





Plant Buddy

Introduction

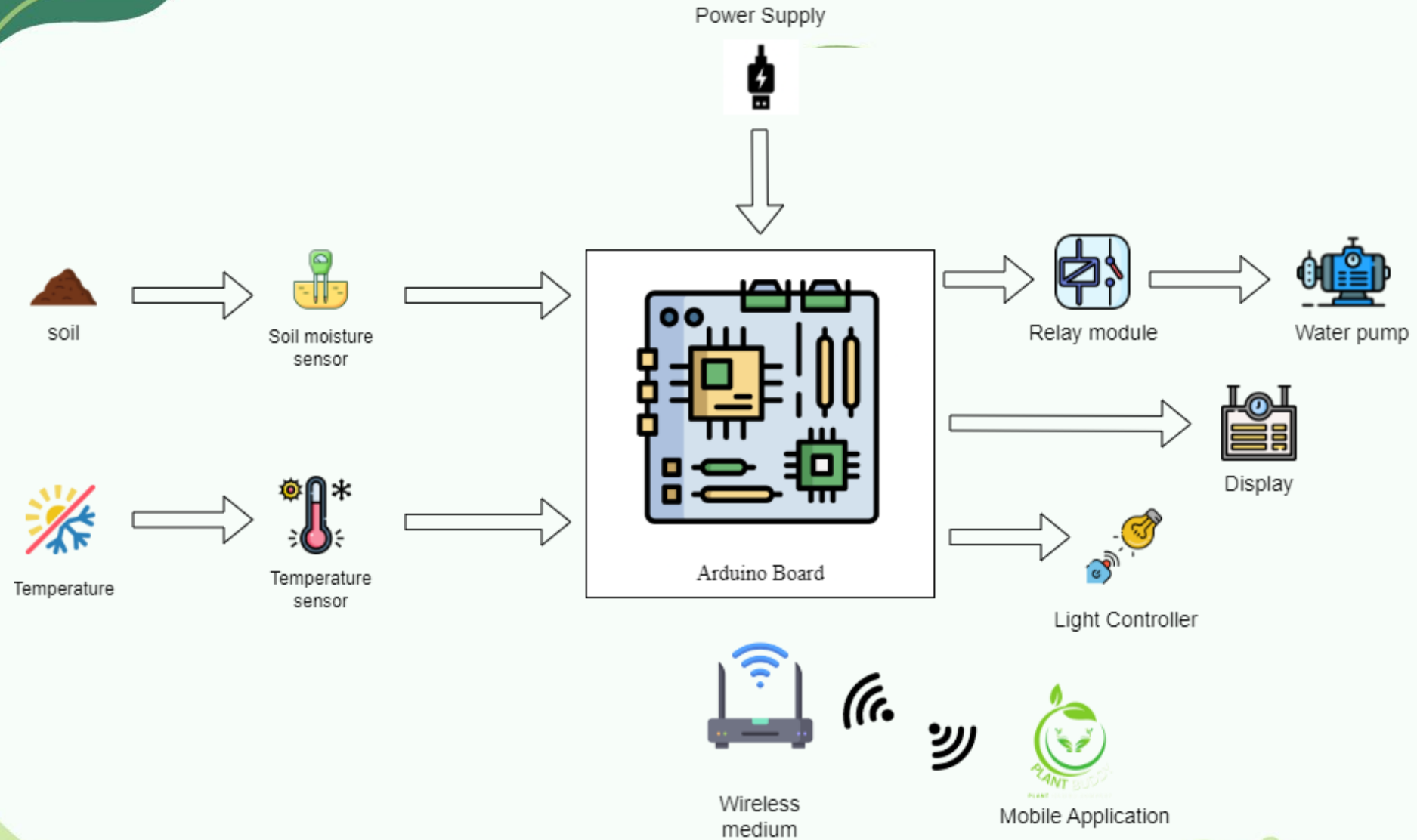


Problem Specification ____.

- ✿ Difficulty finding fresh and chemical-free herbs(garnish leaves).
- ✿ Difficulty in using all the purchased herbs.
- ✿ Insufficient time and motivation for planting and caring for plants.
- ✿ Need to have the ability to install the pot in a small area with adding the beauty to the environment.



Solution Outline

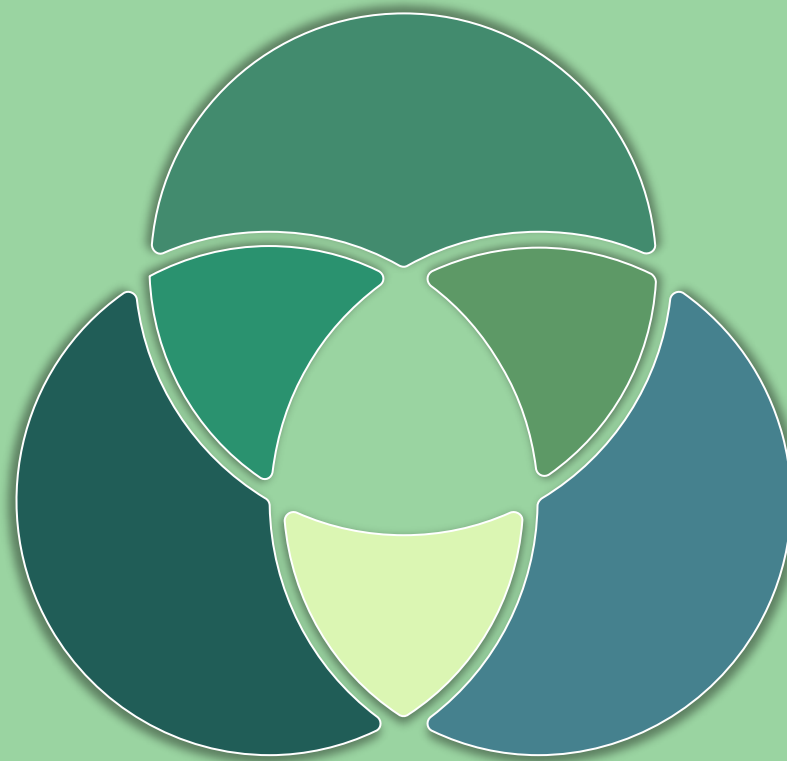


Key Benefits —

- 🍀 **Automated Plant Care**
- 🍀 **Optimized Environment**
- 🍀 **Energy Efficiency**
- 🍀 **Remote Monitoring**
- 🍀 **increased Plant Productivity**
- 🍀 **Time Savings**



Objective





Main Objective

- ✓ To provide a convenient and efficient solution for growing and maintaining fresh herbs indoors while ensuring consistent care and optimal growing conditions without the need for constant manual intervention, the main objective of an automated plant caring system for kitchen herbs is established.

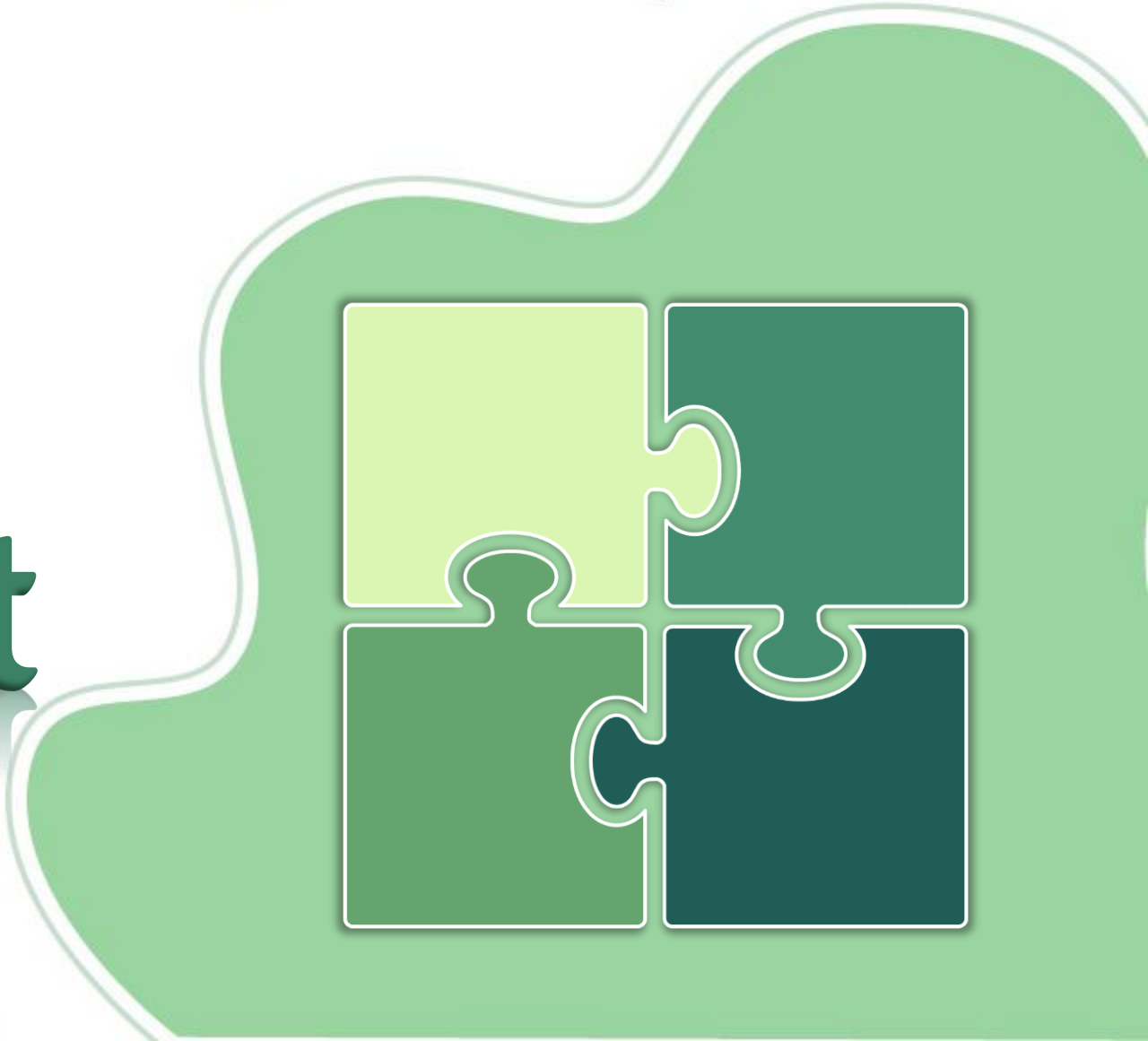


Sub Objectives

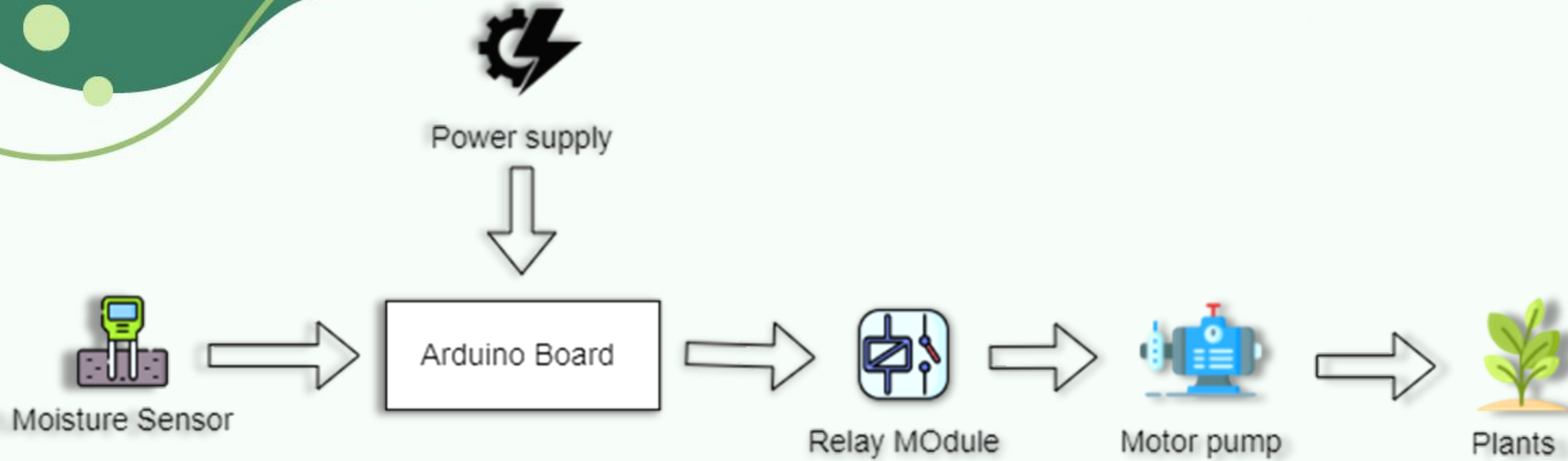
- ✓ Soil Moisture sensor implementation
- ✓ Develop Product Monitoring Application
- ✓ water pumping system Implementation
- ✓ Light controller unit implementation & Display the main information



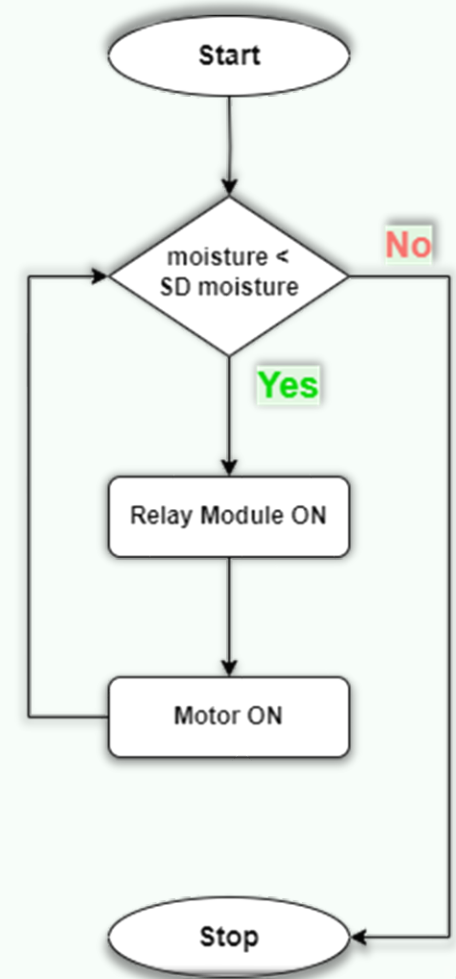
Flow of the Project



Auto Watering System

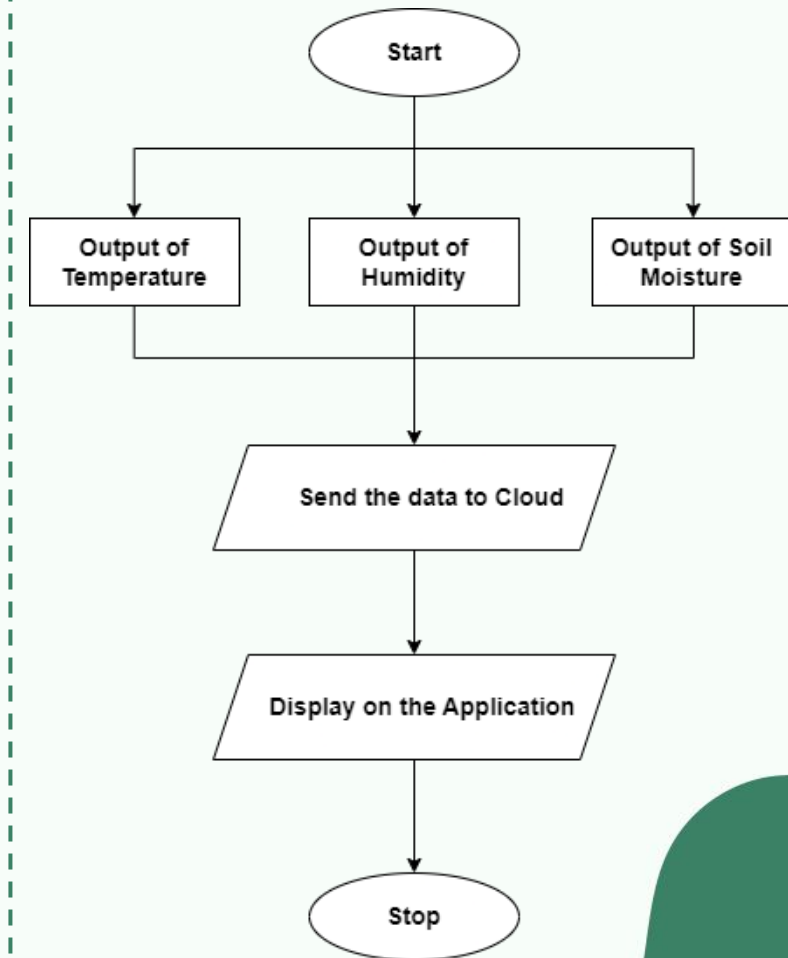
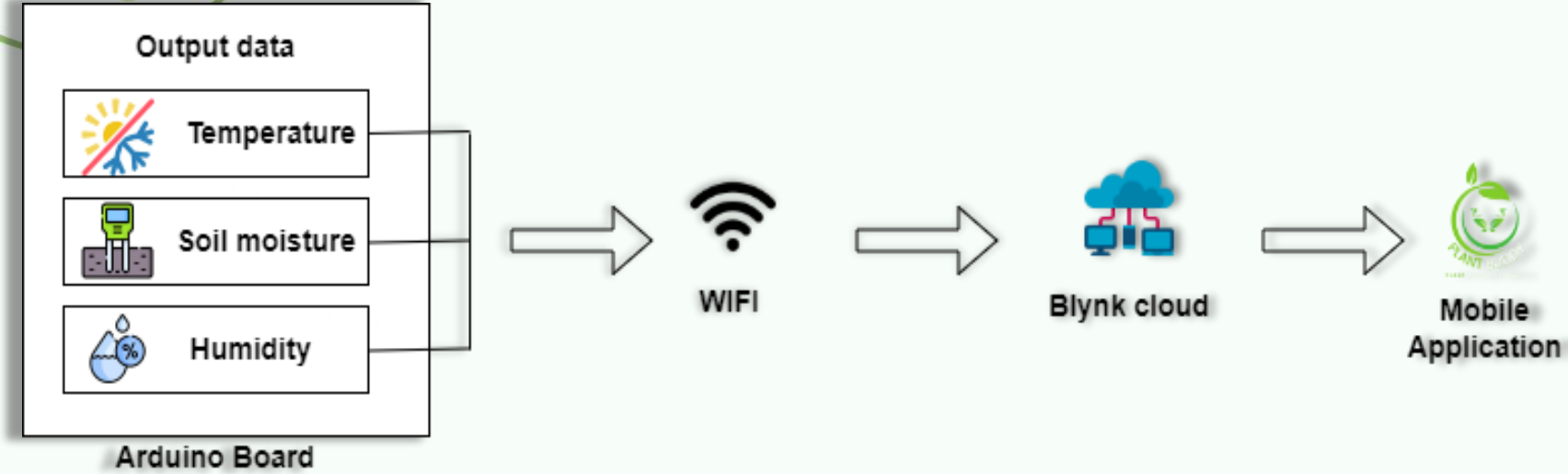


🍀 An auto watering system for home plant care operates by utilizing sensors to monitor soil moisture levels and activating a water delivery mechanism, such as a pump or drip irrigation system, to provide water to plants when needed, ensuring optimal hydration without manual intervention.





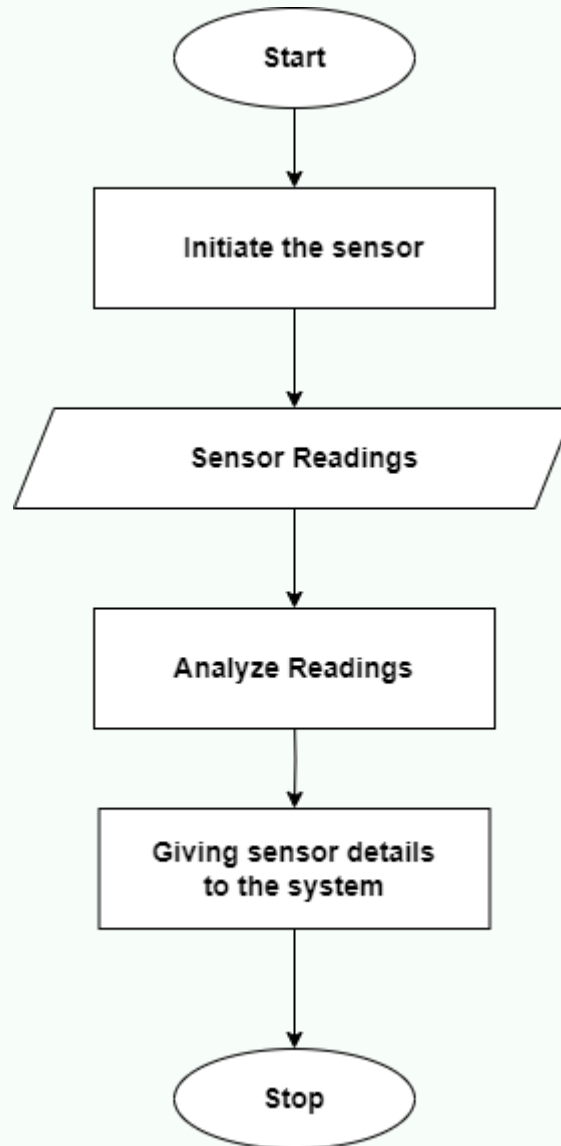
Monitoring Application



🍀 Utilizing sensors, the Plant Buddy tracks temperature, humidity, and soil moisture levels, providing real-time data directly to your mobile device.

