Plant Papa

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Abstract: This will be a self contained system which monitors the moisture level, temperature, and light level a plant is receiving, and controls these environmental variables with an electric pump and LED light source. Current moisture level, temperature, as well as light level will be read out to an LCD screen. Settings for all environmental variables will be accessible and modifiable through a serial interface.

Protocols:

I2C to read from the sunlight sensor
UART to communicate with the board to control Water Pump and Light through console commands
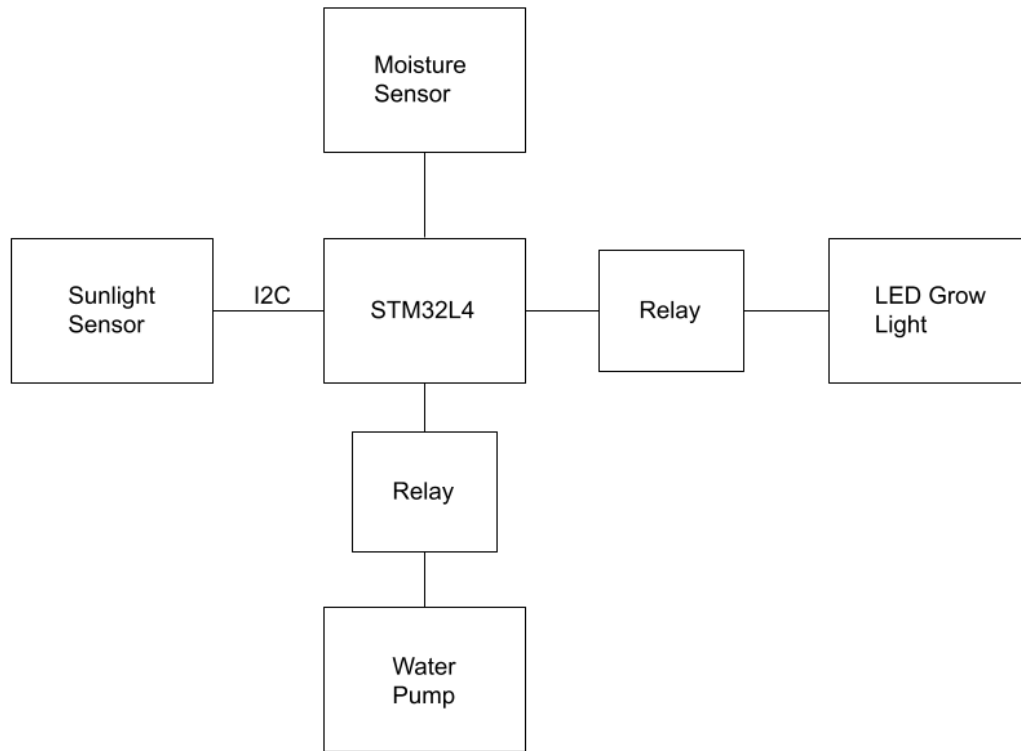
Parts:

Sunlight Sensor (I2C)
Moisture Sensor
Electric Pump
Relays (For light source, pump)
Light Source

https://sites.google.com/view/ece153b-plantpapa-connon-lutz/home

Responsibilities:

Teagan: Taking in inputs from Sunlight sensor and moisture sensor, creating interrupts to trigger
Noah: Creating functions to control the water pump and light relays.

Architecture:

Get data from sensors and based on the readings from them can trigger the LED grow light and or the water pump. Also have communication to be able to control the pump or light from the computer using termite if wanted.