



NORTH SOUTH UNIVERSITY

Center of Excellence in Higher Education

The first private university in Bangladesh

Project Report - CSE323

Name: Uchchwas Das

ID: 1620016042

Name: Md. Nahid Hasan

ID: 1620847042

Name: Md.Tahrim Faroque Tushar

ID: 1621148642

Name: Abdullah Ibne Ali

ID: 1711200642

Sec: 09

Group: 03

Date: 28-08-2019

Submitted To:

Prof. Dr. Rashed Mazumder (Rmz1)

Department of Electrical and Computer Engineering

Temperature Detector Using Arduino UNO & DHT11 Sensor

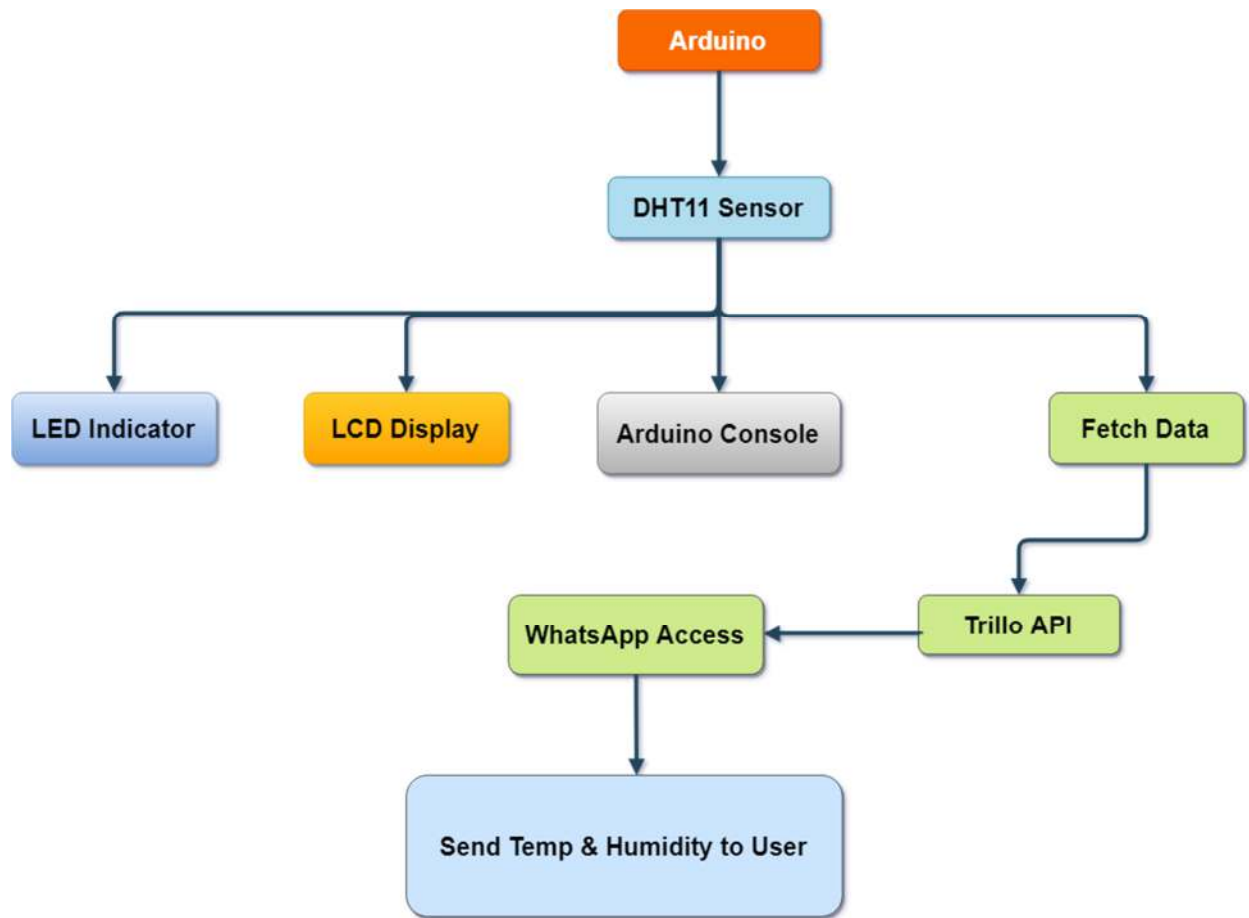
We are using waterfall model here. As the Waterfall Model illustrates the software development process in a linear sequential flow, and also it is suitable for small size project.

1. Requirements:

We will make a temp and humidity detector type project which collect data through sensor and react based on temperature and our estimated cost is 1K, estimated time is 4 weeks.

We will use temperature and humidity sensor(DHT11) to calculate the temperature around us and also, we can see it in LCD screen and in Arduino console. We will use Arduino with Windows operating system to make it and control it. There will be other components like breadboard, resistors etc.

2. System Design:



3. Implementation:

We have done installing Arduino 1.7.8 software in windows 10. We also installed necessary libraries named DHT11 and Wire. At first, we connected the DHT11 sensor to our Arduino UNO and implement the coding part for showing results in the Arduino console.

Then, we move to our hardware part. Finally, we connected the LCD display to show the result in the display. Additionally, added the trim pot to control the brightness in the LCD.

We added messaging system, using Trillo API, so that we can get notified in the event of critical temperature situation.

4. Integration & Testing:

After the implementation, we connected the Arduino with a PC. Then, implement the necessary code to check if the sensor is working in the Arduino console. And it showed the temp and humidity with 99.01% accuracy. Then, we implement the code for showing the data into the LCD. Everything worked perfectly so far. We tested our project in different places of NSU and for humidity we tested it with tissue paper or hot cup of tea. It was showing the results with different temp and humidity rating. Also, tested the message sending system and it was working.

5. Deployment of system:

We did not launch our product in the market yet.

6. Maintenance:

We have upgraded our code for sending the temp and humidity to mobile devices via WhatsApp. We also changed some of the LEDs that was not working properly.

Conclusion:

Our project still can be upgraded, so that it can provide more facilities with much more sustainability in the market.