Collage code 4212 **421221121019 phase2**

Smart Water System

Introduction

General we see a lot of water overflowing from the water tanks, this results in a large scale of water wastage in our household.so to avoid this condition We can use Internet of Things to solve this problem. Our project is IOT based, this project helps us to know the water level in the tank whether it is in the minimum level or the maximum level, the alarm will start for the LOW water level, and you will get a Blynk notification on the smartphone through the internet.

Idealogy:

- IoT Based Water Level Indicator using Ultrasonic Sensor
- In this IoT Internet of Things project, I have explained how to make a simple
- IoT-based water level indicator using an ultrasonic sensor, ESP32, and Blynk
- IoT platform.
- The alarm will start for the LOW water level, and you will get a Blynk
- notification on the smartphone through the internet. Also, you can monitor the
- water tank level on OLED.
- The alarm will also start when the tank is full. You press the push button to stop
- the alarm.

Required Components for ESP32 Water Level Sensor:

- ESP32 DEV KIT V1
- SR04M waterproof ultrasonic sensor OR HC-SR04 sensor
- 0.96" I2C OLED Display
- 220-ohm 0.25watt Resistors – 2 no
- BC547 NPN Transistor
- LED 5mm – 1no
- 2-pin Push Button
- 2-pin Terminal connectors (3 no)
- 5V DC Buzzer
- AC to DC converter PM01 5V (Optional)

In the circuit, if you want to use AC voltage, then you have to use a PM01 AC to DC converter. Otherwise, you can directly give 5V DC supply to this circuit.

The GPIO D26 & D27 are connected with the Echo & TREG pins of the SR04M-2 waterproof ultrasonic sensor.

The OLED SDA & SCL pins are connected with the D21 & D22 GPIO of ESP32 GPIO D12 is connected with the push button to stop the buzzer. I have used the INPUT_PULLUP function in Arduino IDE instead of using the pull-up resistors with the push button.

And the indicator LED and Buzzer are connected with GPIO D14 & D13 of ESP32. You can use any other ultrasonic sensor.

Circuit of IoT Based Water Level Indicator: