UTM
UNIVERSITI TEKNOLOGI MALAYSIA

INNATES

INDUSTRIAL TRAINING PRESENTATION

Prepared and Presented By:

1. Muhd Waffi Qayyum Bin Din
2. Yogaruban A/L Ganason

Company Supervisor: Miss Nur Intan Syaziera

Faculty Supervisor: Dr.Khatibsyarbini

Innovating Solutions

About Company

01 Innates PLT is a spin-off company from Universiti Teknologi Malaysia (UTM), established to provide Internet of Things (IoT) solutions for the Industrial Revolution 4.0 (IR4.0).

02 The company's core competency is in IoT security solutions, with a strong focus on delivering fail-proof, fool-proof, and future-proof products.

03 Innates PLT aims to integrate IoT across various sectors, including manufacturing, retail, healthcare, and smart cities, to enhance operational efficiencies, improve quality of life, and offer convenience.

Company Mission and Vision

Mission

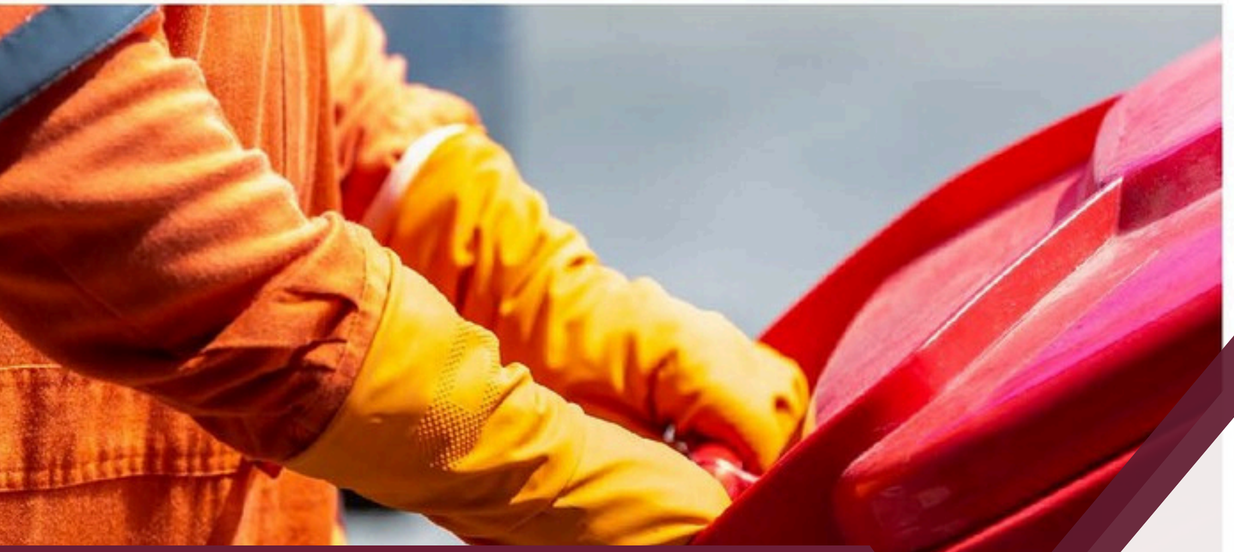
To provide hardware and software solutions, integrating with existing product security systems embedded with IoT solutions.

To offer solutions that address resource inefficiency, environmental concerns, and security issues.

Vision

To be recognized as a leading-edge solution provider that transforms businesses through the power of the Internet of Things (IoT).

Innates PLT
Organizational Chart



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Project working on:

Scheduled Waste Management System (SWaM)

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Project Objectives

01

To create a waste management system that simplifies waste collection, disposal, and monitoring through a single platform for better efficiency.

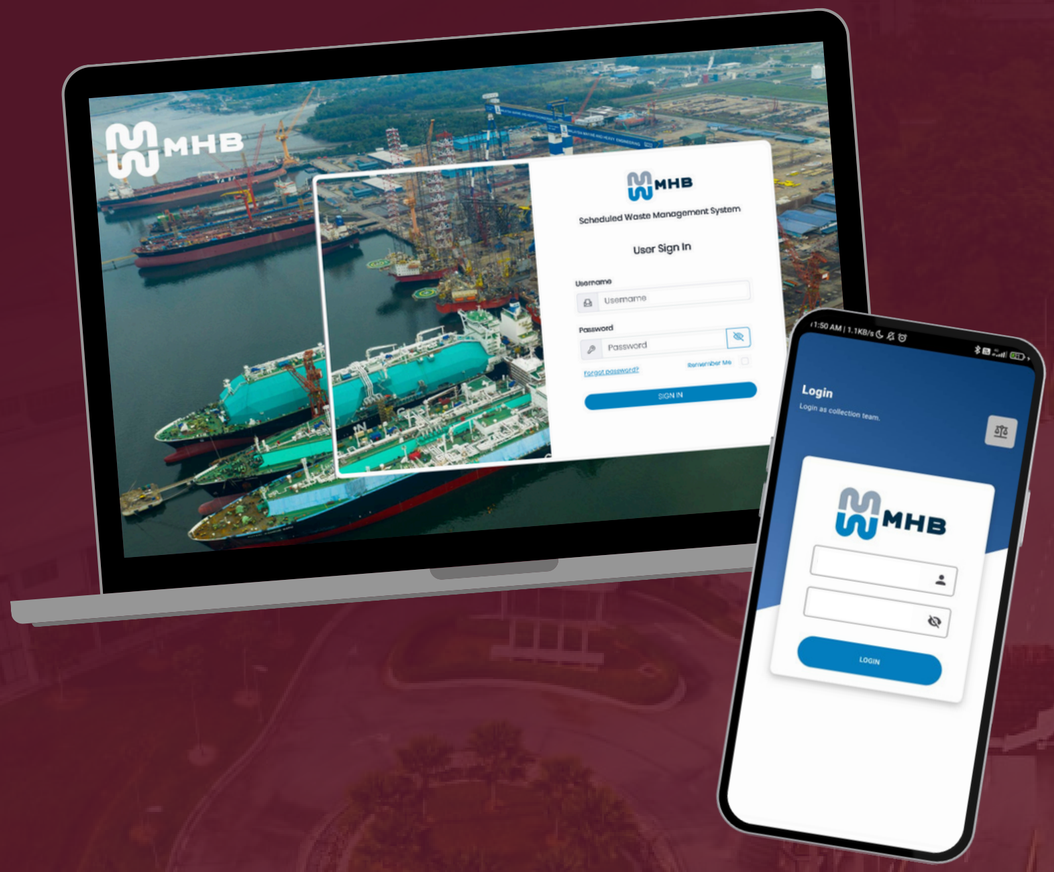
To enable real-time data entry and synchronization between mobile and web apps, ensuring accurate data and fewer errors.

02

03

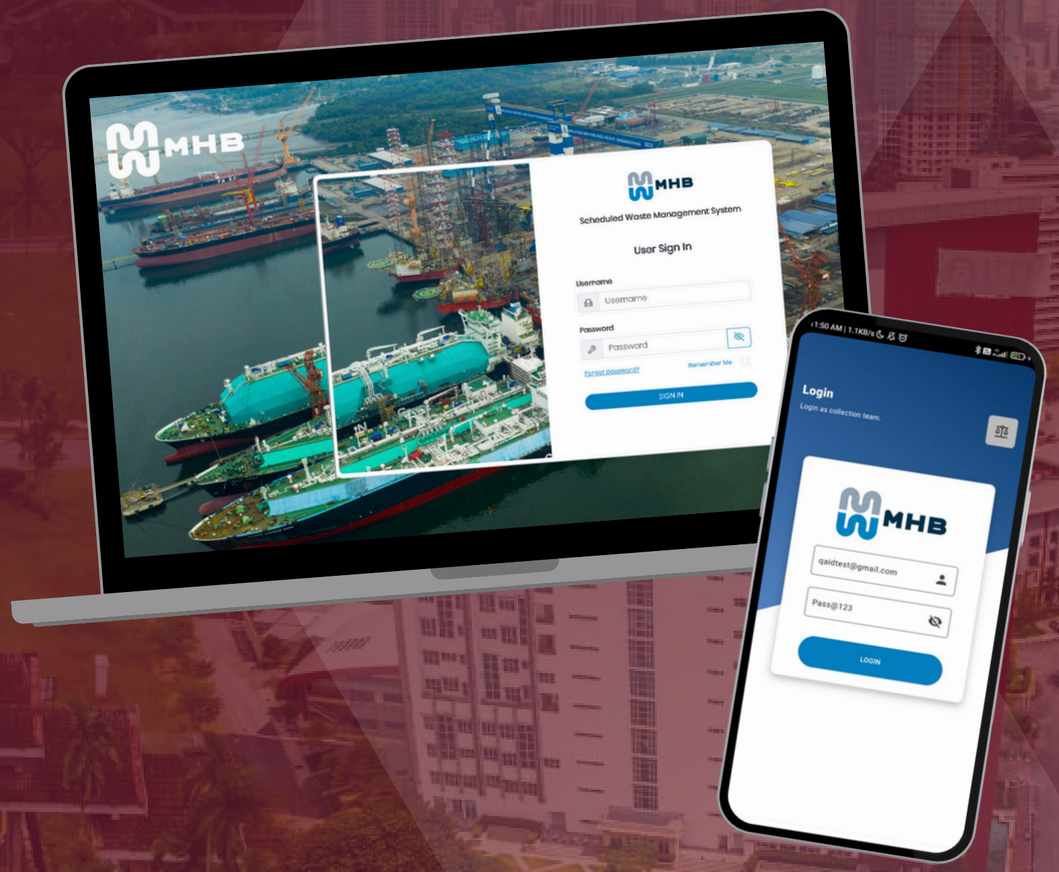
To improve data management with secure storage and easy-to-use interfaces for mobile and web platforms.

