Information about the sensors

Tuesday, October 25, 2016

11:12 AM

Kit with Uno Arduino Board

multimeter

Poster

Circuit demonstration

System block diagram

Everybody needs to know everything

Video demonstrating what the system does - 1min/2min

TASKS

1. PLAN VISUAL demonstration (for video/demo)

* Water sprinkler

1. Program
2. Proper credit
3. Luminosity sensor library (upload it)
4. Temperature/humidity sensor libraries;

**Soil Moisture Sensor**

<https://learn.sparkfun.com/tutorials/soil-moisture-sensor-hookup-guide?_ga=1.232606874.424248686.1479406997>

-signal ouput -- > analog input

-digital ouput -- > power ---> digital ground

-readings

Sparkfun has code with

-thresholdUp = 400;

-thresholdDown = 250;

Since we have a table with 1-5 as range for soil moisture, my suggestion:

Anything below 200 is 1

201 - 2

300 - 3

400 - 4

Anything beyond 400 is 5

Download library is required

**Luminosity sensor**

How it gathers data:

Broadband photodiode

Infrared-responding photodiode

How it sends data to Arduino: serial digital connection

16 bits - one sensor

UV light

Broadband photodiode

Infrared-responding photodiode

16 bits - one sensor

direct

Download library is required

Tsl2561

Reading

We saved data in footcandle , which corresponds roughly to 10 lux (1 lumen per square meter) (industry standard)

Footcandle = "the illuminance cast on a surface by a one-candela source one foot away'(candela is the SI unit for luminosity)

The sensor's liberary converts it to lux;

**DHT22**

<https://learn.adafruit.com/dht/connecting-to-a-dhtxx-sensor>

Wait 1 second to read when powered u to avoid wrong readings

Requires libraries (Adafruit and its own)