brandeismakerlab

How to Humidity and Temperature

This guide will walk you through how to use an AM2302/DHT22 sensor

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F TOOLS:

- PC with Windows 10 (1)
- Arduino UNO (1)

PARTS:

• jumper wire (3) Male to Felmale

- AM2302 / DHT22 sensor (1)
- USB 2.0 A-Male to B-Male Cable (1)

Step 1 — Grab starting materials and plug in



- Start by grabbing the three jumper cable wires.
- Plug in each wire to the three different prongs of the AM2302/DHT22 sensor
- 1: Ground (GND) [BLACK]
- 2: 5v power (VCC) [RED]
- 3: pin 2 (DAT) [GREEN]

Step 2 — Schematic to see layout better



 This is the same thing as the previous slide, but the cables are shown plugged in

Step 3 — Arduino Set up



- Grab your laptop, Arduino, and an USB 2.0 A-Male to B-Male Cable
- Plug the USB A end to the laptop
- Plug the USB B end into the Arduino Uno
- (i) I did use a breadboard here but it is unnecessary as there are no resistors used. You can do either.

Step 4 — Open up Arduino IDE



- Download the Arduino IDE if you have not already: <u>https://www.arduino.cc/en/Main/Soft</u> <u>ware</u>
- Once downloaded, open up the application and continue to the next section

Step 5 — Grab some source code to test the part!

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- Here is some source code that runs basic processes to see if the hardware works
- GitHub link: <u>https://github.com/BrandeisMakerLab</u> /Ardu...
- Make sure that you select the correct board and port (under the tools section)
- Verify and Upload the code to the Arduino

Step 6 — Start using the code!

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 Click the magnifying glass on the top right corner to access the Serial Monitor.

Step 7 — Finished.

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 Congratulations! you have successfully used the AM2302/DHT22 sensor, go have fun!