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COURSE TITLE : COMPUTER INTERFACING
COURSE CODE: CSE360
LAB REPORT: 2
GROUP-06

Prepared by:

Sadaf M. Anis	(ID : 20101537)
Zahin Zaima	(ID: 20201147)
Md. Yasin	(ID : 20201157)
Abid Hossain Ashik	(ID:20201162)
Nur - E - Jannat	(ID: 21301744)

Prepared to:

Md. Shazid Bin Mahbub
Lecturer
Department of Computer Science and Engineering
BRAC University

Sumaiya Tanjil Khan
Lecturer
Department of Computer Science and Engineering
BRAC University

Task description-

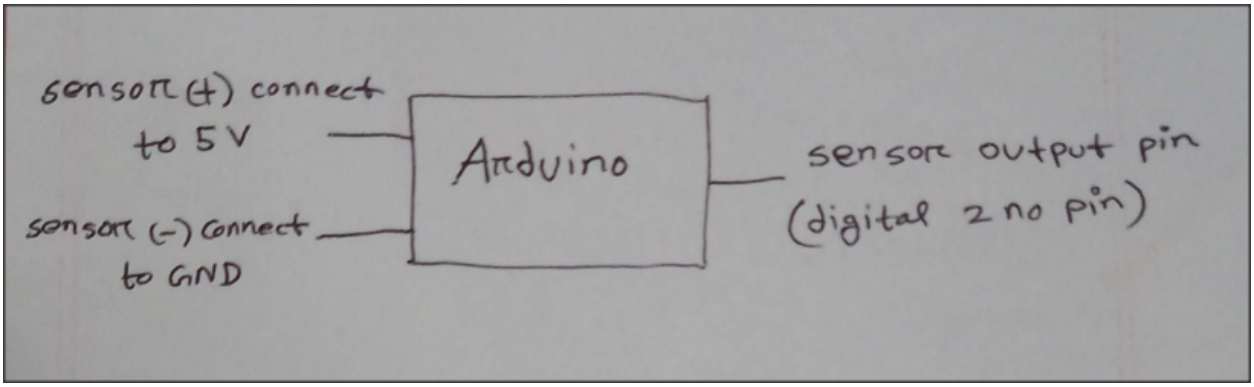
In the following experiment our objective was to view the temperature and humidity of our surroundings via connecting temperature humidity sensor with a 16 X 2 LCD display in the Arduino UNO r3.

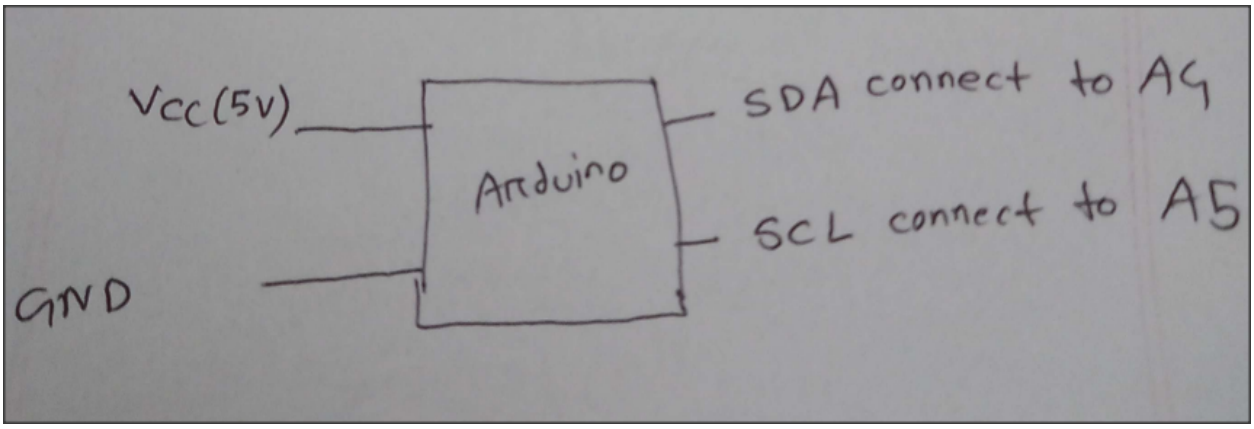
The DHT-11 Digital Temperature And Humidity Sensor uses a capacitive humidity sensor and a thermistor to measure the surrounding air and spits out a digital signal on the data pin. There are 3 pins of the sensor. The positive end is connected to the Vcc and the negative end is connected to the GND as respectively. The output pin can be connected to any digital pin of the arduino. After that the analogue data needs to be converted to digital data as the input of the arduino. For that we need to go to the DHT library from the tool management section. We opened the DHT sensor library from there. Now for the LCD display to visualize the output, there are 4 pins such as SDA,SCL,VCC,GND. SDA is used for data transfer while on the other hand SCL is used for clock control. The following pins SCL is connected to pin A4 and SCL is connected to pin A5 of the arduino. GND and VCC are connected to the vcc and gnd pins respectively. For viewing in the LCD display we used the Liquid Crystal 2C library by Marco Schwastz.