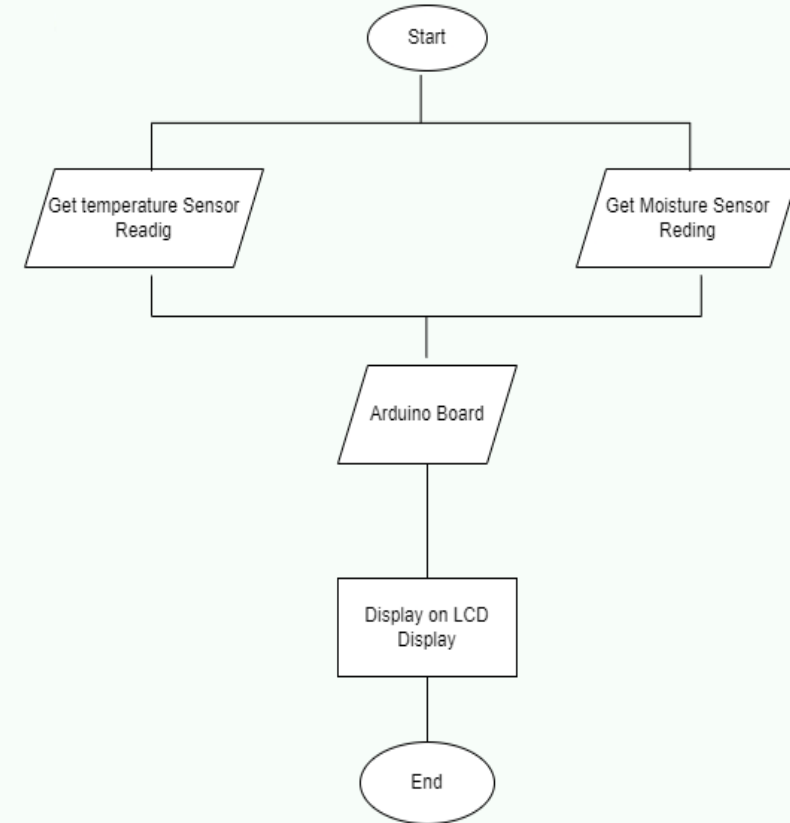
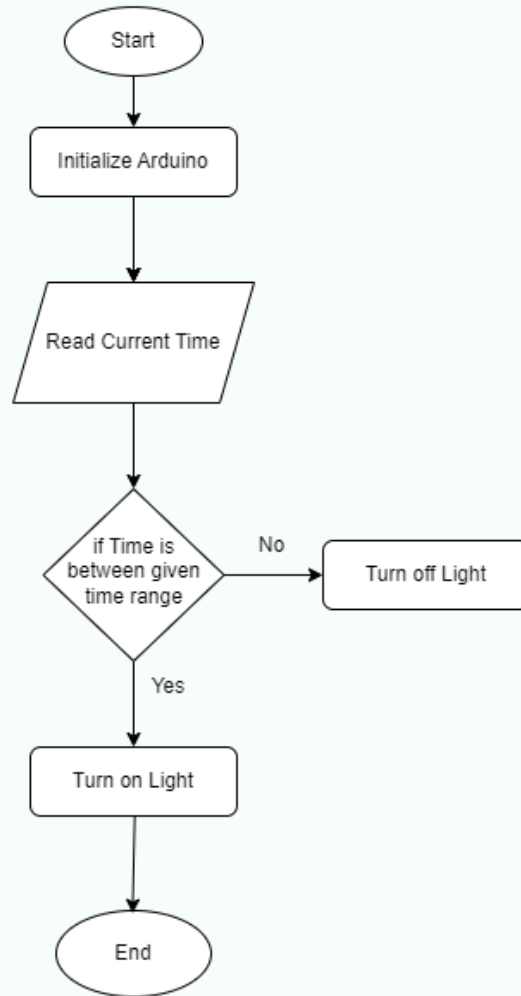


