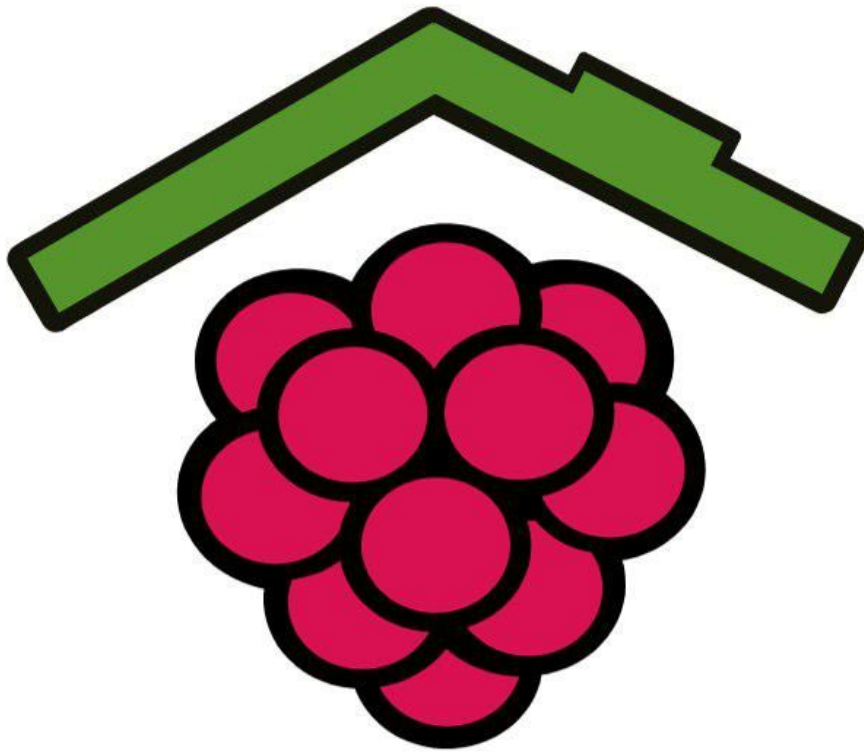


# Berry House



*remote plant monitoring*

**Sensors Platform**  
**Quickstart Guide**

## Contents:

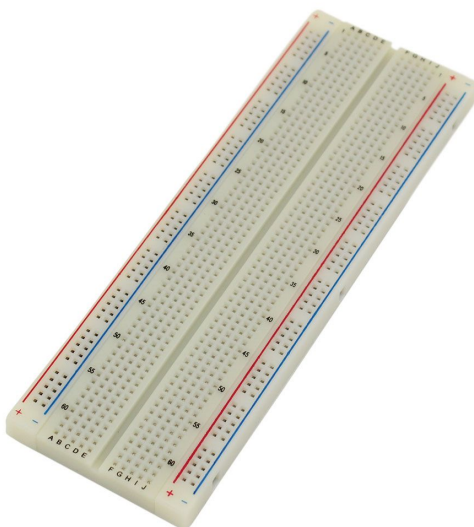
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## Tools:

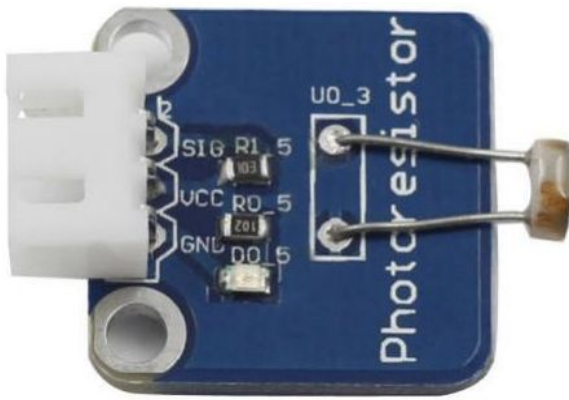
1. Raspberry Pi



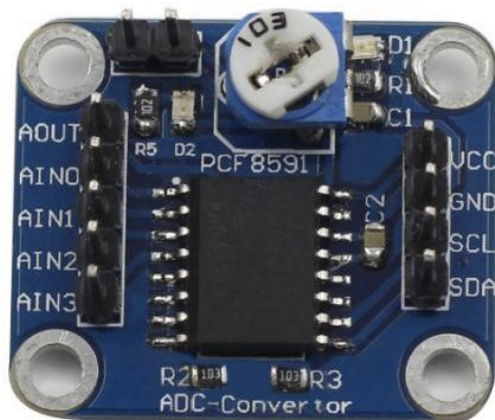
2. Breadboard



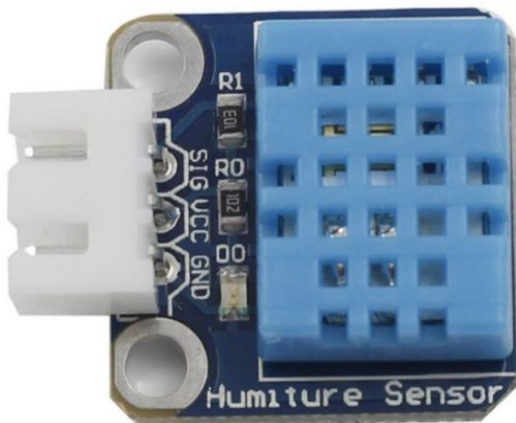
3. Photoresistor Module



4. PCF8591 chip



5. Humiture Sensor

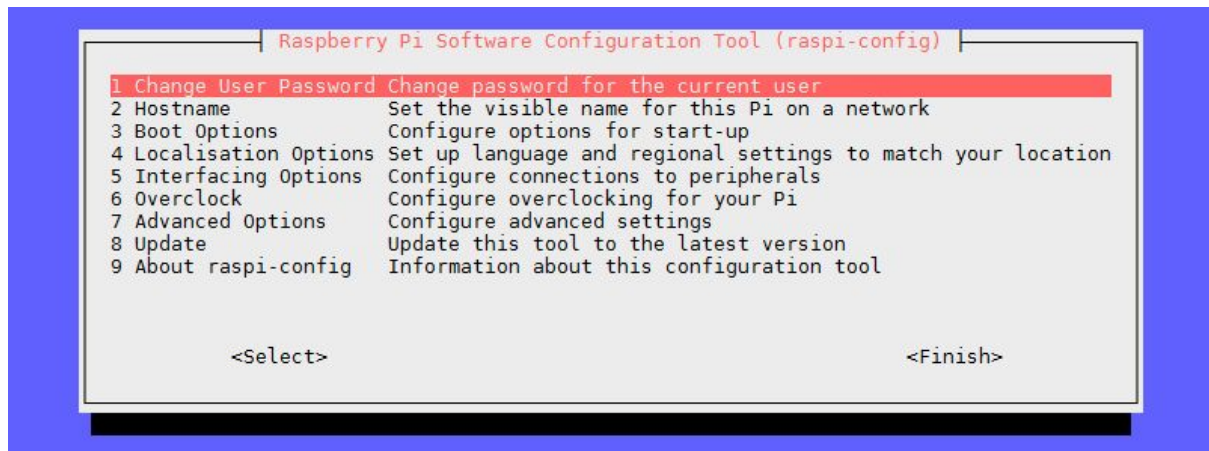


## Raspberry Pi Setup:

First, you should change the configuration of your Raspberry Pi to support these sensors. And for that, you should run the following commands:

1. Open the terminal
2. `echo "dtoverlay=w1-gpio" >> /boot/config.txt`
3. `sudo raspi-config`

After that, you will see a screen similar to this. We'll proceed to enable the I2C interface on your Raspberry Pi:



4. Select "Interfacing Options".
5. Select "I2C".

The screen will ask if you want the ARM I2C interface to be enabled.

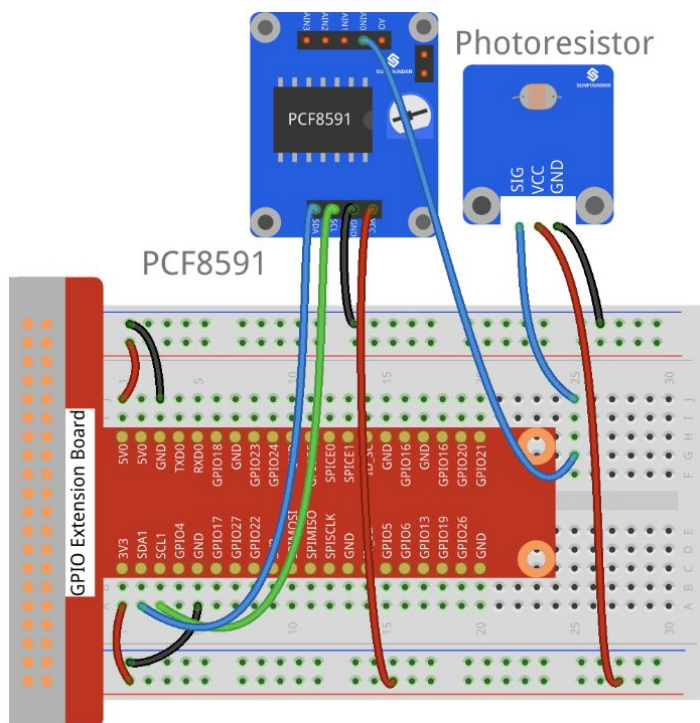
6. Select "Yes".
7. Select "Ok".
8. Select "Finish" to return to the command line.

Now we need to install some utilities

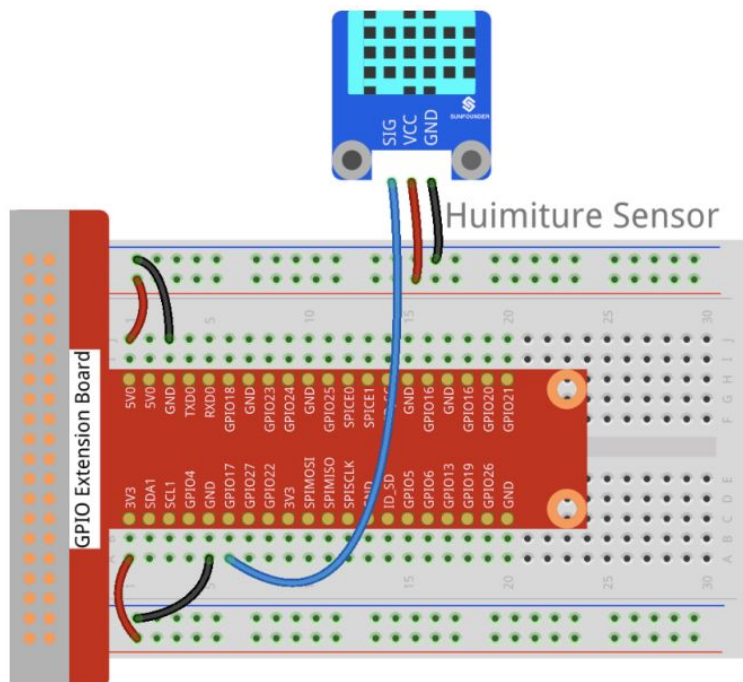
9. Open the terminal
10. `sudo apt-get update`
11. `sudo apt-get install -y python-smbus i2c-tools`
12. Reboot your Raspberry Pi to load the I2C module. Now we should be able to check if the i2c module is running by using the command: `lsmod | grep i2c_`

## Circuit:

First, let's connect our photoresistor module, so that our circuit looks something like:



Now, let's connect our humidity sensor, which will help us measure both air humidity and temperature. For that, our circuit should now look something like:



Now you can continue and setup your own [HTTP broker](#)! After that's been done, you can just use your broker URL in the Python script *humidity\_and\_light* to start sending data to it.

## References:

M. (November 2, 2014). Enable I2C Interface on the Raspberry Pi. *raspberrypi-spy*. Retrieved from <https://www.sunfounder.com/learn/sensor-kit-v2-0-for-raspberry-pi-b-plus/lesson-28-humiture-sensor-sensor-kit-v2-0-for-b-plus.html>

SunFounder. (April 15, 2017). Lesson 20 Photoresistor Module. *SunFounder*. Retrieved from <https://www.sunfounder.com/learn/sensor-kit-v2-0-for-raspberry-pi-b-plus/lesson-20-photoresistor-module-sensor-kit-v2-0-for-b-plus.html>

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