**Motivation:**

The motivation behind the SmartGreens IoT project lies in the intention to facilitate the cultivation of plants and gardens, especially for individuals with busy schedules and little time available for gardening. Through the implementation of IoT technology in embedded systems, the goal is to enable people to care for their plants remotely and automatically, eliminating the need for constant manual intervention. This provides an accessible and intuitive solution for those who wish to cultivate gardens and/or plants at home, but may lack the experience or time to do so in a traditional manner.

**Objectives:**

1. Develop a smart garden system based on ESP32 that is accessible and easy to assemble.
2. Integrate soil moisture, air humidity, luminosity, and other sensors to monitor the environmental conditions of the garden.
3. Implement actuators such as automated irrigation systems, light control, and ventilation to adjust the environmental conditions as necessary.
4. Establish MQTT communication to send sensor data to an online dashboard, allowing remote and real-time monitoring of the garden.
5. Create a user-friendly interface for the user, allowing manual control of devices and providing insights into the garden's status and cultivation tips.
6. Document the assembly and configuration process of the system, providing resources and instructions for others to replicate the project in their own gardens.