Internet of Things

# PROJECT AQUASENSEHUB

Kelompok A9

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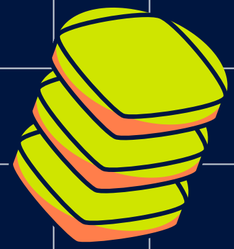


AQUASENSEHUB

# INTRODUCTION

## WHY WE CREATE AQUASENSEHUB

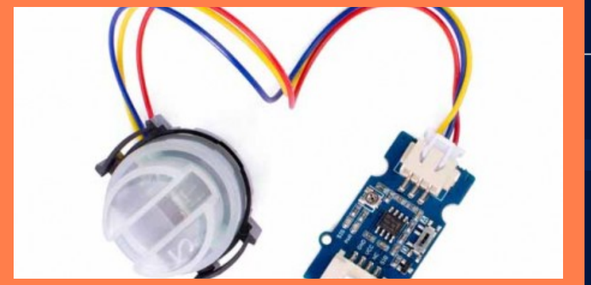
- Periodic checks and manual measurements in traditional aquarium management can lead to inconsistent oversight.
- Fluctuations in critical parameters like temperature, pH levels, and water clarity may be overlooked.

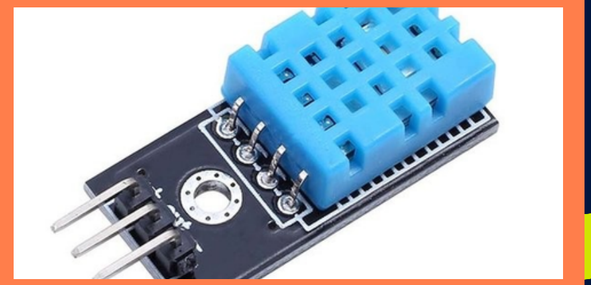
# PROPOSED SOLUTIONS

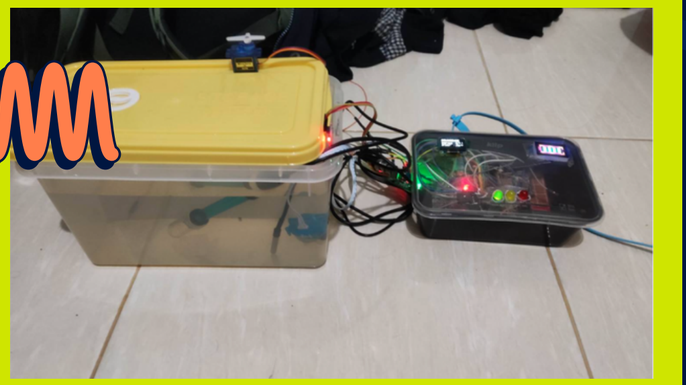
- Automatic Feeding System
- Connectivity and Control
- Integration with Blynk Application
- Accurate Monitoring
- Ease of Use

Blynk

# TECHNOLOGY INVOLVED



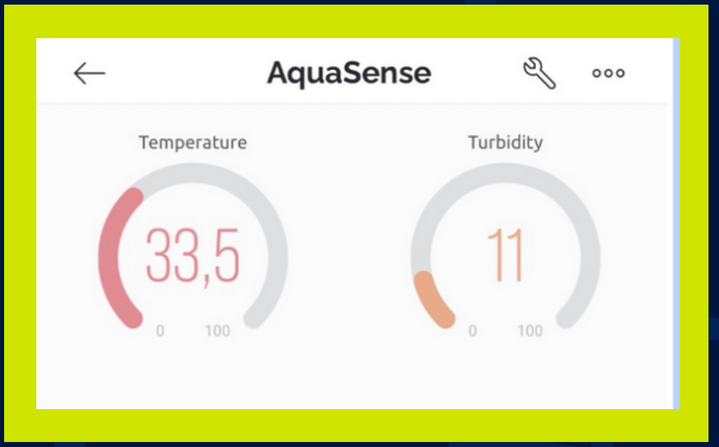




## Assemble the Technologies!

The OLED module seamlessly integrates into the smart aquarium, presenting real-time readings in a clear format and confirming the accurate operation of the system. The Blynk mobile UI provides a user-friendly interface, graphically representing data from all sensors and incorporating a button for user-controlled fish feeding via a servo mechanism. The final assembly underscores the organized arrangement of wires and secure placement of components within the fish tank setup. The ESP32 serves as the central hub for seamless communication between sensors, and the OLED module enhances user interaction by graphically displaying vital parameters. This smart aquarium system successfully combines functionality and aesthetics, offering a user-friendly solution for monitoring and managing aquarium conditions.

# IMPLEMENTATION



# EVALUATION

After assembling the smart aquarium device, the evaluation phase becomes crucial, assessing performance and user-friendliness. Criteria include **technical functionality and user experience**. Sensors like pH and water level are tested for **precision and responsiveness**. The OLED module **effectively displays** real-time readings, affirming **accurate data** processing by the ESP32. The Blynk mobile UI offers a **user-friendly interface**, graphically representing sensor data, with a **strategically placed** button for user-controlled fish feeding. The assembly emphasizes neatness, with the ESP32 as the central hub ensuring **seamless communication** between sensors. The system **successfully** combines functionality with an **aesthetically pleasing** design for a user-friendly solution in aquarium monitoring and management.

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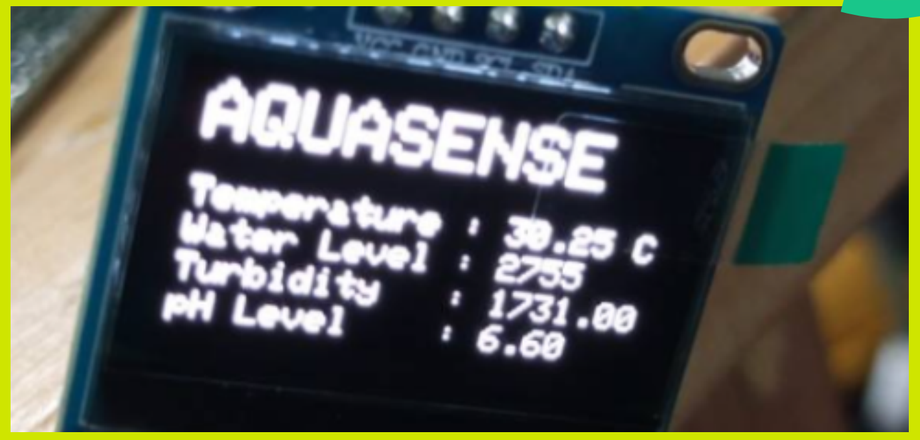
# CONCLUSION

## Key finding and insight

AquaSenseHub project offers a sophisticated solution for aquarium monitoring, leveraging the ESP32 microcontroller and various sensors to capture crucial data points. The seamless integration with the Blynk platform enhances user experience, providing remote access and control, while the modular code design ensures efficient execution and scalability. The project successfully meets acceptance criteria, demonstrating a harmonious blend of sensor technology, remote accessibility, and automation, making it a comprehensive and extensible solution for aquarium enthusiasts.



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# THANK YOU SO MUCH

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