Retraction

Retraction: Indicator for The Water Level Using Bluetooth (J. Phys.: Conf. Ser. 1916 012166)

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This article (and all articles in the proceedings volume relating to the same conference) has been retracted by IOP Publishing following an extensive investigation in line with the COPE guidelines. This investigation has uncovered evidence of systematic manipulation of the publication process and considerable citation manipulation.

IOP Publishing respectfully requests that readers consider all work within this volume potentially unreliable, as the volume has not been through a credible peer review process.

IOP Publishing regrets that our usual quality checks did not identify these issues before publication, and have since put additional measures in place to try to prevent these issues from reoccurring. IOP Publishing wishes to credit anonymous whistleblowers and the Problematic Paper Screener [1] for bringing some of the above issues to our attention, prompting us to investigate further.

[1] Cabanac G, Labbé C and Magazinov A 2021 arXiv:2107.06751v1

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Indicator for The Water Level Using Bluetooth

J Janet¹, S Sureshkumar¹, A Riyaz Ahamed¹ and R Kaviyaraj²

¹ Dept of computer Science, Sri Krishna College of Engineering and Technology, Coimbatore, India
² Dept of Computer Science and Engineering, SRM Institute of Science and Technology, Chennai, India
jjjanet@skcet.ac.in

Abstract. The significance of water rationing has increased over the past few decades. It is hard to estimate level of water in tanks manually. When the water tank is full, the client may not realise the condition that the motor is turned ON which leads to water wastage. To tackle the issues related with the water tank, the water level pointer and regulator framework are utilized. The water level can likewise be tried utilizing a sensor, so the siphon consequently turns ON if the water goes down. The proposed system can even notify clients about the damages in the tank.

1. Introduction
In everyday life, water is a widespread dissolvable that assumes a significant part. It has been assessed that the complete volume of water accessible on earth is 1.4 billion cubic kilometers. This volume of water may be enough to cover the earth in a 3-kilometer layer. [1] Only one percentage of pure water is available for domestic use. A study assesses that an individual devours a normal of 135 liters each day in India. Continuously 2025, such utilization will increment by 40%. This infers the requirement for our new water supply to be kept up. Proficient administration of the water utilized at homes is a lot of fundamental as, about half of water provided to the urban areas gets squandered through its ill-advised utilization. The control of water is just conceivable if the client knows about the amount of water he utilizes and the amount available to him. In the entire lives, water is major. There is scarcely any individual who monitors the water level in the overhead tanks. [2] By automating the control of this design, may work with basic human mind or no human intervention. The definition can be utilized in a roundabout way to survey and screen the water level in overhead tanks and evade squander. Indicator of water level using Bluetooth is determined by ultrasonic sensors utilizing the Arduino project. At first, the tank is considered vacant. [3] At the point when the water level turns out to be low, the engine siphon is consequently turned ON and killed when the tank is full.

2. Objectives
To achieve this mission, there are a few focuses on that should be cultivated. Such targets will fill in as a kind of perspective and will restrict the framework for specific circumstances to be actualized:

1) To assemble a framework for water level control.
2) The color sensor checks for the purity of the water and ensures the contaminated level.
3) To keep an eye on the tank's water level. When the storage chamber level is low, motor stops.

3. Literature survey
1. The presented paper is Indicator for Water Level Control System and purity checker, [4] comprising of arduino to mechanize the water siphoning measure in a tank and can recognize the water level in a tank and to turn the siphon on or off appropriately and show the status on the Android Mobile Screen. The machine controls the water level in the sump tank too (source tank).

2. This paper has built up a framework which, with the guide of a level locator, at first tests the accessibility of water tank and afterward changes the condition of the motor as per the data accumulated through the level indicator. The motor pump makes use of this design. The device proposed consists of an Ultrasonic sensor and a Arduino board circuit for logic. The Idea proposed declines the manual guideline of water necessities in the homegrown and horticultural areas.

3. The paper proposes a strategy that is straightforward observing arrangement of the water level with different levels demonstrated,[5] It additionally implies that the water level is underneath or more the detail. This methodology assisted us with seeing how to utilize Bluetooth modules as a convenient framework and how to make them.

4. This paper introduced a gadget that, by utilizing ultrasonic sensors, tests the water level. The machine utilizes a water level pointer, a water level sensor, a control framework for water siphons and a microcontroller. The ultrasonic sensor peruses the water level and imparts a sign to the Arduino uno controller and begins to reverberate with the heartbeats.

