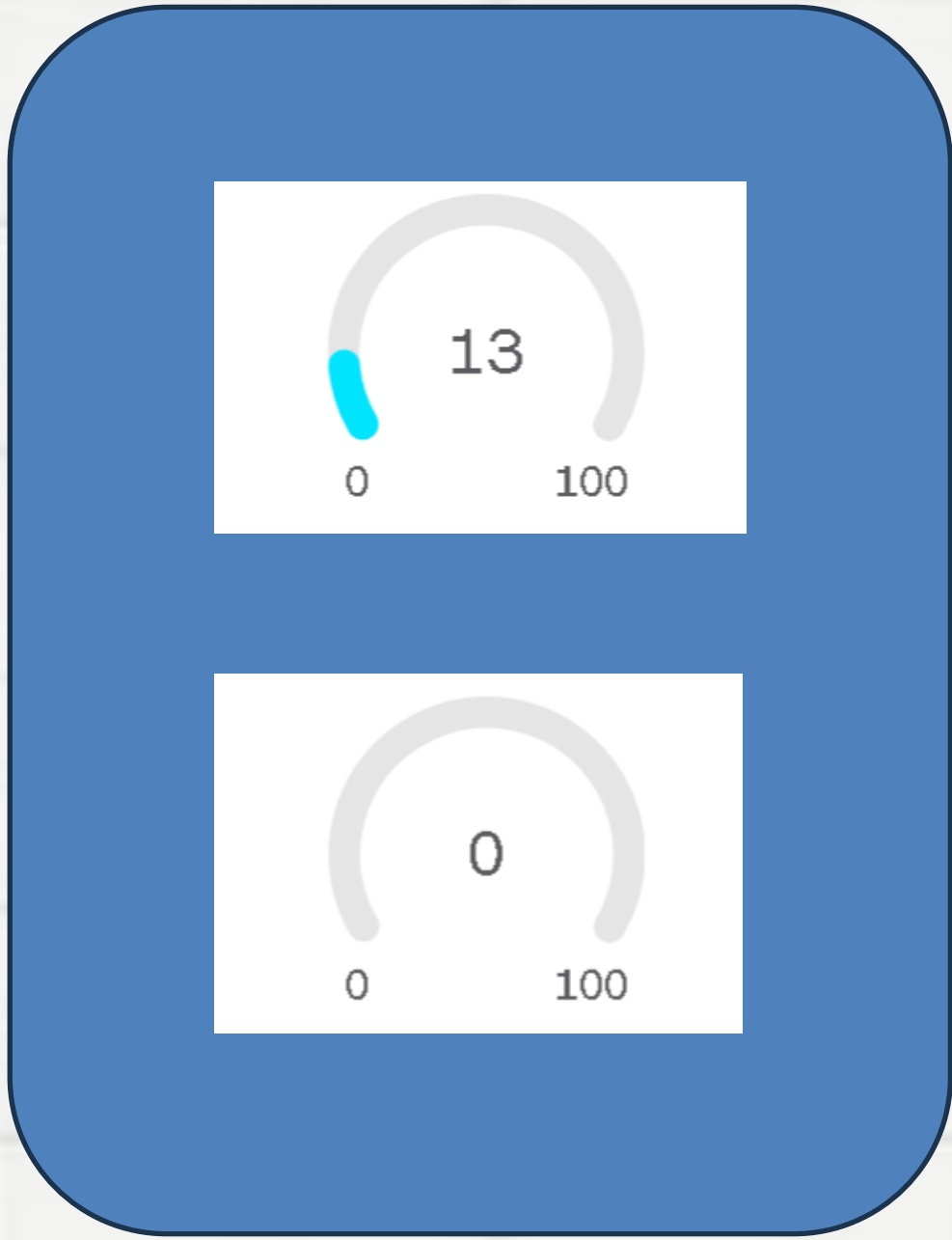
- 1 Ultrasonic sensor measures distance.
2. ESP32 processes data to calculate liquid level.
3. LEDs indicate levels; buzzer alerts for low levels.