Soil Moisture Checking

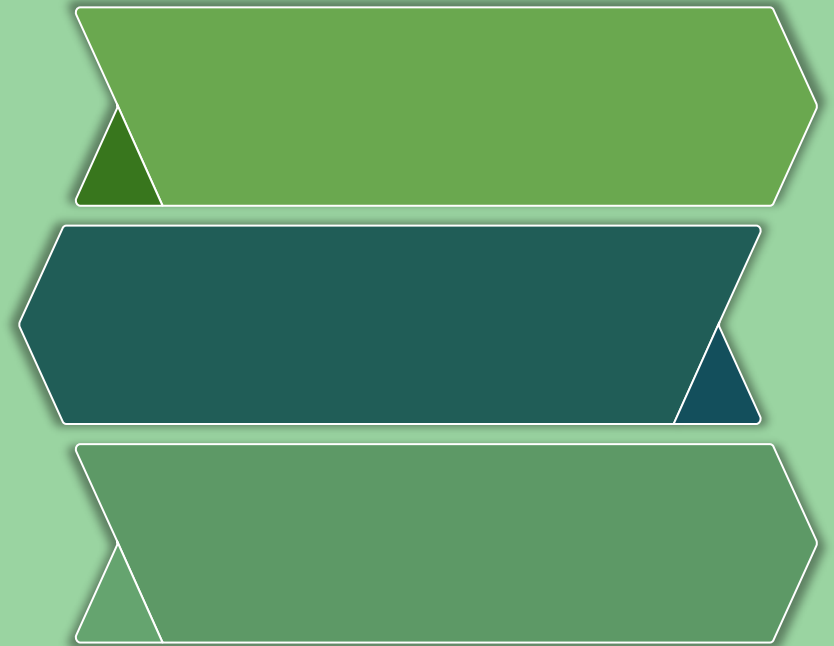




Light Control System

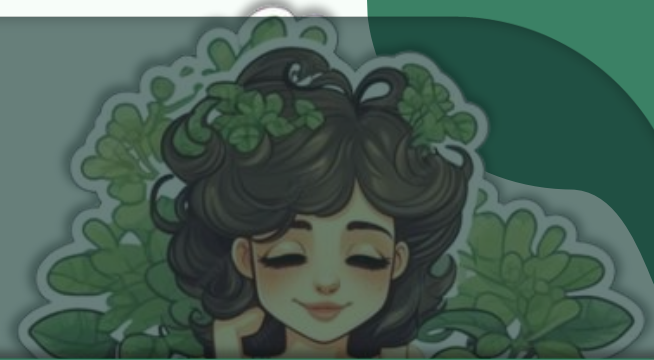


GANTT Chart

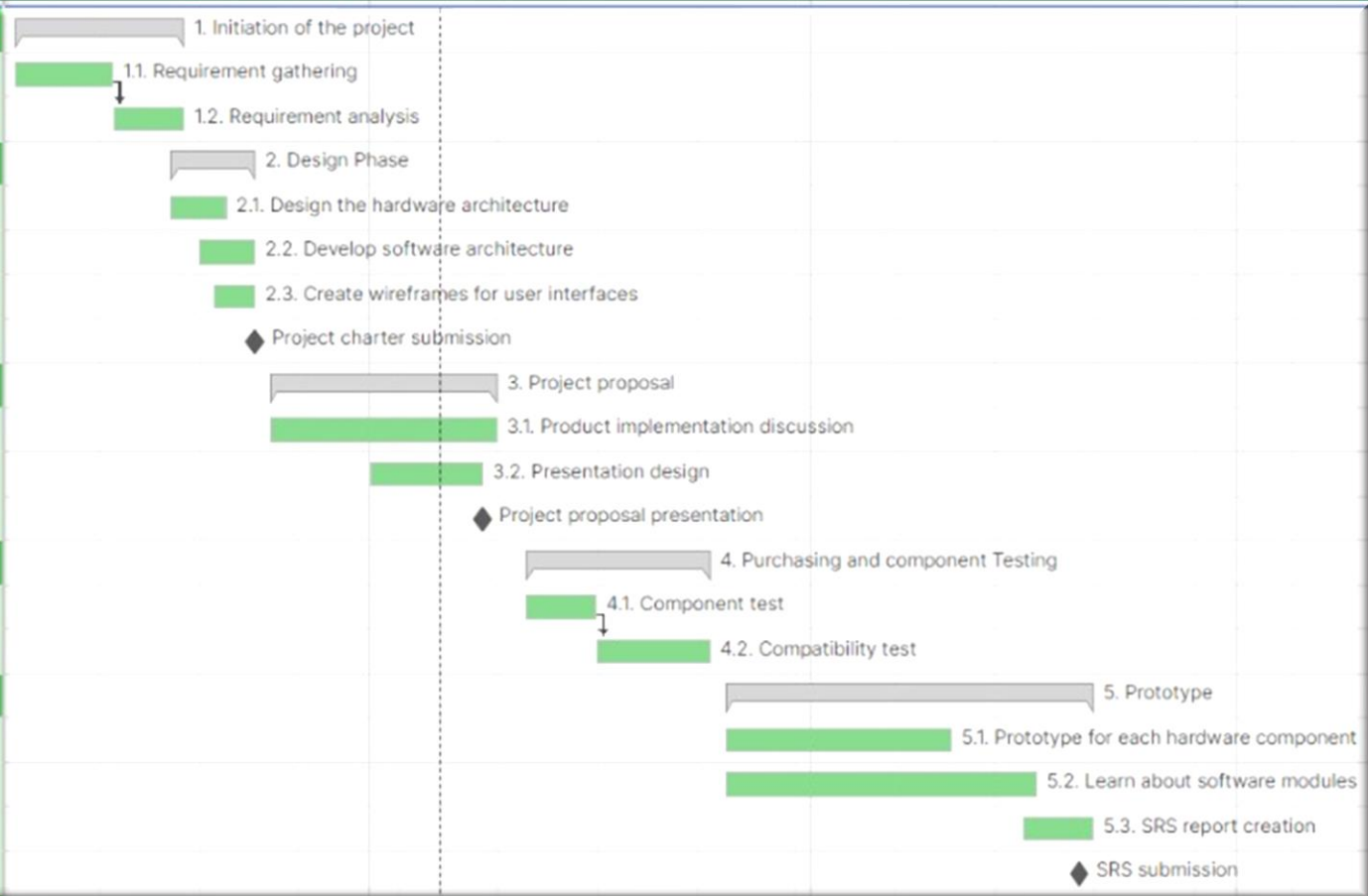




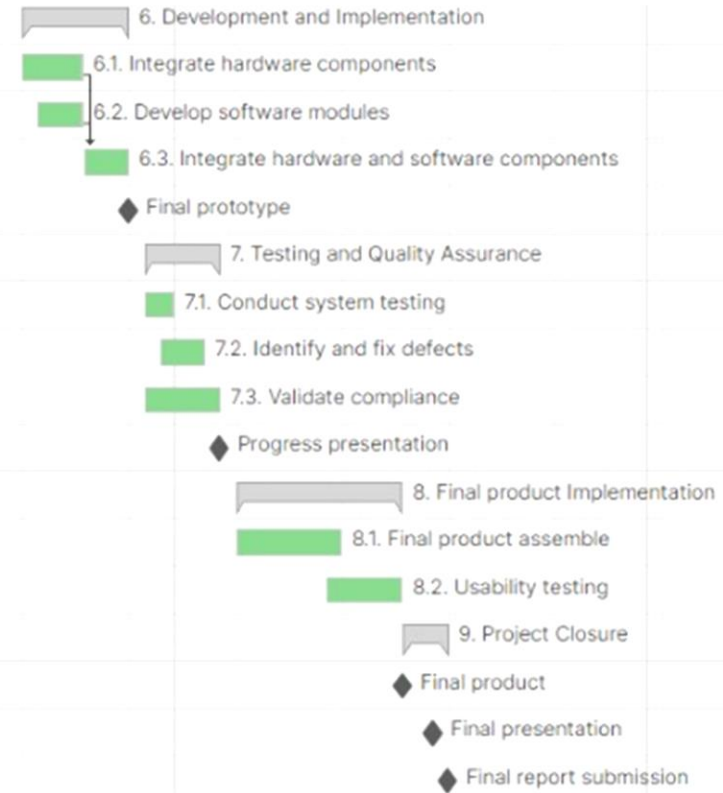
GANTT Chart



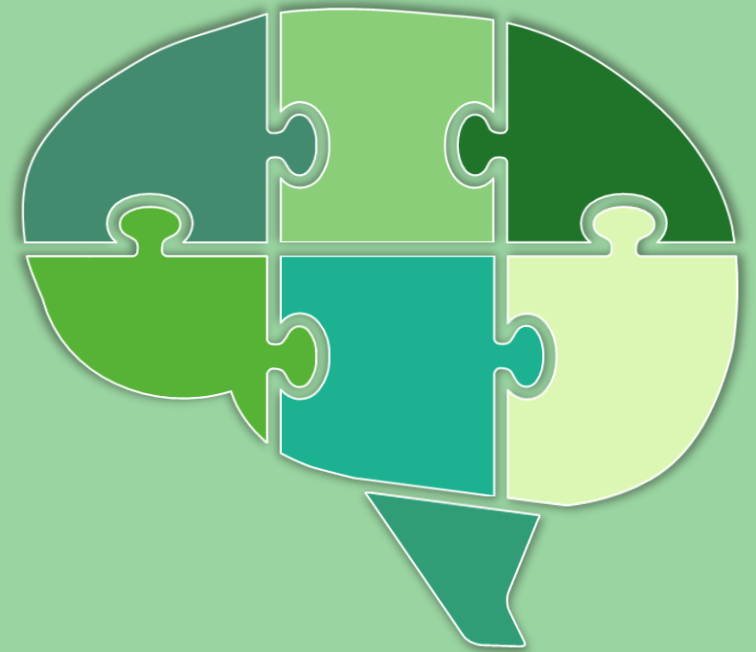
1. Initiation of the project	12d	02/05/24	02/16/24
1.1. Requirement gathering	7d	02/05/24	02/11/24
1.2. Requirement analysis	5d	02/12/24	02/16/24
2. Design Phase	6d	02/16/24	02/22/24
2.1. Design the hardware architecture	4d	02/16/24	02/19/24
2.2. Develop software architecture	4d	02/18/24	02/21/24
2.3. Create wireframes for user interfaces	3d	02/19/24	02/21/24
Project charter submission	0	02/22/24	02/22/24
3. Project proposal	16d	02/23/24	03/09/24
3.1. Product implementation discussion	16d	02/23/24	03/09/24
3.2. Presentation design	8d	03/01/24	03/08/24
Project proposal presentation	0	03/09/24	03/09/24
4. Purchasing and component Testing	13d	03/12/24	03/24/24
4.1. Component test	5d	03/12/24	03/16/24
4.2. Compatibility test	8d	03/17/24	03/24/24
5. Prototype	26d	03/26/24	04/20/24
5.1. Prototype for each hardware component	16d	03/26/24	04/10/24
5.2. Learn about software modules	22d	03/26/24	04/16/24
5.3. SRS report creation	5d	04/16/24	04/20/24
SRS submission	0	04/20/24	04/20/24