Scheduled Waste Management System (SWaM)



- Scheduled Waste Management System (Swam) is proposed to MHB
- The system consists of 3 type of users:
  - Collection , Disposal , Admin team
- The main objective is to streamline the process of waste management starting from the collection until disposal
- This system also allow live data monitoring for the admin team
- This system includes both web and mobile application

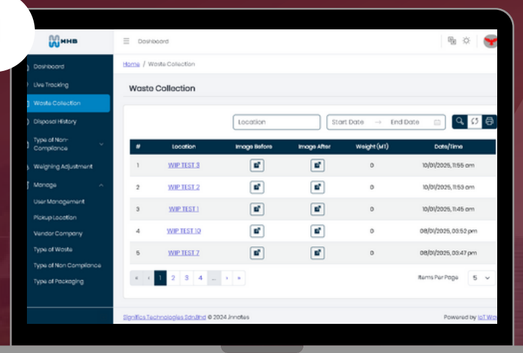
- Features
  - Collection Team (Mobile App)
    - Submit waste collection report
    - Submit Non-Compliance report
  - Disposal Team (Mobile App)
    - Submit weighing report
  - Admin Team (Web App)
    - Manage User, Waste, Pickup Location, Non-compliance report, Waste collection Activities
    - Monitor Collection Lorry Live location



Main Role & Task

- In this project, I have been assigned to join the Frontend Web Development team.
- My main task is to develop the UI/UX based on a mockup design for Admin Team
- Integrate each module with its backend
- Modules that I have developed:
  - Waste Collection,
  - Type of Non-Compliance,
  - Weighing Adjustment,
  - Manage,
  - Live Tracking,

1



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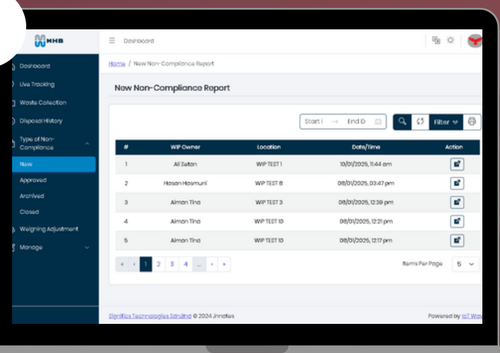

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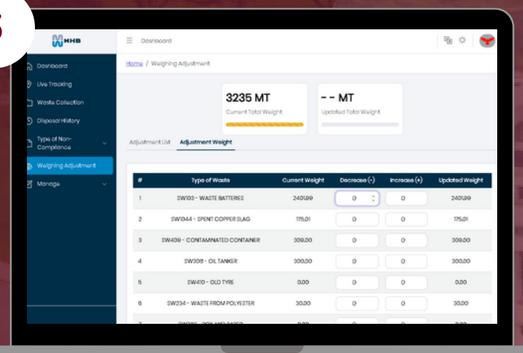

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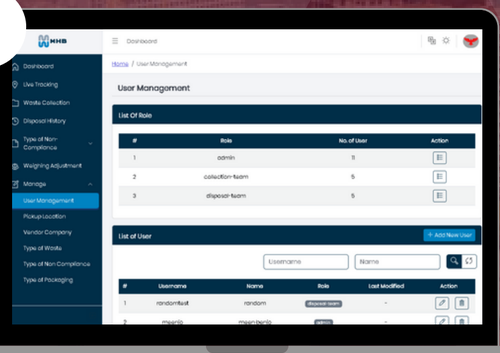

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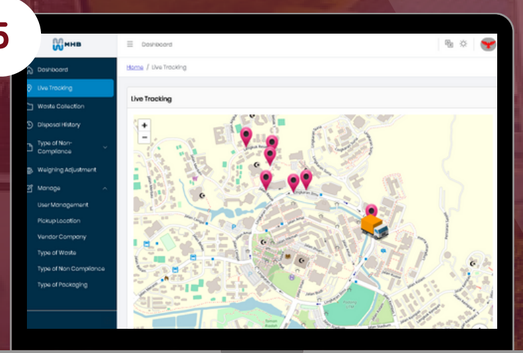


Hardware & Software used

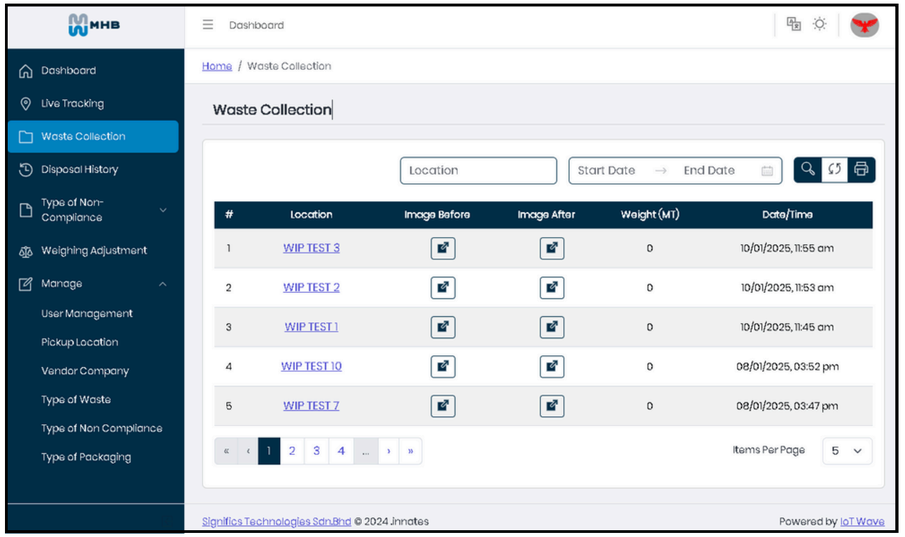
Hardware

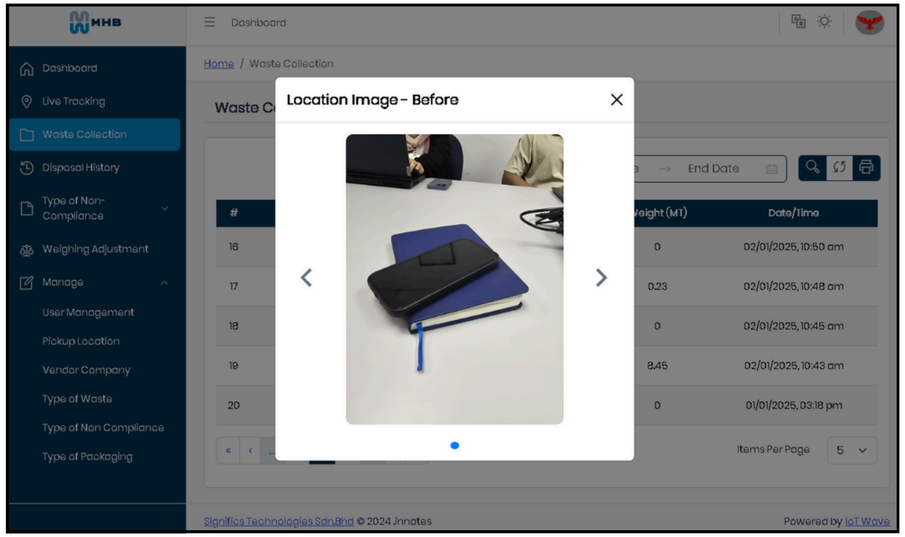
Hardware	Specification
Processor	Intel(R) Core (TM) i7-6600U CPU @ 2.60GHz 2.81 GHz
RAM	12 GB
Storage	237 GB

