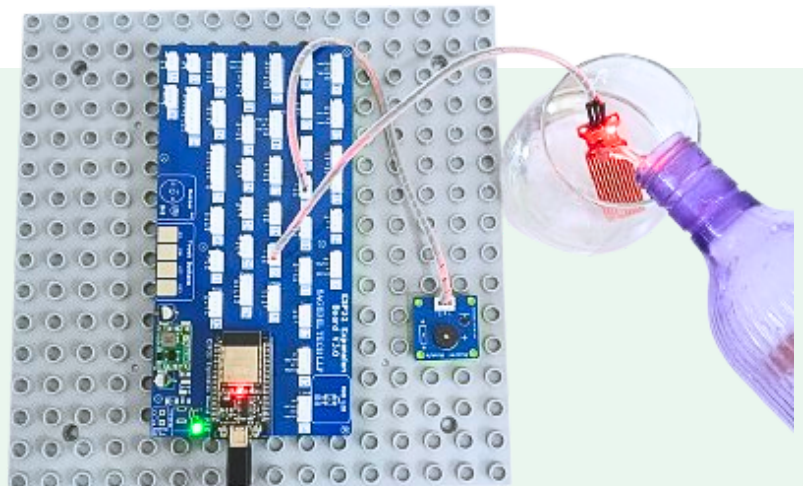


FLOOD DETECTION AND ALERT SYSTEM

IoT-Based Water Level Monitoring and Warning System

2026



WATER LEVEL SENSOR



FLOOD DETECTION



ALERT SYSTEM

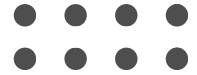


Phone
9958007460



Website
www.sagedel.com

FLOOD DETECTION AND ALERT SYSTEM

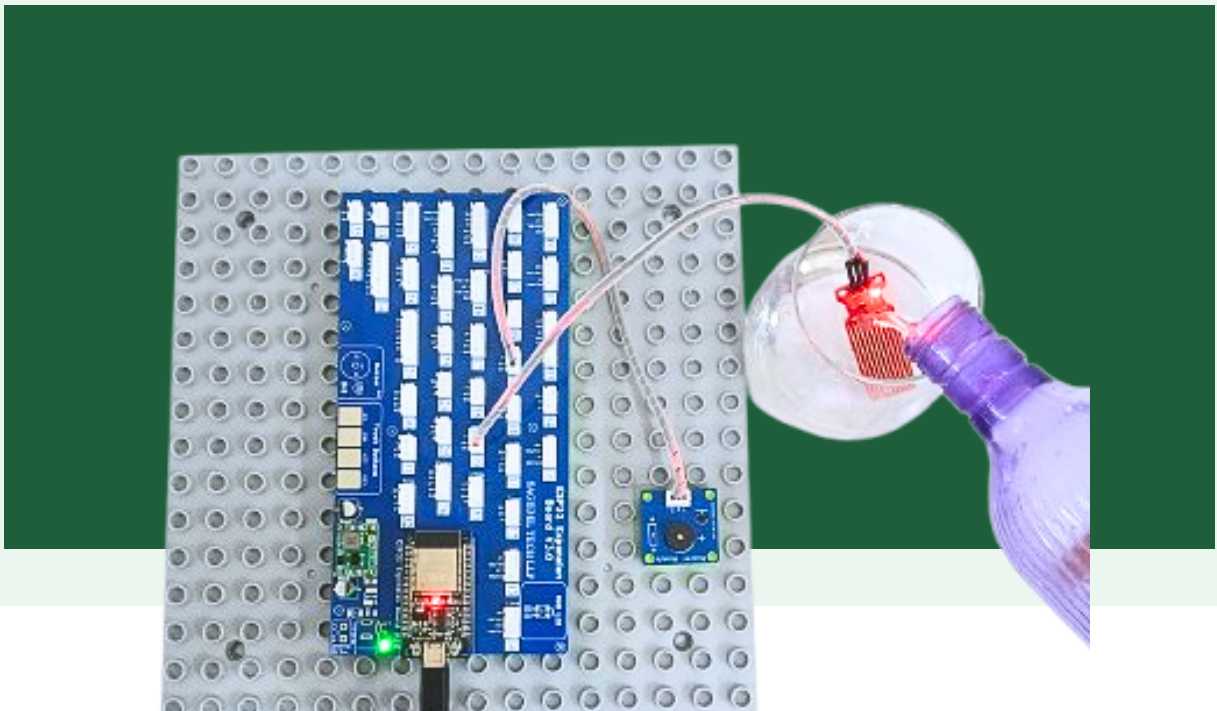


Objective:

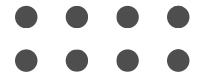
Learn how to interface a water level sensor and buzzer with an ESP32 microcontroller to detect rising water levels and provide an immediate alert when the water reaches a critical level.

What it Does:

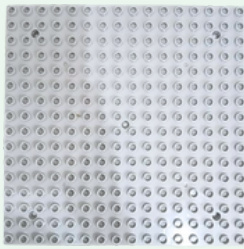
The ESP32 continuously reads the water level sensor and compares the sensor value with a predefined threshold. When the water level reaches or exceeds the threshold, the buzzer turns ON and produces an alert, helping provide an early warning of potential flooding.



