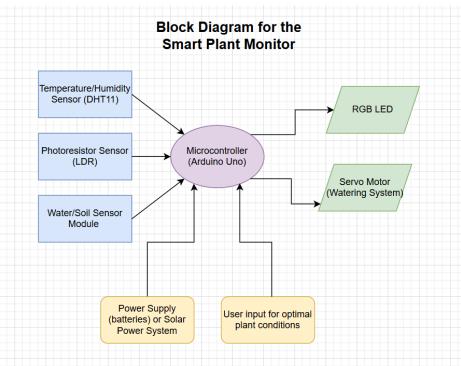Design Decision Table

Choice of Microcontroller	Arduino Uno	Widely Used Board that can support all sensors and outputs for this project
Sensors	DTH11	Selected for measuring environmental conditions around the plant. Needs to monitor the temperature every few minutes.
	3.3V 5V Soil Humidity Hygrometer Sensor Module Moisture Detect Cable for Arduino	
	Photoresistor (Photocell)	Measure light intensity
Input	????	
Output	RGB LED	Provides a quick, color-coded indicator of plant status
Power	9V Battery	
Size	No bigger than a phone	

Block Diagram:

Block Diagram for the Smart Plant Monitor

Temperature/Humidity Sensor (DHT11)

Photoresistor Sensor (LDR)

Water/Soil Sensor Module

Microcontroller (Arduino Uno)

RGB LED

Servo Motor (Watering System)

Power Supply (batteries) or Solar Power System

User input for optimal plant conditions

Above is the block diagram for the smart plant monitor. Blue blocks represent the input sensors, green are the outputs, purple is the microcontroller, and the yellow is external components such as the battery and user input.