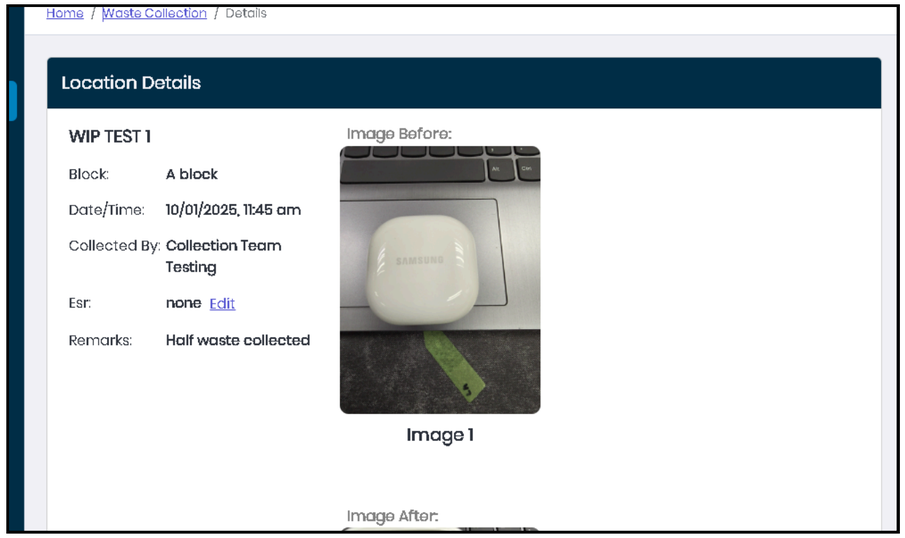
Software

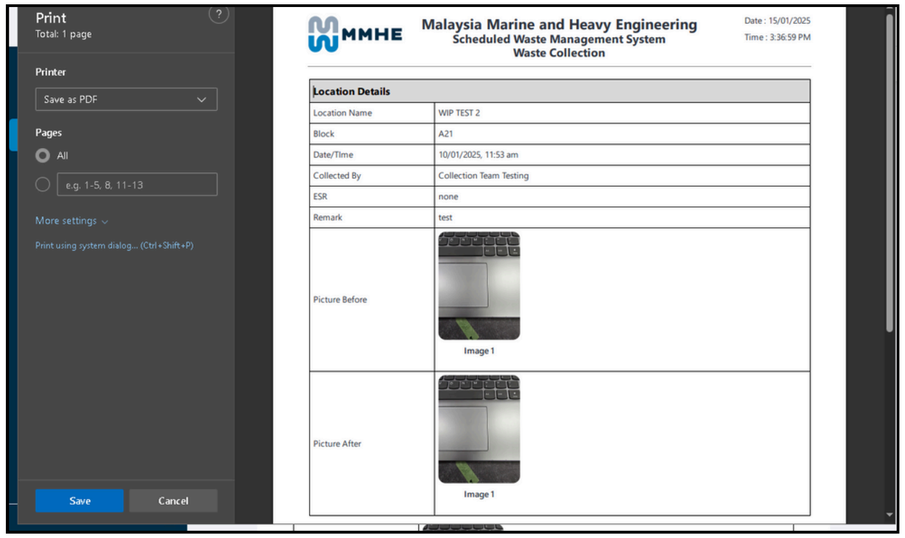
Software	Specification
Operating System	Windows 10 Enterprise Version 22H2
Source-Code Editor	Visual Studio Code
Programming Language	Typescript
Programming Library	React
Component Library	Core-UI

01 Waste Collection Module









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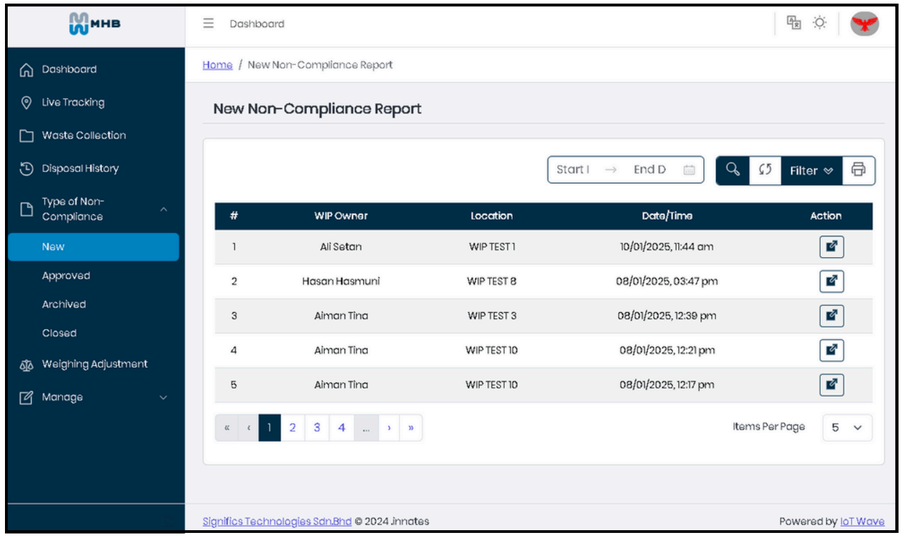
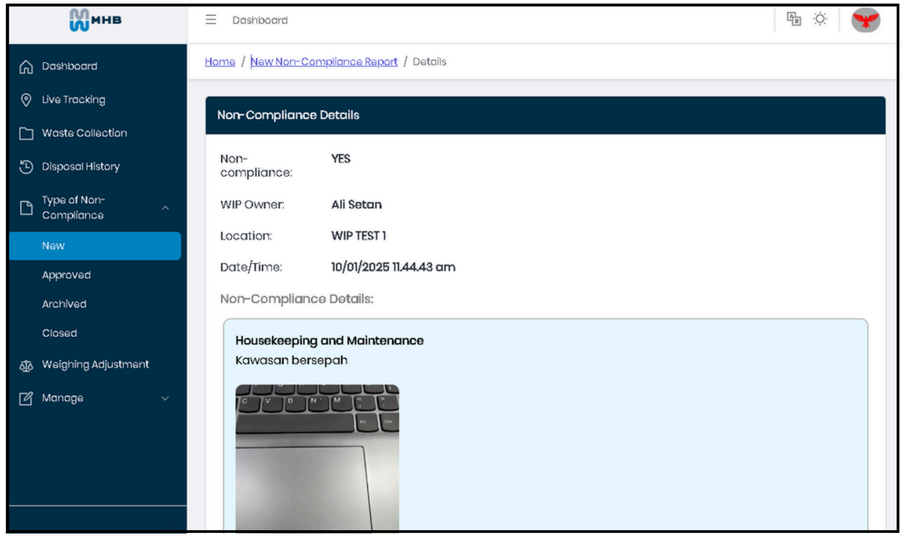
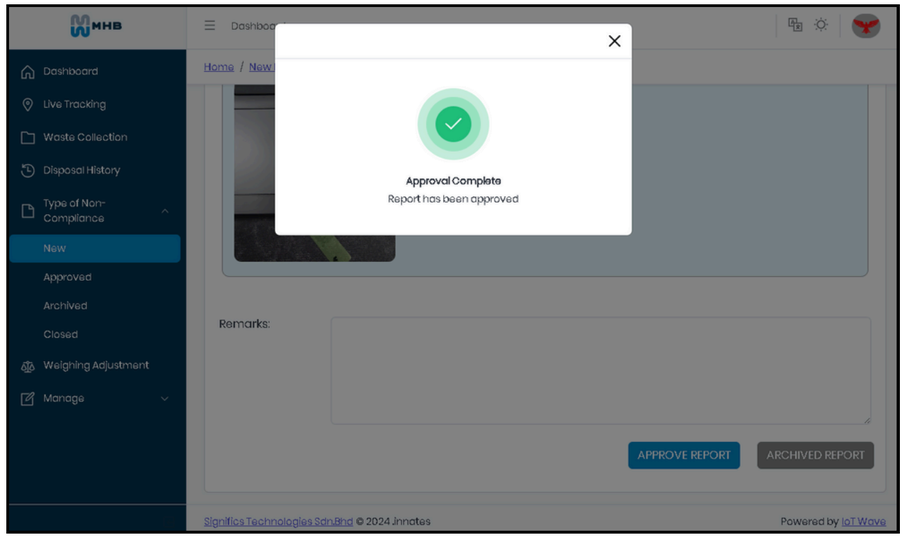
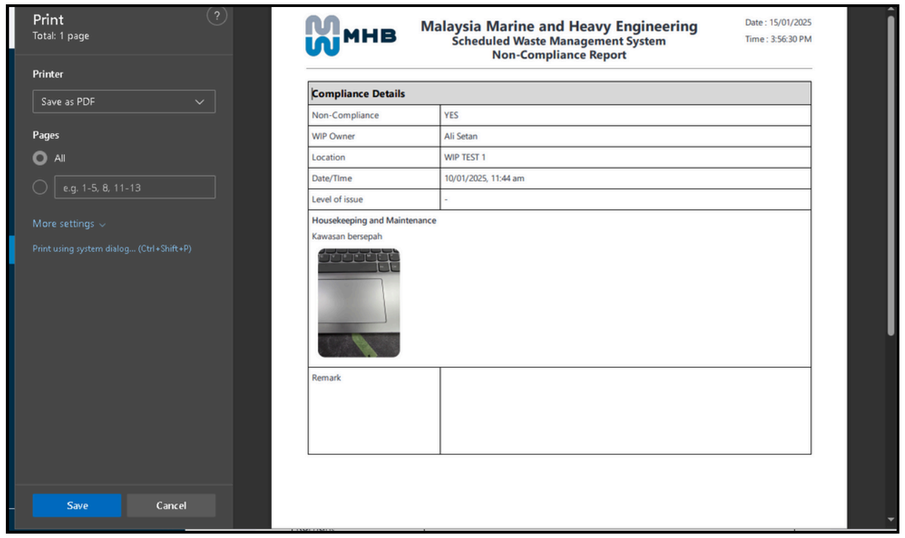
02 Type of Non-Compliance