Modules & Components used:



ESP Expansion Board



Lego board



Buzzer Module



Water Sensor



USB cable

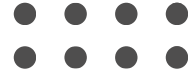


Connector

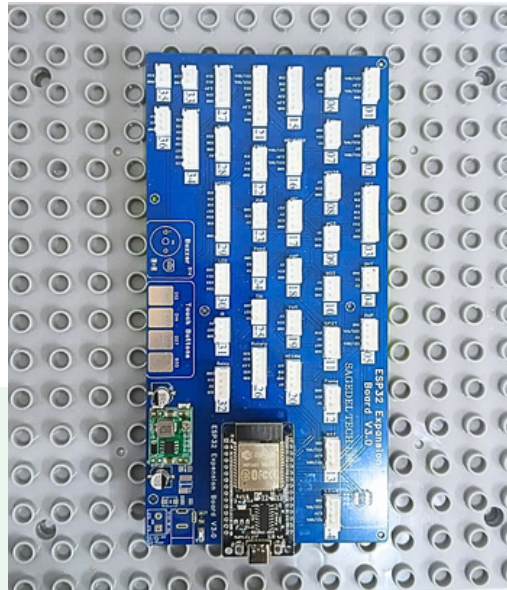


Glass (any container)
• not provided

Step-by-Step Assembly & Connections

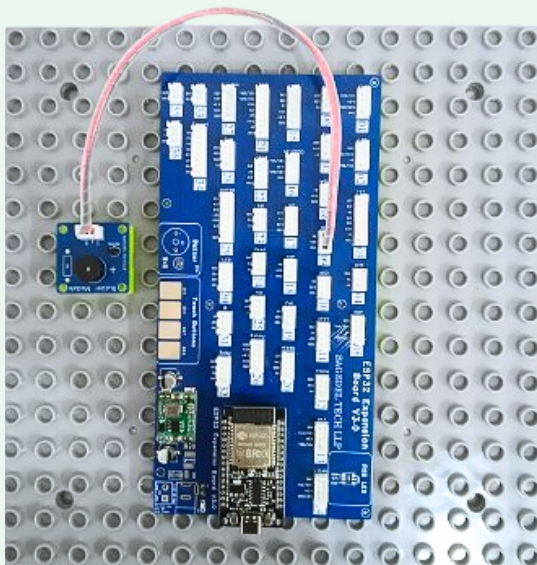


Step 1: Place the ESP32 Expansion Board securely on the lego plate and align it with the mounting holes.



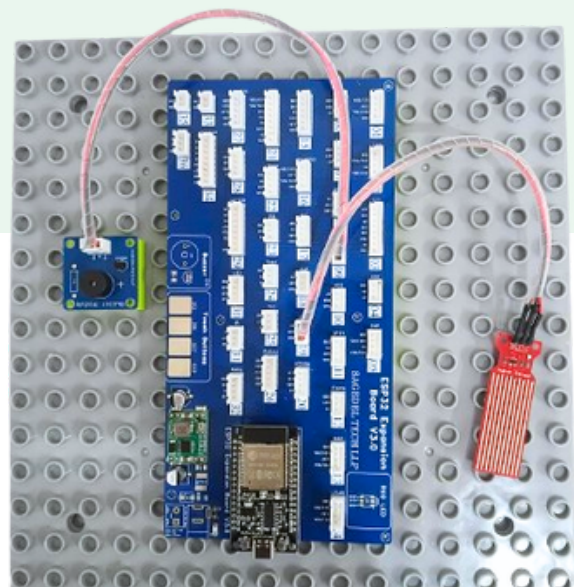
Step 1

Step 2: Connect the buzzer to **Port No. 9** on the ESP32 Expansion Board. Ensure the connections are properly secured.



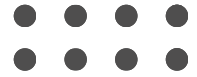
Step 2

Step 3: Connect the water level sensor to **Port No. 19** on the ESP32 Expansion Board.

