

## CODE FOR WATER LEVEL DETECTION AND ALERT SYSTEM

```
// HC-SR04 Pins

#define TRIG_PIN 9

#define ECHO_PIN 10


// LED Pins

#define GREEN_LED 2

#define BLUE_LED 3

#define RED_LED 4


void setup() {

    Serial.begin(9600);


    // Setup sensor pins

    pinMode(TRIG_PIN, OUTPUT);

    pinMode(ECHO_PIN, INPUT);


    // Setup LED pins

    pinMode(GREEN_LED, OUTPUT);

    pinMode(BLUE_LED, OUTPUT);

    pinMode(RED_LED, OUTPUT);

}


void loop() {
```

```
// Triggering the sensor
digitalWrite(TRIG_PIN, LOW);
delayMicroseconds(2);
digitalWrite(TRIG_PIN, HIGH);
delayMicroseconds(10);
digitalWrite(TRIG_PIN, LOW);

// Receiving the echo
long duration = pulseIn(ECHO_PIN, HIGH);
float distance = duration * 0.034 / 2;

// Print distance to Serial Monitor
Serial.print("Distance: ");
Serial.print(distance);
Serial.println(" cm");

// Turn off all LEDs first
digitalWrite(GREEN_LED, LOW);
digitalWrite(BLUE_LED, LOW);
digitalWrite(RED_LED, LOW);

// Water Level Indication Logic
if (distance < 20) {
    digitalWrite(GREEN_LED, HIGH); // High water level
```

```
} else if (distance >= 20 && distance < 30) {  
    digitalWrite(BLUE_LED, HIGH); // Medium water level  
} else {  
    digitalWrite(RED_LED, HIGH); // Low water level  
}  
  
delay(1000); // Wait 1 second before next reading  
}
```