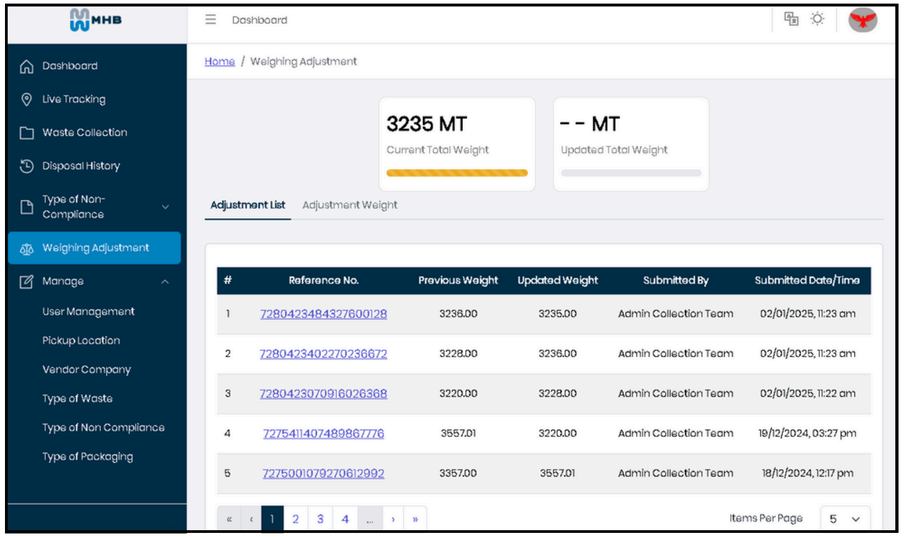


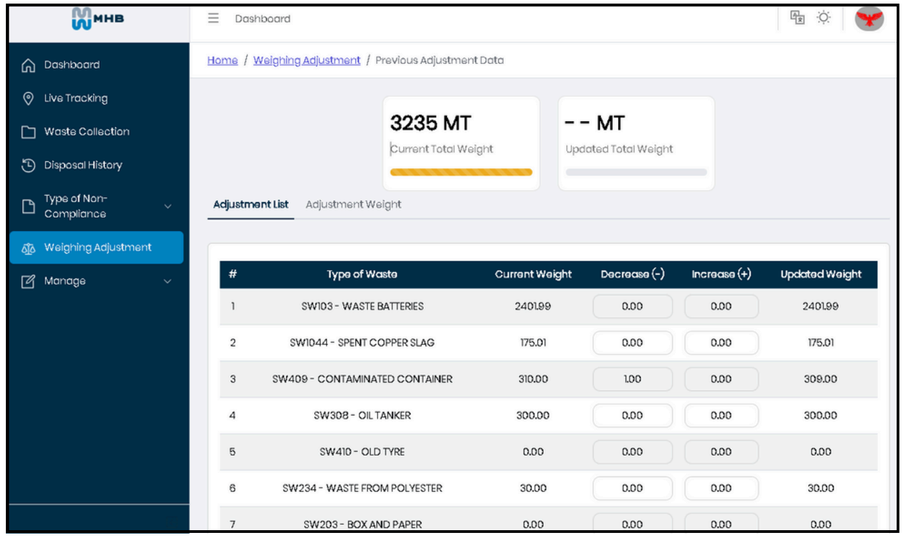


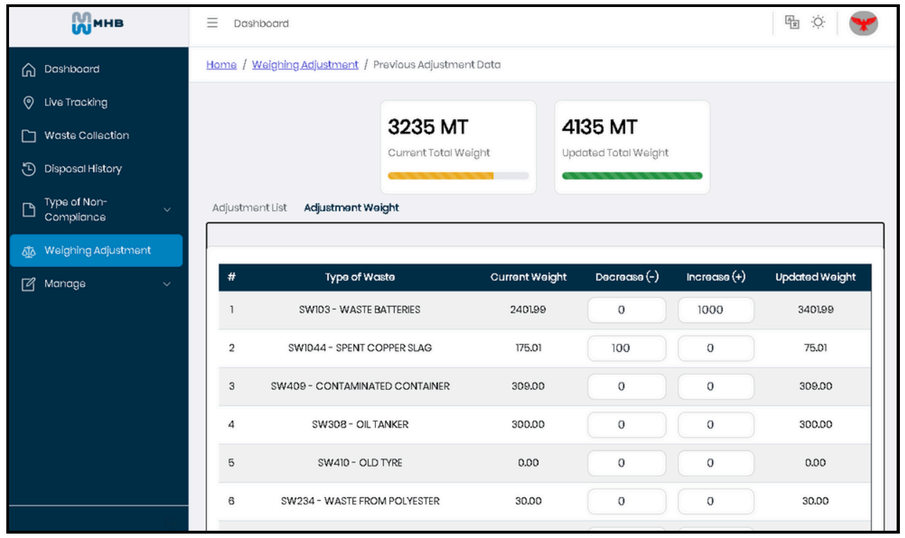


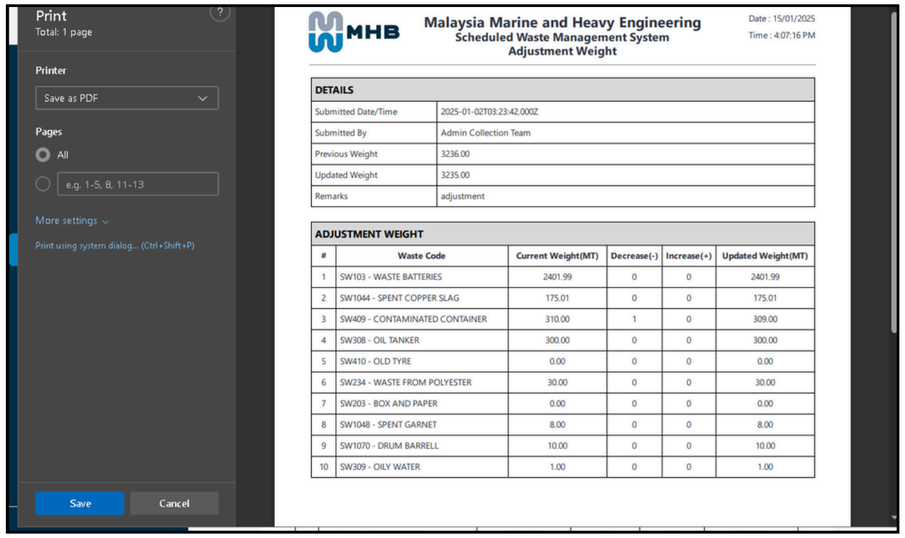


03 Weighing Adjustment Module

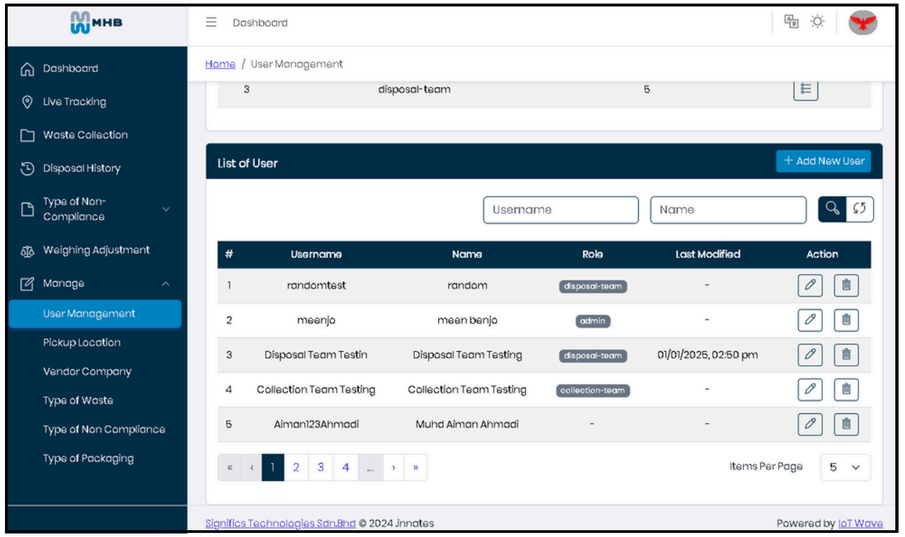


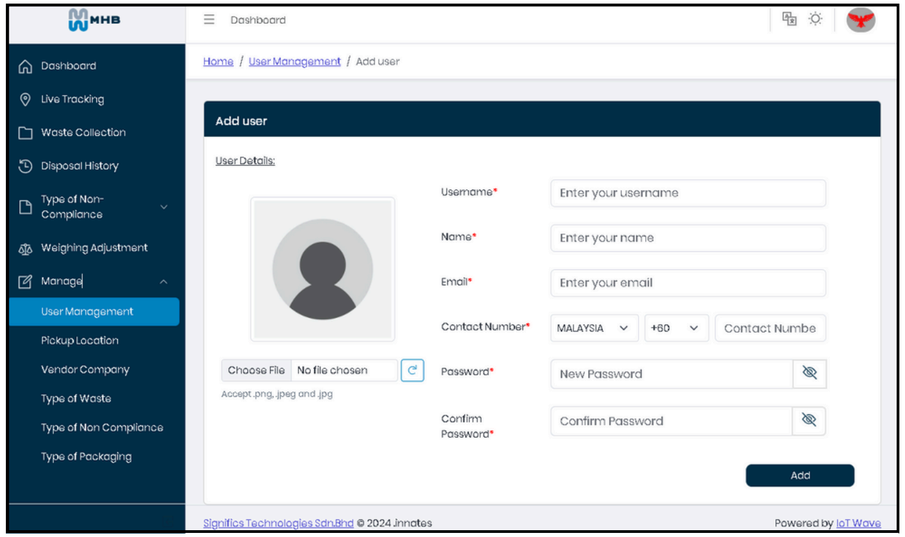


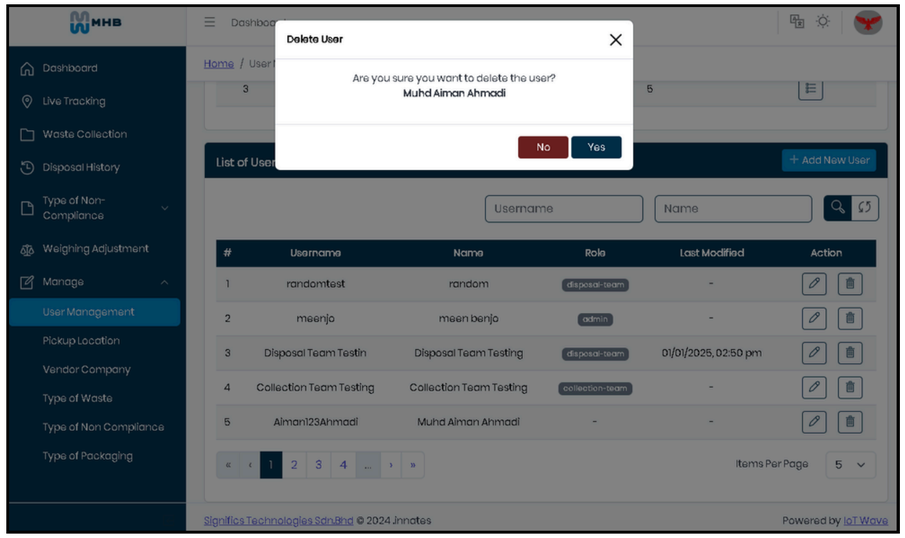


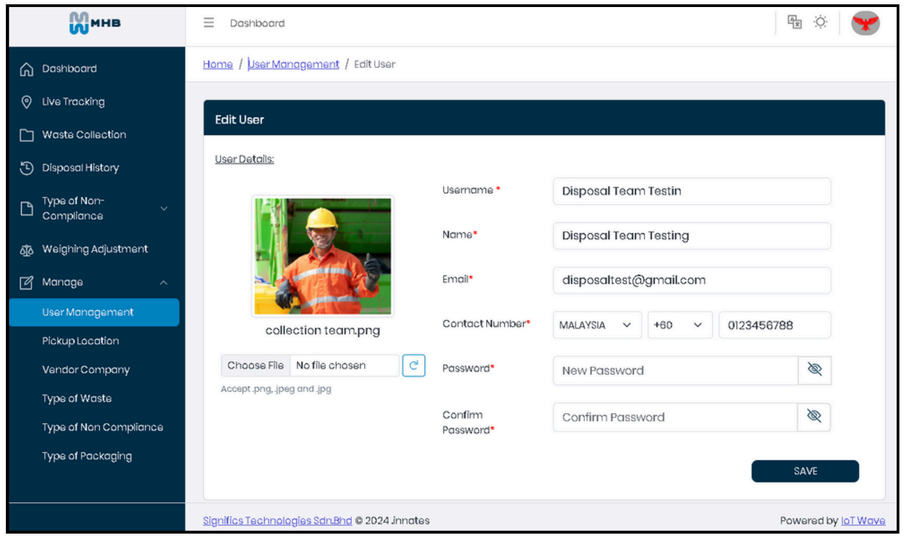


04 User Management Module

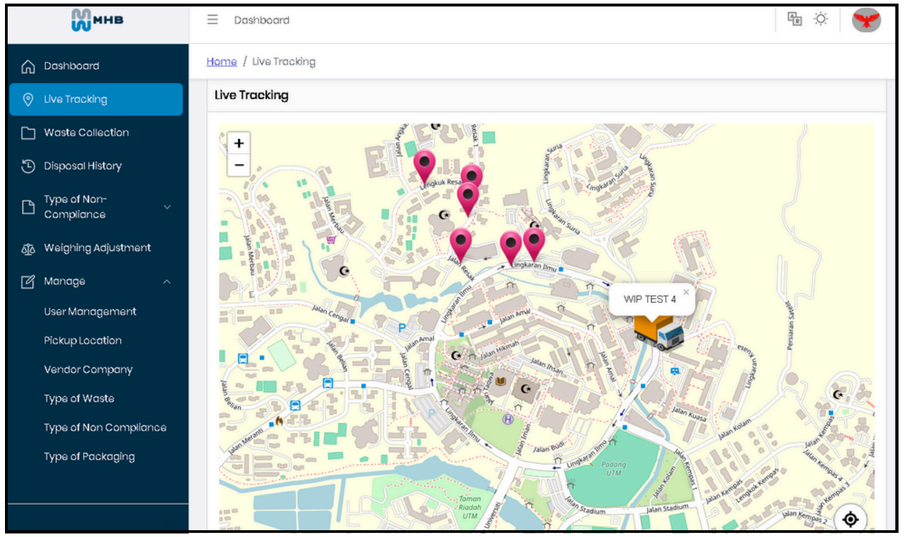


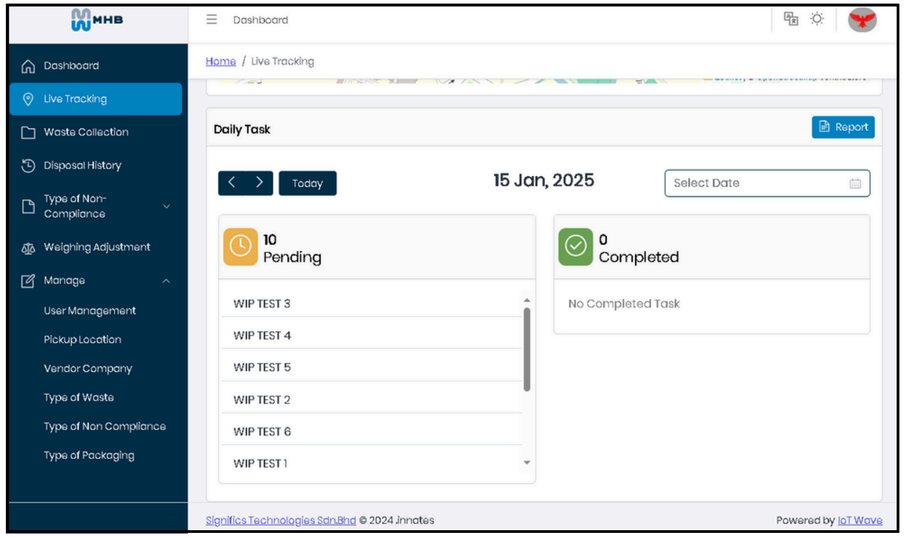


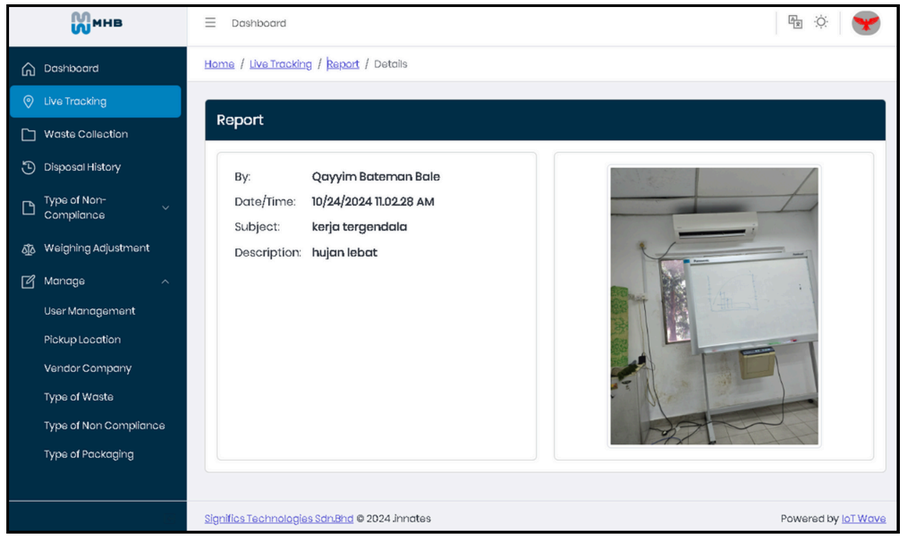


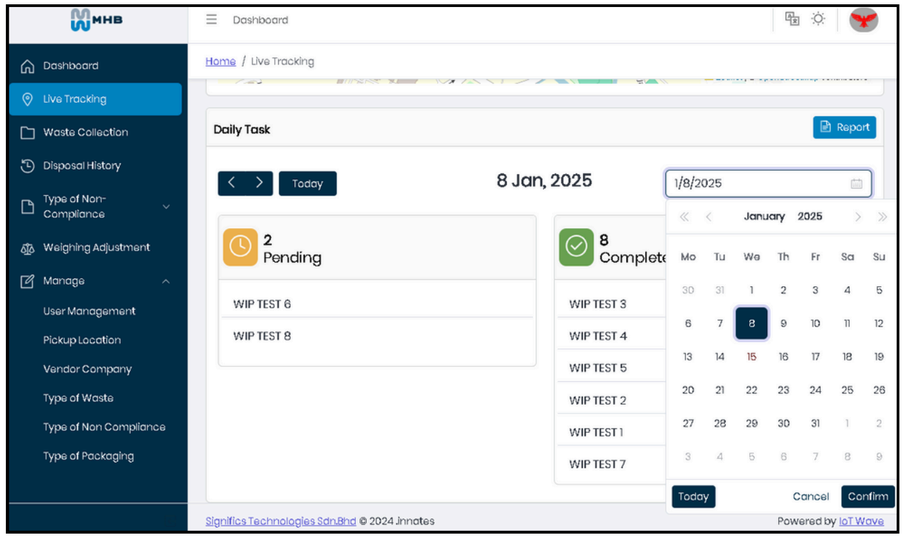


05 Live Tracking Module









Side Task

Participated in User Acceptance Testing (UAT) with user

Participated in Developing User Manual For different project

KELAH FISH FARMING SYSTEM

Project Objectives

01

To design and develop an Internet of Things (IoT)-based Kelah fish farming system

To develop an IoT-enabled monitoring system for real-time tracking and management of water quality parameters such as temperature, pH levels, ammonia concentration, and water flow.

02

03

To create a user-friendly mobile apps for viewing the real-time water quality data and alert the user when there is abnormal activities on pond.