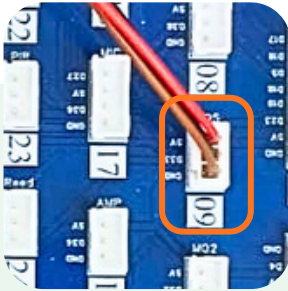


Step 3

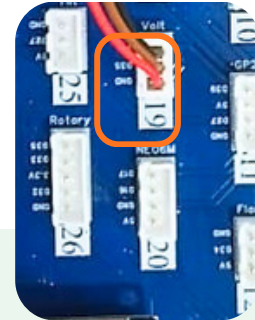
Specific Port Connections



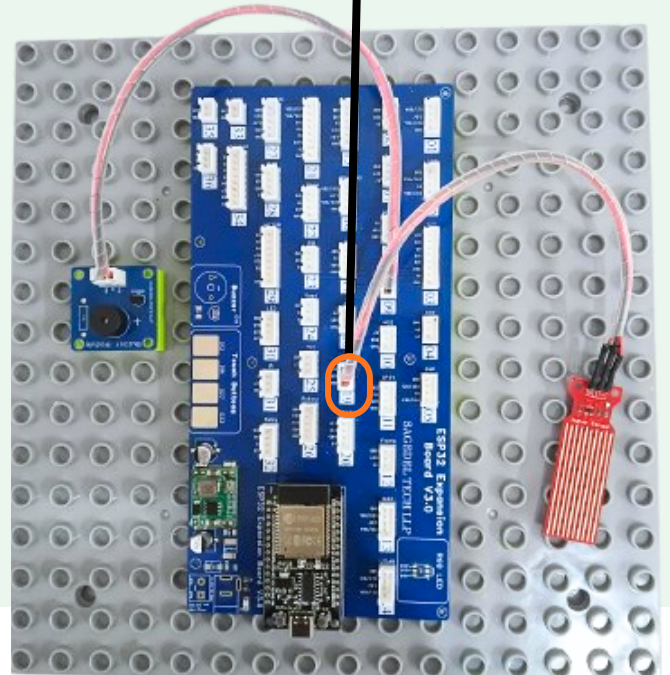
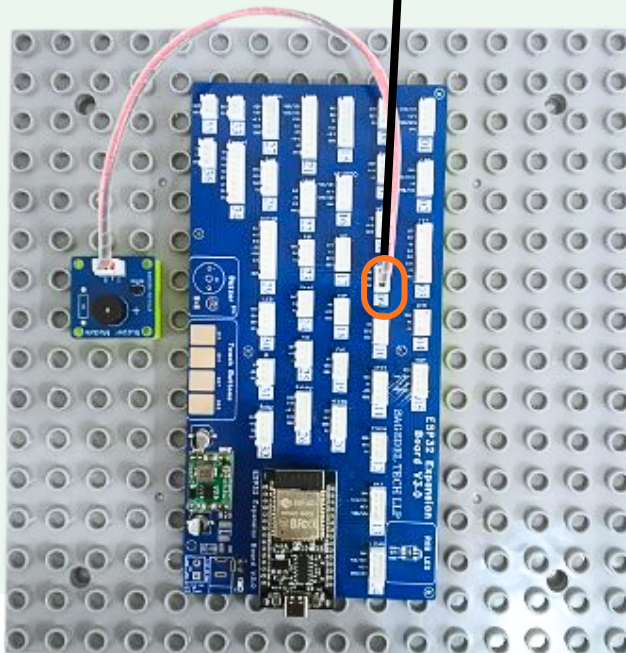
- **buzzer** → port no. 9
- **water sensor** → port no. 19



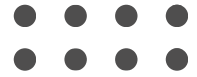
connect buzzer to
connector no. 9



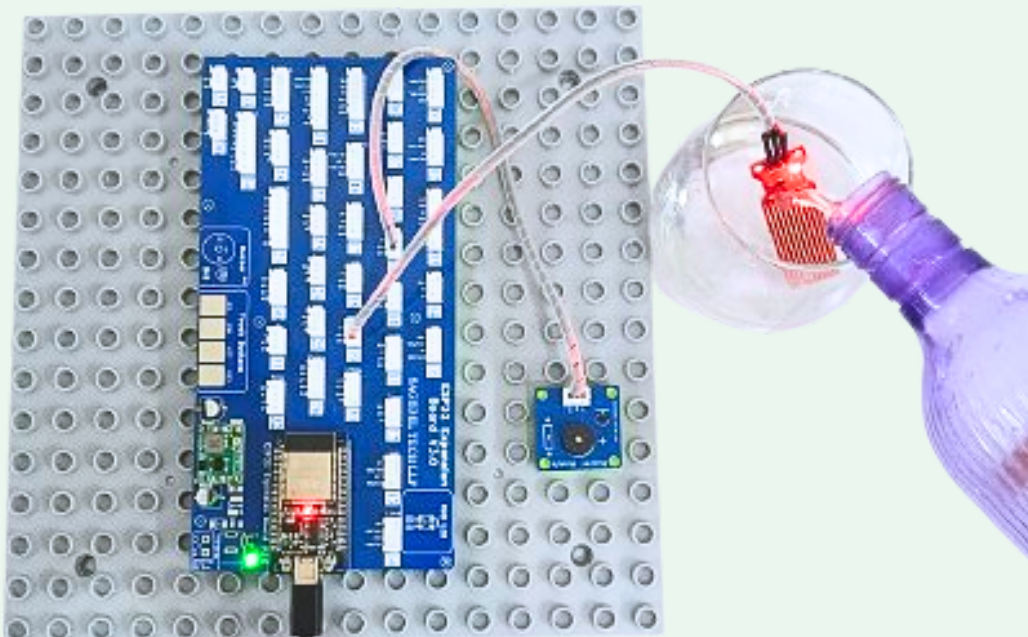
connect water sensor to
connector no. 19



Final Management



- Power on the ESP32 and observe the water sensor readings. As the water level rises, the sensor reading increases accordingly. When the sensor value reaches 4000 or above, the buzzer will beep to indicate a high water level/flood alert.



Calibration:

It involves mapping the raw water level sensor readings from low-water to high-water conditions to establish an accurate threshold for flood detection and alert activation.