Weather Station

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Introduction

The project consists of a weather station that measures the temperature, humidity and air quality and displays the values on an LCD. If the Air Quality exceeds a specific value, a LED will start blinking to inform you that there is a bad air quality index.

Description

Humidity & Temperature Sensor and Air Quality Sensor values are processed by Arduino UNO and displayed on an LCD. Depending on the air quality value, a LED will start blinking.

Hardware Design

Components:

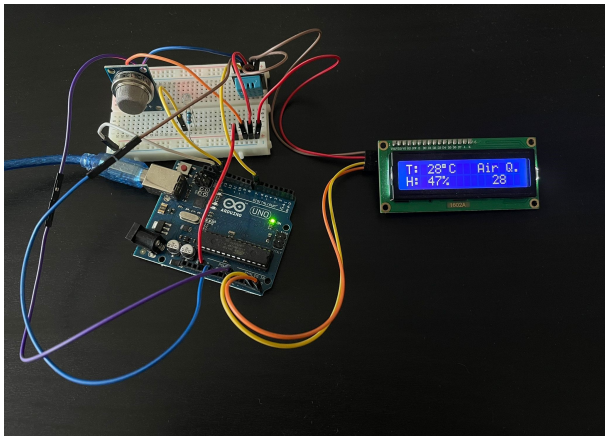
- Arduino Uno
- Breadboard
- LCD 1602 IIC/I2C
- Air Quality Sensor MQ-135
- Humidity & Temperature Sensor DHT11
- Jumper wires
- Resistor
- Led

Software Design

I used Arduino IDE. External Libraries:

- LiquidCrystal_I2C
- DHT

Results



Conclusions

This was my first Arduino Project and it was really interesting to make. By using LiquidCrystal_I2C and DHT external libraries I could easily read the values from DHT11 sensor and display them on LCD.

Download

weather_station.zip

Journal

- 21/04/2022 - Project theme selection
- 29/04/2022 - Order of components
- 02/05/2022 - Order of additional components
- 04/05/2022 - Finished the project
- 26/05/2022 - Presented the project at the lab
- 27/05/2022 - Finished writing wiki page

Bibliography/Resources

- Arduino Uno Datasheet
- ATmega328P Datasheet

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