5. The framework utilized an Arduino Uno controller in an overhead tank stockpiling framework to robotize the water siphoning measure and can recognize the storage container’s limit. Through utilizing an adjusted circuit to show the level of water and the utilization of AC power, [6] this examination has effectively improved the momentum water level regulators, subsequently dispensing with the danger of electric shock.

4. Software development specification
System Development Specification (SDS) is a record or assortment of archives determining the highlights and conduct of a framework or programming program (otherwise called a Software Requirement Specification). [7] It incorporates a bunch of parts that endeavor to characterize the essential highlights.

4.1. Functional requirements
A practical necessity decides a capacity or part of a framework. Where a capacity is characterized as a conduct particular among information sources and yields.

4.2. Non functional constraints
The proposed system should be available at any time. Unusual necessities are the qualities or characteristics of the framework that can pass judgment on its activity.

4.3. Hardware requirements
A total assortment of utilitarian, operational, proficiency, interface, quality elements, plan, criticality, and test prerequisites are determined and dissected by equipment necessity examination. Alongside the ultrasonic sensors, Water Level uses the Arduino module.

4.3.1. Arduino. The ATmega328 miniature regulator is incorporated into the Arduino UNO. There are 14 computerized I/O pins, as shown in Figure 1. PWR yield is given by six of them. It is free and open source, and it includes a model level [8]. It likewise has a 16MHX precious stone oscillator connected to it. Notwithstanding the above highlights, it additionally has a USB association and helps in miniature regulation.
4.3.2. **Ultrasonic sensor.** For distance detection, an ultrasonic sensor is used. In Figure 2 the transmitter sends out an ultrasonic sound wave with a high recurrence, which ricochets off each strong article what is more, is gotten as a reverberation by the collector. The fluctuations in time are measured. The reverberation is at that point prepared by the control circuit.

![Figure 1. Arduino UNO.](image)

4.3.3. **Connecting wires.** The conductive ties between the components in contact are altogether electronic circuit links. In principle, they have zero opposition and complete relations as shown in figure 3. They resemble decent shaded jumper links on the breadboard.

![Figure 2. Ultrasonic Sensor Pin Configuration.](image)

4.3.4. **Relay.** Transfers are used to electrically separate two circuits while still attractively connecting them. At the point when they are totally segregated, they are helpful for exchanging starting with one circuit then onto the next. The transfers comprise of an input and a segment of yield as shown in Figure 4.

![Figure 3. Connecting Wires.](image)

4.3.5. **Color sensor.** A color sensor is used to find the color of the surface indicated through Red, Green and Blue. It contains 10 pins out of which 4 pins act as control pin. This allows the sensor to show frequency scaling which helps in providing optimal output. Figure 5 depicts color sensor.

![Figure 4. Relays.](image)

![Figure 5. Color sensor.](image)
4.4. Software requirements

4.4.1. Arduino IDE software. A cross-platform framework, the Arduino Integrated Development Environment (IDE). A cross-stage structure, the Arduino Integrated Advancement Environment (IDE). It Figure 6 underpins the programming language dialects utilizing uncommon code organizing laws. A product library from the Wiring project is given by the Arduino IDE, which gives a few regular information and yield methodology.

![Figure 6. Arduino Software IDE.](image)

5. Proposed system

5.1. System architecture

As demonstrated in the square outline, the “trigger” and “reverberation” pins of the ultrasonic sensor module are joined straightforwardly to the pin. Arduino, 12 and 13. With figure 7, a seven-portion show is related.

![Figure 7. Block Diagram.](image)

5.2. Workflow diagram

Two sensors are utilized for the programmed water level marker and control framework at two tank levels, one at higher level followed by lower level as shown in figure 8.
5.3. Result and images
This section contains screenshots of the proposed system's graphical user interface (GUI), which depict the interface as well as the system's intermediate output as shown in figure 9.

The above image illustrates the working model of water level indicator. If water rises above sixth degree the motor stops automatically.

6. Conclusion and Future Work
To diminish human communication and save time, mechanization of the various segments around us has been generally expanded. As the tallness of water in the tank can not be haphazardly decided, the water tank floods. This prompts extra energy use, which is really a significant concern. Until the tank is full, individuals simply need to pause and quit doing their different things. Consequently, here is a thought that faculties and demonstrates the measure of water so the siphon can be closed off at the ideal time and save water, power and time also.

The endeavor using Automatic Arduino's Water Level Indicator and Controller will be important for a huge extension because of the unimportant need of human power and the foundation communication is much less unpredictable to make it more practical for all to use.

This project Indicator for The Water Level Using Bluetooth can include pH sensors to identify the acid and base level of water.

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