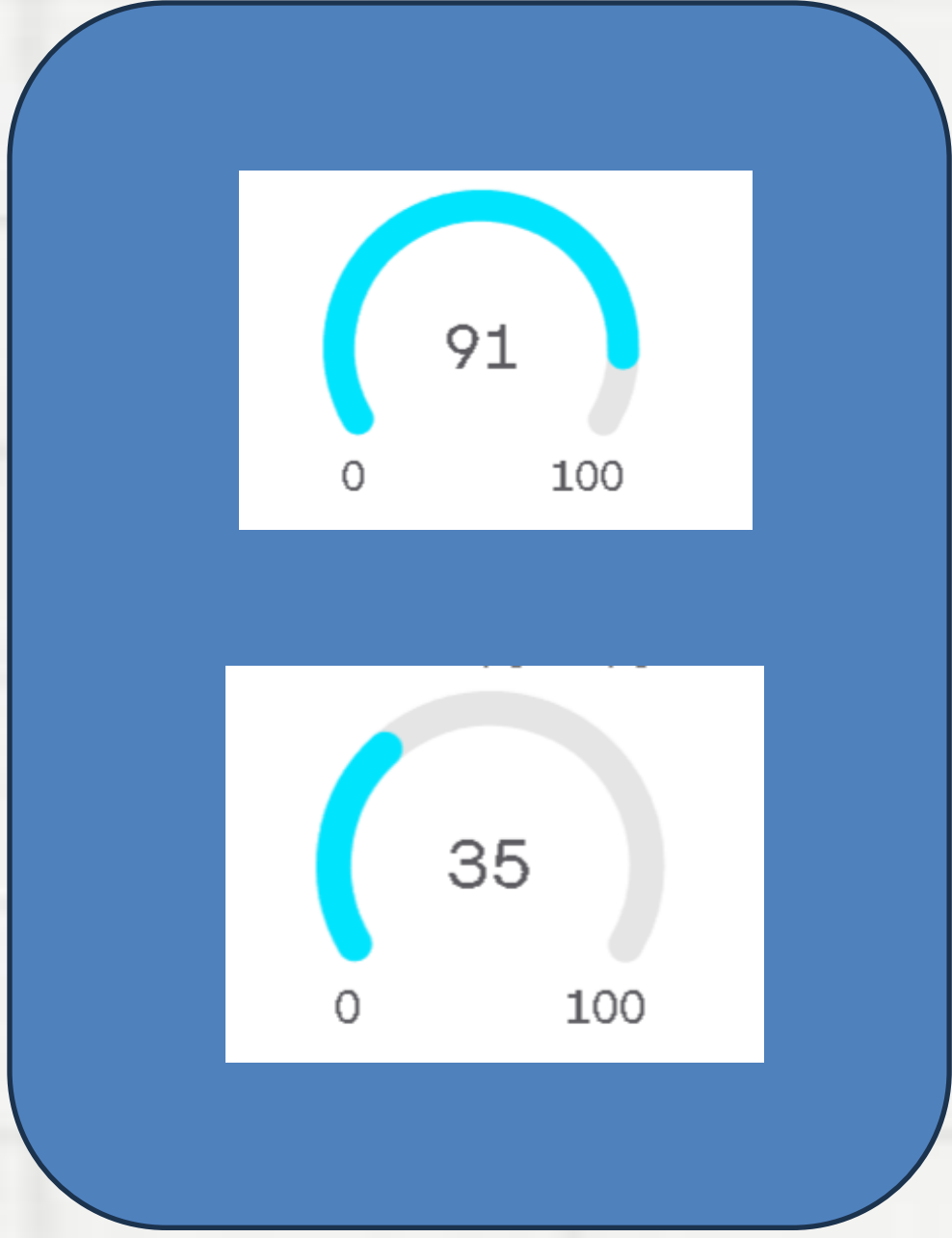


Schematic
Diagram:

Web Dashboard:



Water Level is LOW

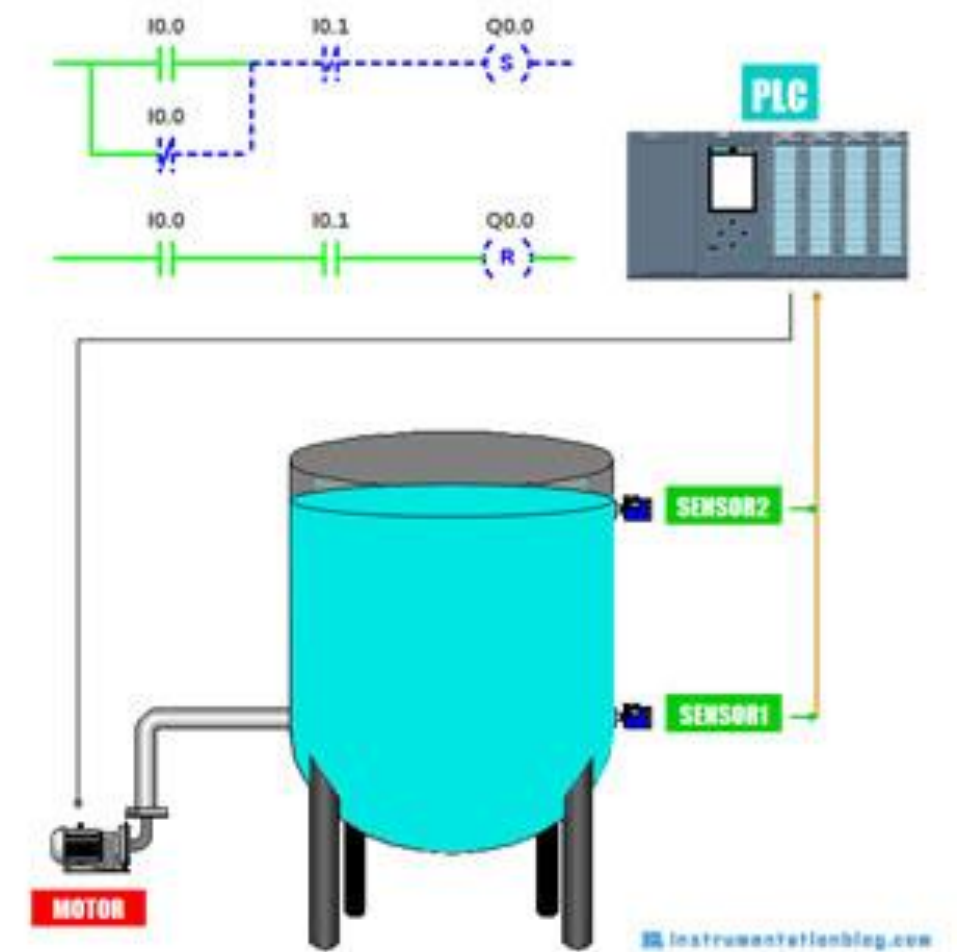


Water Level is HIGH

Conclusion

- "In essence, the Liquid Level Meter is a prime example of how IoT devices like the ESP32 can be utilized to create smart, automated solutions that solve real-world problems. By incorporating simple components like ultrasonic sensors, LEDs, and buzzers, we create a seamless, user-friendly experience that empowers users to take control of liquid monitoring."

Tank Water Level Measurement



The background is a light blue grid. It is decorated with various hand-drawn blue doodles. At the top left are several overlapping circles. To their right is a solid blue circle with white horizontal lines. Further right are more overlapping circles. On the far right edge, there are some horizontal lines and a partial drawing of a star or flower. At the bottom, there are several curved lines on the left, a wavy line in the center, a series of small 'v' marks, and a large, loose loop on the right.

Thank you