6. Development and Implementation	7d	04/21/24	04/28/24
6.1. Integrate hardware components	4d	04/21/24	04/24/24
6.2. Develop software modules	3d	04/22/24	04/24/24
6.3. Integrate hardware and software component	3d	04/25/24	04/27/24
Final prototype	0	04/28/24	04/28/24
7. Testing and Quality Assurance	5d	04/29/24	05/04/24
7.1. Conduct system testing	2d	04/29/24	04/30/24
7.2. Identify and fix defects	3d	04/30/24	05/02/24
7.3. Validate compliance	5d	04/29/24	05/03/24
Progress presentation	0	05/04/24	05/04/24
8. Final product Implementation	11d	05/05/24	05/15/24
8.1. Final product assemble	7d	05/05/24	05/11/24
8.2. Usability testing	5d	05/11/24	05/15/24
9. Project Closure	3d	05/16/24	05/19/24
Final product	0	05/16/24	05/16/24
Final presentation	0	05/18/24	05/18/24
Final report submission	0	05/19/24	05/19/24

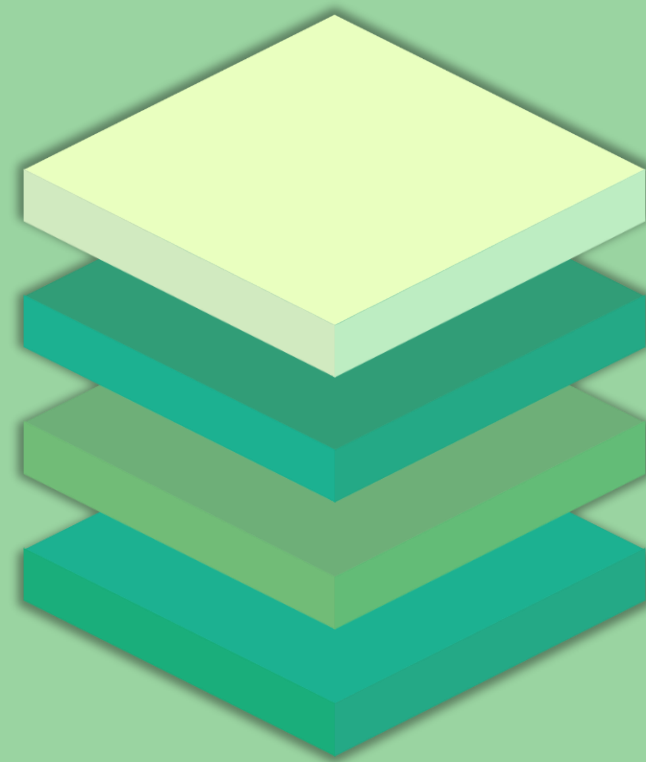


Personnel & Facilities



Student Name & ID	Role	Function Name	Facilities
Lakshan T.R IT22344342	<ul style="list-style-type: none"> ➤ Project manager ➤ QA Engineer ➤ Embedded System Engineer 	Soil Moisture sensor implementation	<ul style="list-style-type: none"> ➤ Arduino ➤ Wires ➤ Moisture Sensor
Rangana W.P.M IT22365200	<ul style="list-style-type: none"> ➤ QA Engineer ➤ Business Analyst ➤ Embedded System Engineer 	Light controller unit implementation & Display the main information	<ul style="list-style-type: none"> ➤ Arduino ➤ Wires ➤ Temperature Sensor & LEDS
Devinda M.C.G IT22360328	<ul style="list-style-type: none"> ➤ Designer ➤ Cloud Engineer ➤ Embedded System Engineer 	Develop Product Monitoring Application	<ul style="list-style-type: none"> ➤ Laptop ➤ Arduino ➤ Mobile Phone
Rajapaksha K.V IT22895264	<ul style="list-style-type: none"> ➤ Project manager ➤ QA Engineer ➤ Embedded System Engineer 	water pumping system Implementation	<ul style="list-style-type: none"> ➤ Arduino ➤ Wires ➤ Water Pump ➤ Relay Module

Software & Hardware



Software & Hardware Components

Hardware

NodeMCU ESP8266

Soil Moisture Sensor

Breadboard & Wires

Temperature Sensor

Relay module x 2

Motor Pump

LEDs

Laptop

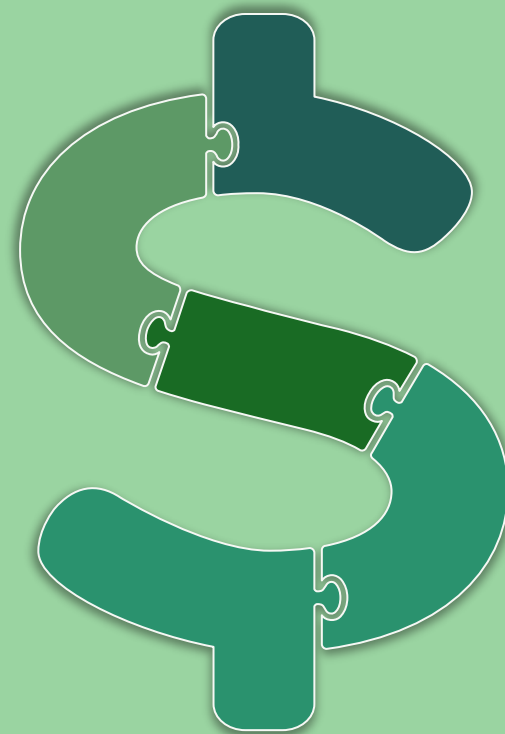
Software

Arduino IDE

Blynk Platform



Budget







Q & A

Time



The background is a light cream color, decorated with various green elements. There are several stylized leaves of different shades of green, some with detailed veins. Interspersed among the leaves are sunburst or starburst shapes, created with thin green lines radiating from a central point. There are also solid green circles of varying sizes. The overall aesthetic is clean, modern, and nature-inspired.

Thank You!