Kelah Monitoring System (KMS)

- Kelah Monitoring System (KMS) is proposed to make the fish pond owner able view the live data of the pond water quality.
- Provide notification alert when there are blackout at the pond location.
- Able to register the Aqua Farm, Ponds and the IoT system for each pond.
- Provide historical data of each sensor and pond readings.
- Provide notification when there are detection such as oxygen failure, and when any human and animal intruder entering the pond.

Main Role and Task

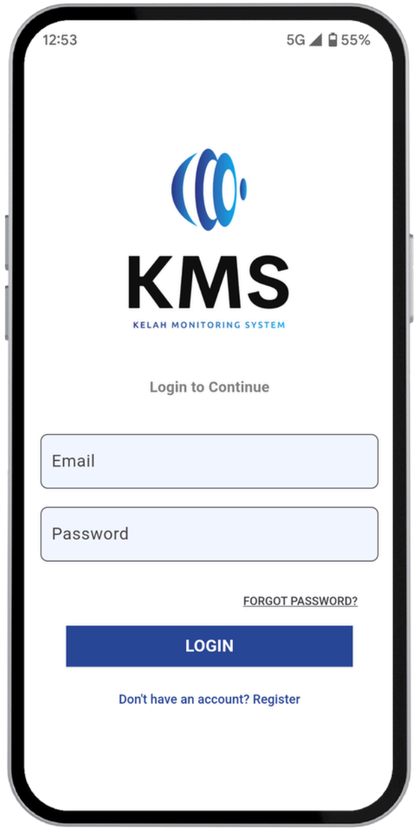
- Assigned as Frontend Mobile Developer Intern.
- Develop UI/UX for this KMS based on mock-up design prepared.
- Develop live data monitoring screens.
- Develop aqua farm and sensor registration features.
- Implement Notification Alert
- Integrate KMS with RESTful API

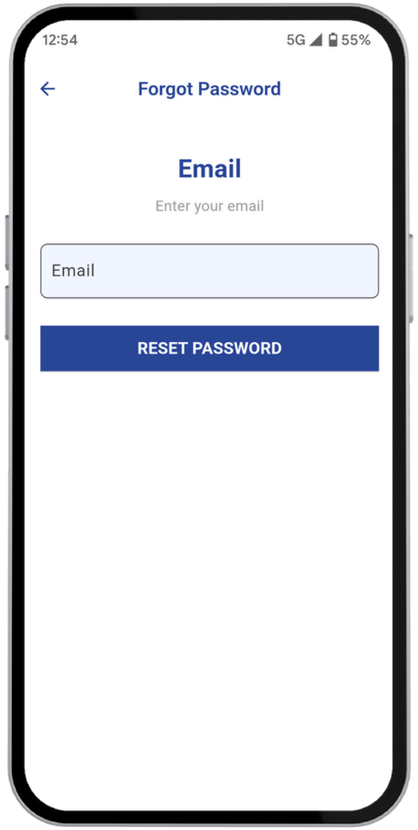
Mobile Application Development Tools

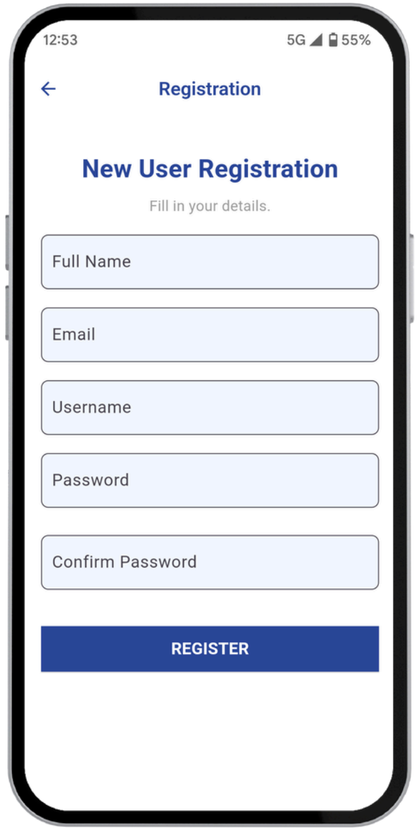
- Flutter
- Visual Studio Code
- Android Studio

KMS Modules

01 Login Module

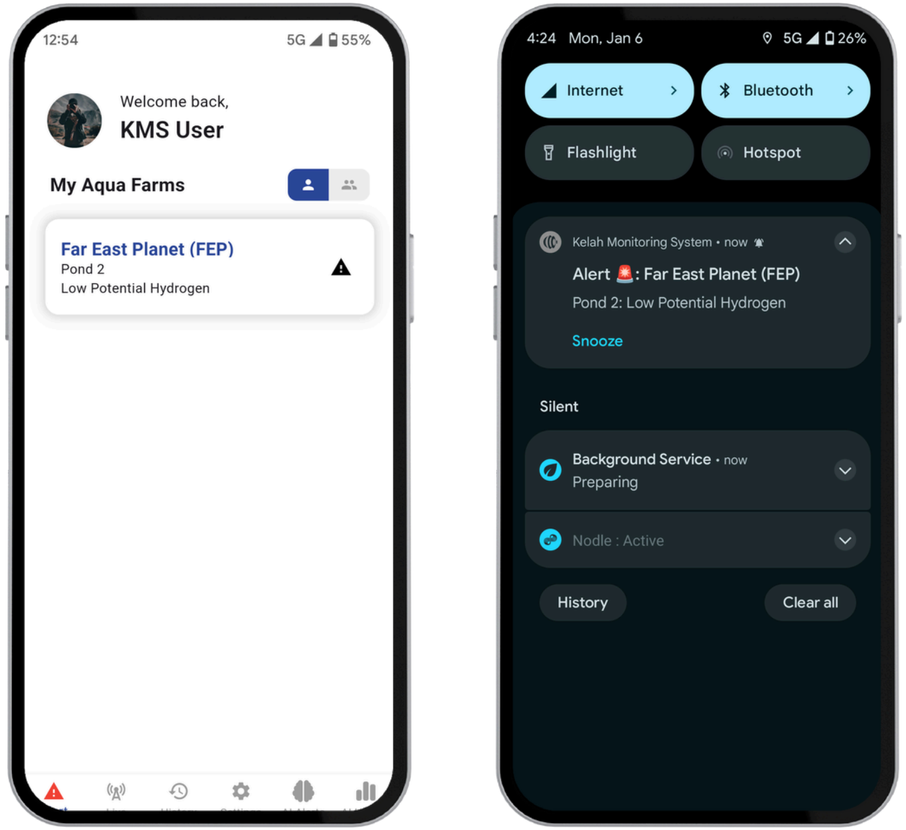






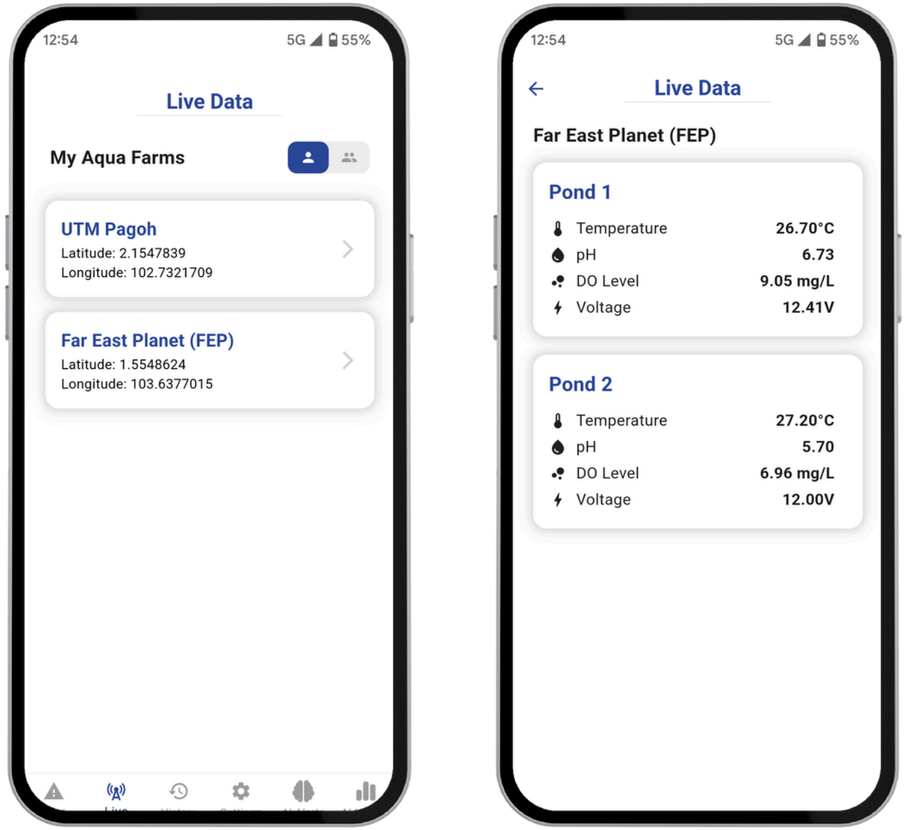
KMS Modules

02 Alert Module



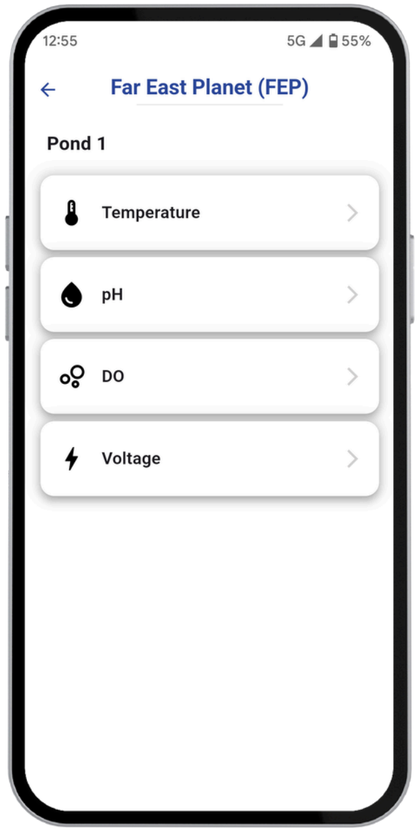
KMS Modules

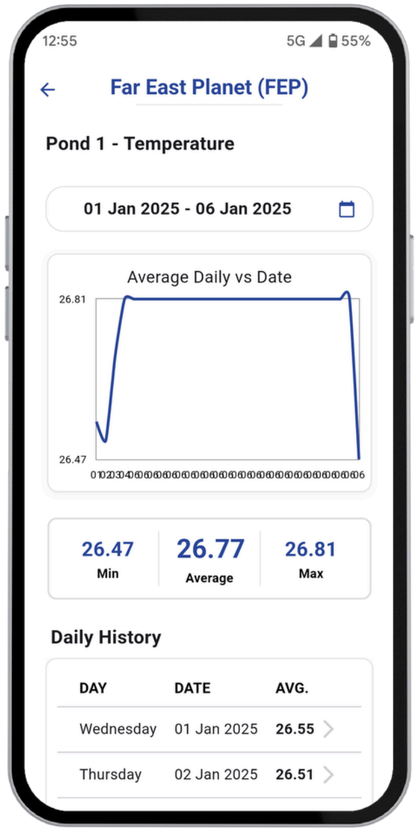
03 Live Data Module

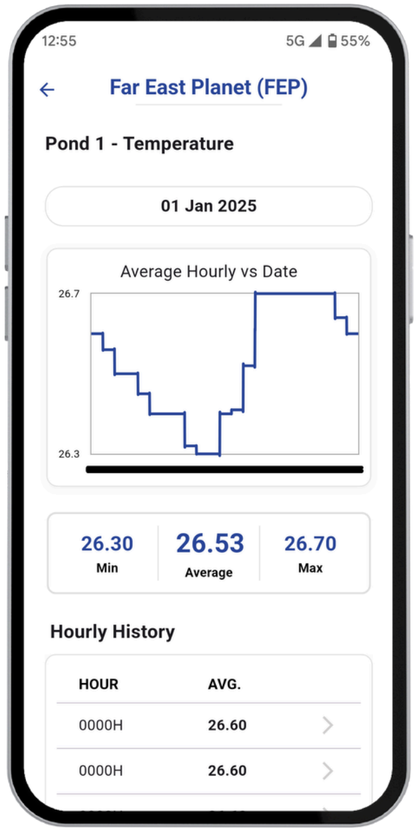


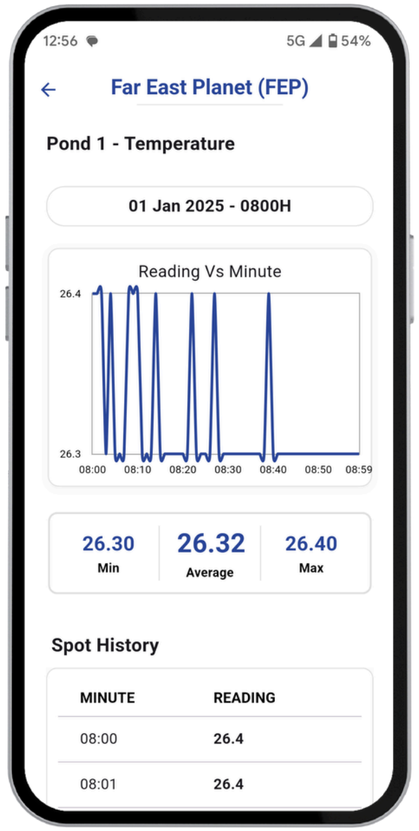
KMS Modules

04 History Module









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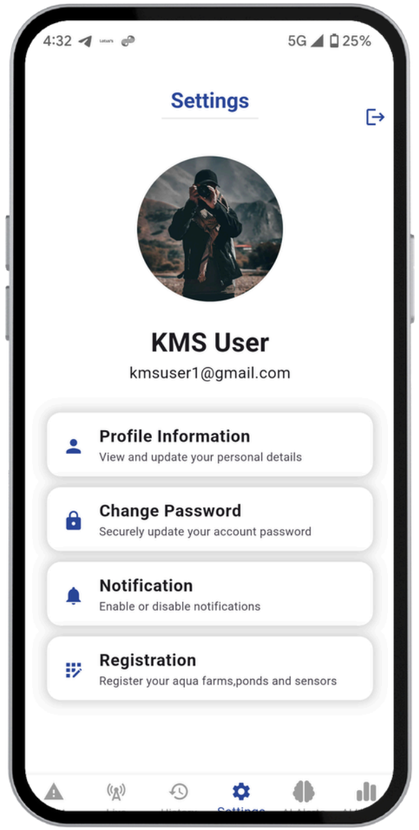
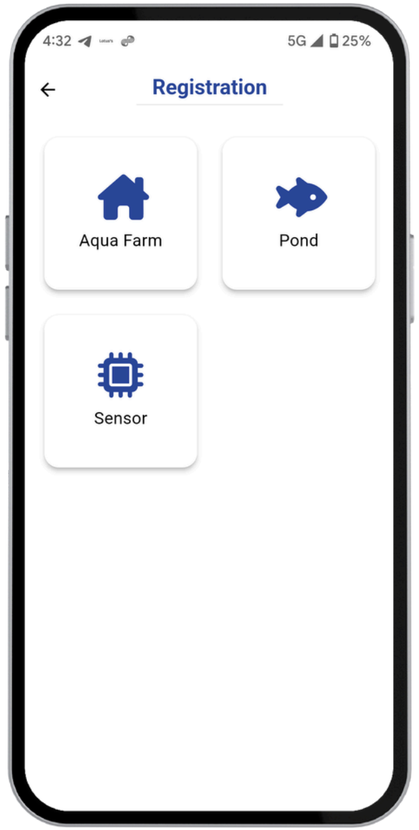
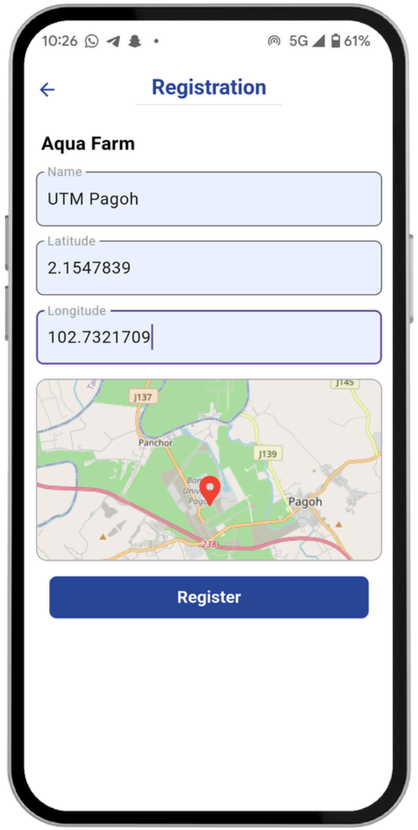
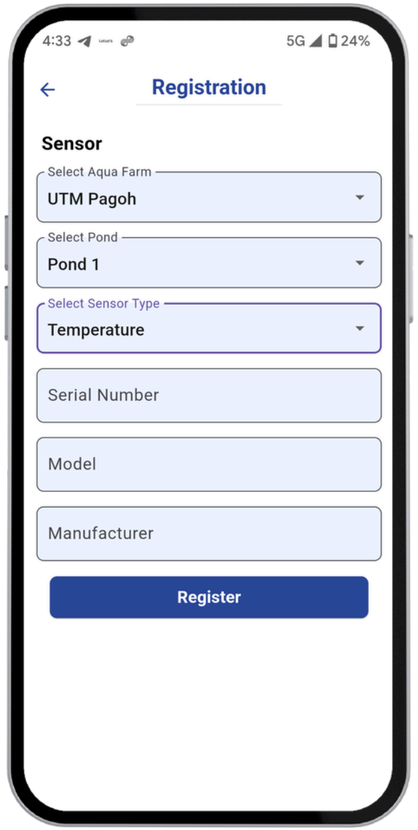
KMS Modules

05 Settings Module



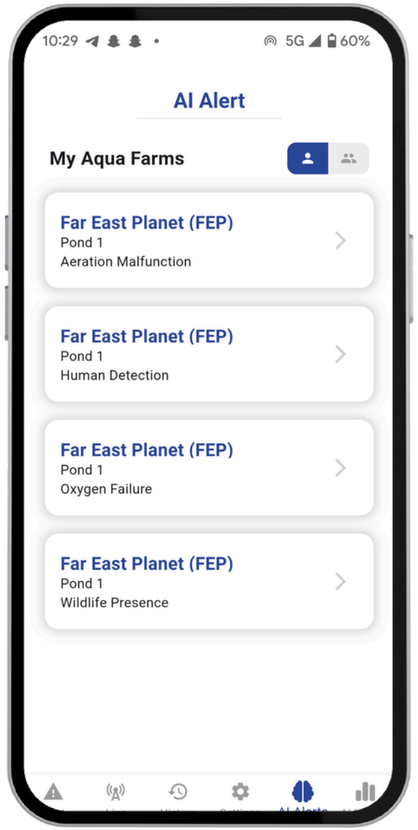


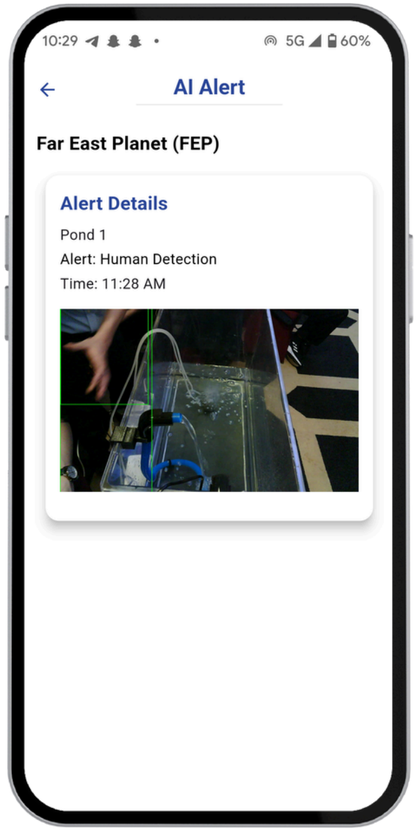


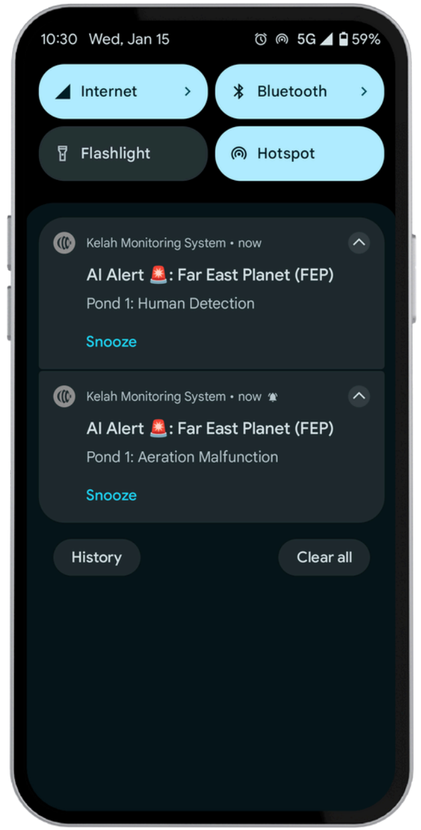


KMS Modules

06 AI Alert Module

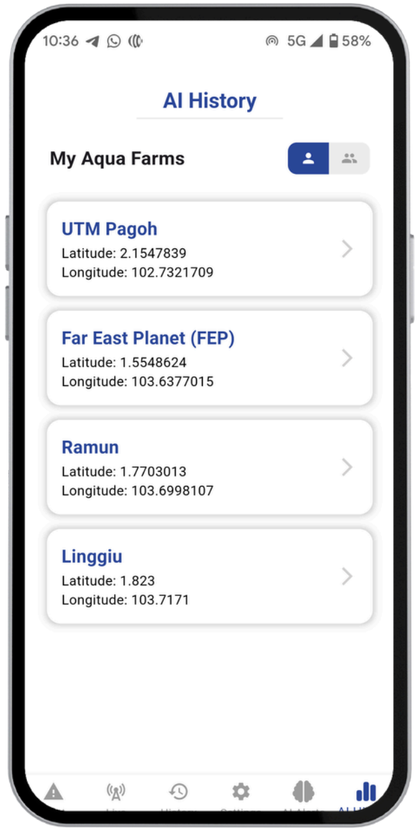


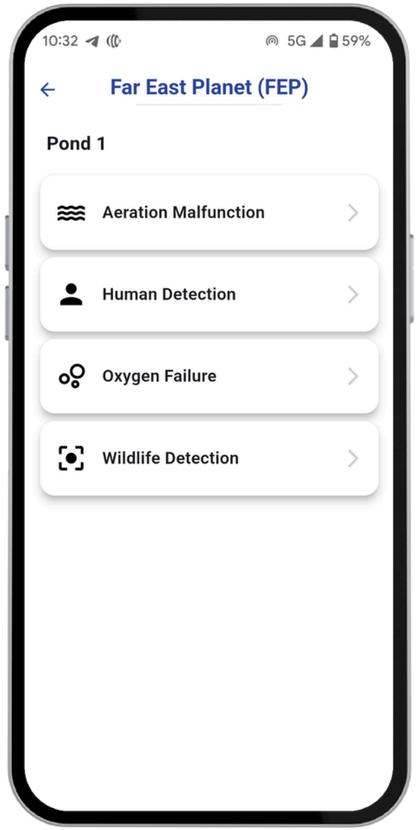


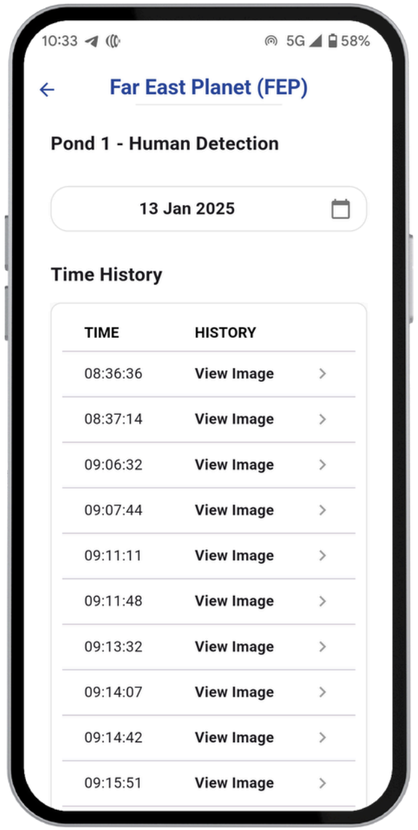


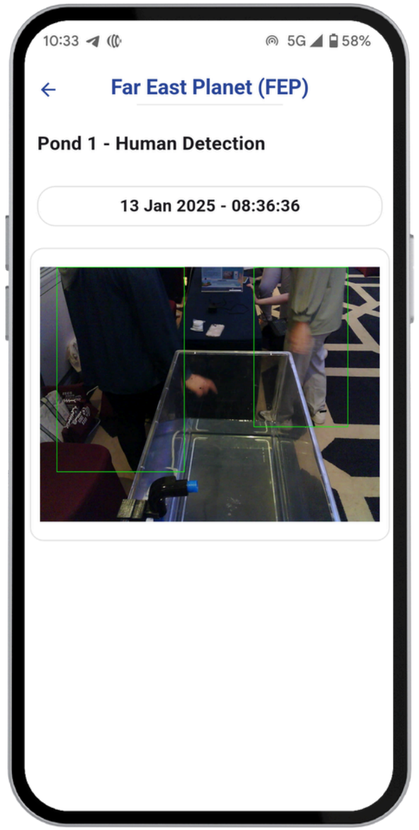
KMS Modules

07 AI History Module

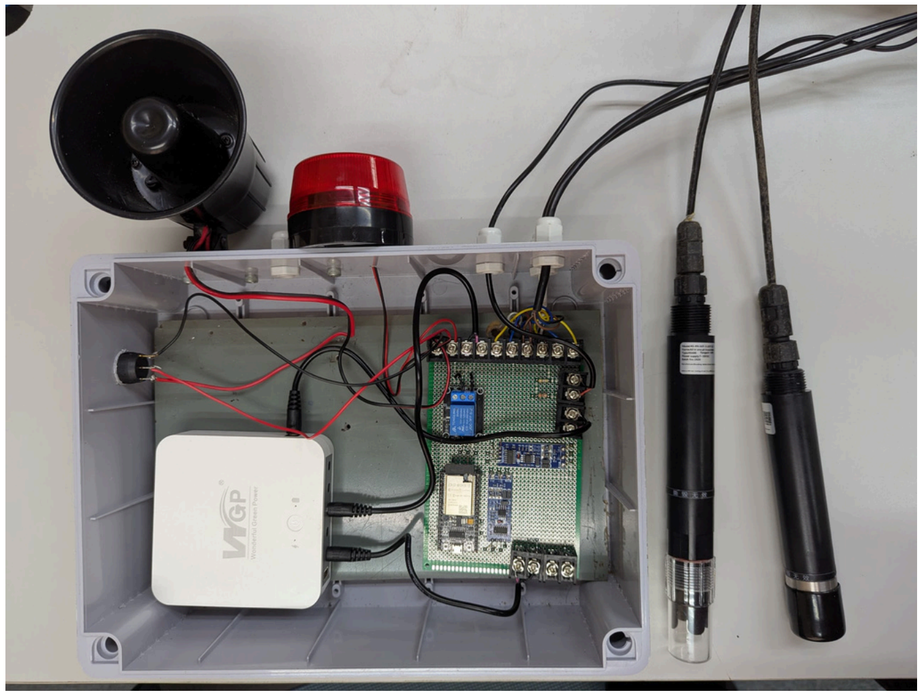








Side Task



- Modify current IoT hardware code to use mobile API to sensor data to the server and database.
- Test the integration with hardware and KMS app.

Achievement

Problem-Solving Abilities

Dealt with various technical challenges, such as debugging code and troubleshooting system errors

Time Management

Effectively balanced the project deadlines, ensuring timely completion of deliverables while maintaining quality

Skills Development

Developed skills in Flutter Mobile & TypeScript Framework and learned to use MySQL and RESTful API

Teamwork

Collaborated closely with team members, sharing knowledge and responsibilities to achieve project goals. Supported peers in troubleshooting and resolving complex issues

Learn New Tools

Introduced to LoopBack API 4.0

Communication

Participating in team discussions in overcoming technical hurdles

THANK YOU