Meeting 1 of Group Syndicate

Attendees:

- Vidur Somaru
- Shravan Ramjathan
- Keagan Shaw
- Ahmed Vally
- Shivar Tuplah
- Shaymen Kista
- Paayal Rakesh

Meeting Times:

- Date: 27 February 2025
- Start: 17:30
- End: 18:30
- Duration: 60 minutes

Purpose of Meeting:

The purpose of this meeting was to discuss similar projects and plan the commencement of the Smart Hydro project.

Meeting Summary:

The meeting began with Shravan indicating that similar Git projects exist and can be used as references. Paayal added that the team has access to the previous project's code, allowing them to build upon the existing foundation. It was also noted that a team leader from the previous year will provide assistance. Shravan mentioned that he is in contact with members of last year's team to gather further input.

The discussion then focused on the Smart Hydro project itself.

Current Code Base:

The team identified key physical components:

- A PVC aluminum frame to support the system.
- An electronic circuit.
- A variety of sensors for monitoring air, temperature, humidity and PH levels.

The team acknowledged that they had access to two similar projects from 2024. The team discussed using Arduino for the Smart Hydro project.

Enhancements:

Enhancements to Smart Hydro were discussed, including:

- Color-coding to indicate plant needs.
- A system for automated bug infestation control.
- The development of a mobile and desktop application for remote project control was proposed.

Project Requirements:

Project needs were defined, including:

- Periodic nutrient additions.
- A manual mode for testing purposes.
- An automatic mode for regular operation.
- Adherence to Smart Hydro's specific criteria.

The possibility of building sensors in-house versus purchasing pre-built sensors was raised, with the decision pending further investigation. Points for enquiry to Denzyl were noted.

The team discussed documentation requirements, including documenting architectural choices and budget allocations. The Agile development style was chosen for the project.

Shravan, as Team Leader, emphasized a collaborative approach, prioritizing team input and guidance over dictation. The team discussed role finalization and the phases of the project: client discussion and input, documentation, and research. It was clarified that the project would involve higher-level coding rather than Object-Oriented Programming. Sprint

week requirements and ensuring deliverables meet the expected standard were discussed. Shravan distributed links to relevant resources, research, and similar projects.

The team acknowledged potential limitations on the scope of additions to the project and agreed to compile questions for Denzyl to clarify these limitations.

Shravan expressed his desire to incorporate a machine learning model, with discussion around using chatbots to provide alerts and facilitate communication.

The core purpose of the Smart Hydro project was defined: to establish a secure and reliable method for food production, particularly relevant in situations of floods and climate change, ultimately addressing food scarcity. The team discussed learning from other cultivation methods, such as indoor cannabis growth, to optimize their approach.

Application Requirements:

Application requirements were discussed:

- Users should have the ability to manually adjust specifications for different plants.
- Access levels within the application will vary for different employees.
- The application should be designed to allow for future expansion and development.
- The chatbot should provide plant-specific data, including relevant guidelines.

The budget was discussed, with the potential for adjustments depending on proposed ideas and their associated costs.

The overarching goal is to develop a user-friendly application that integrates data for the chatbot and creates a more automated and efficient system, promoting ease of use and optimal long-term plant development.