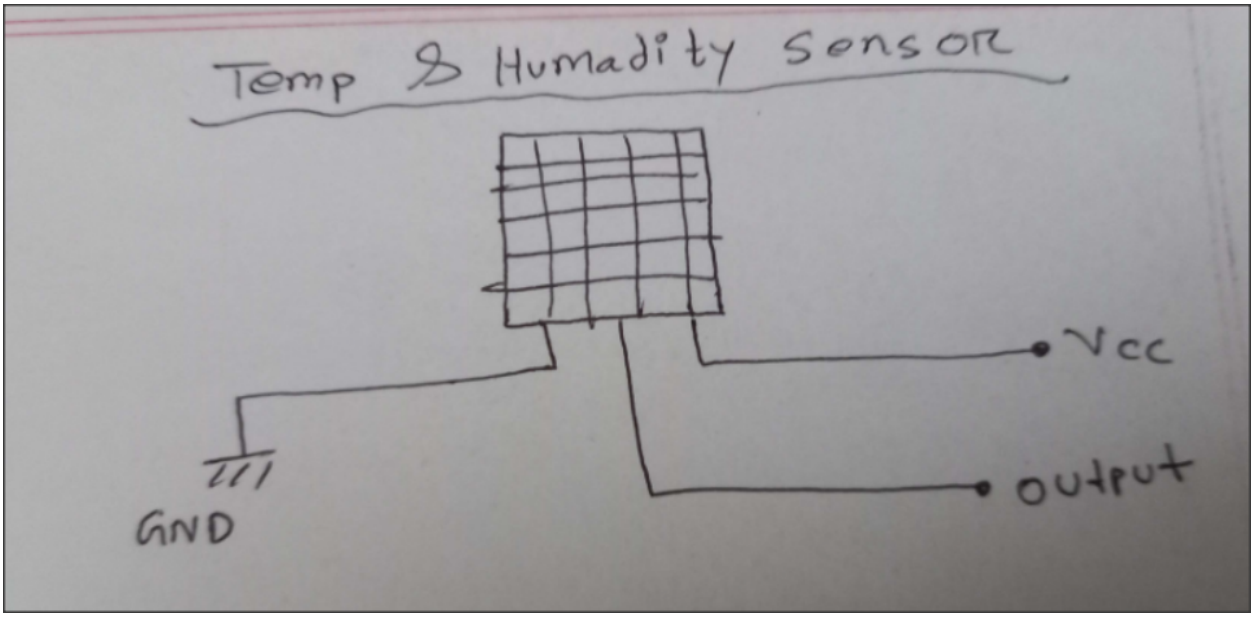
Components Required:

Arduino UNO R3
Breadboard
Jumper wires(male to male, male to female)
DHT 11 Sensor
16X2 LCD display

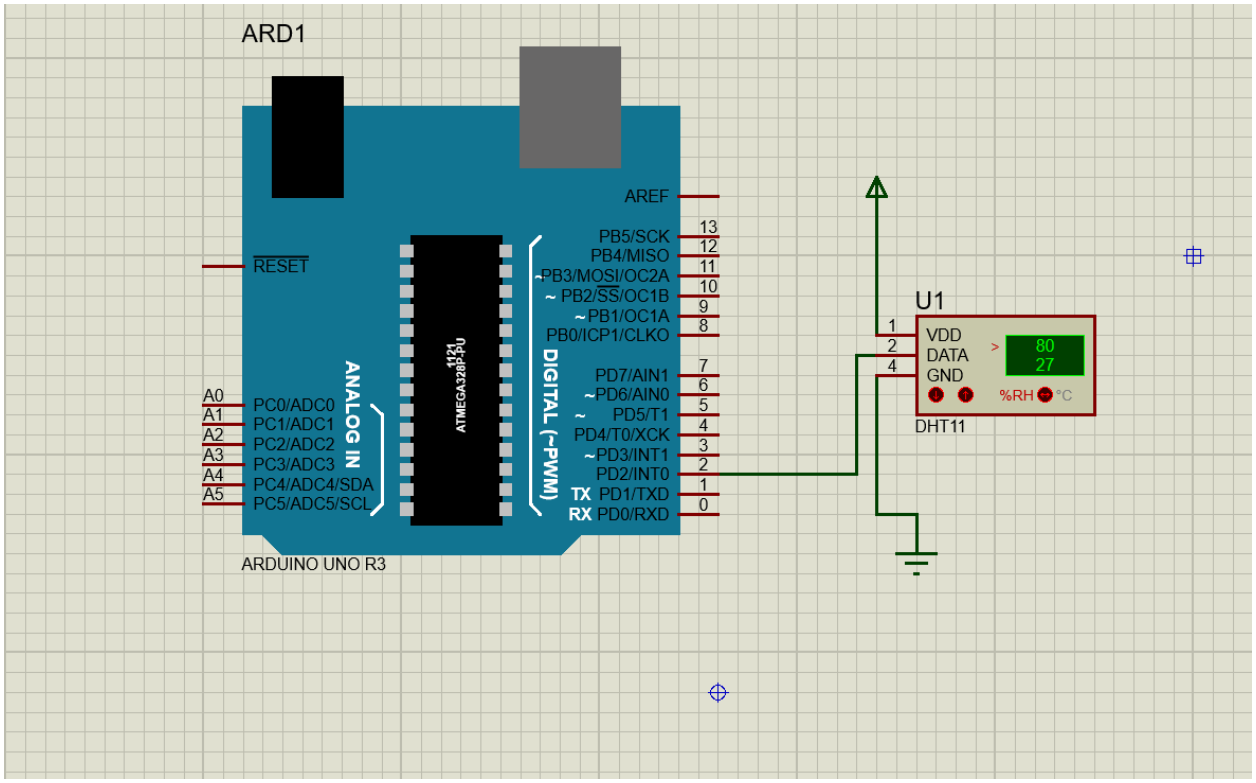
Circuit Diagram:



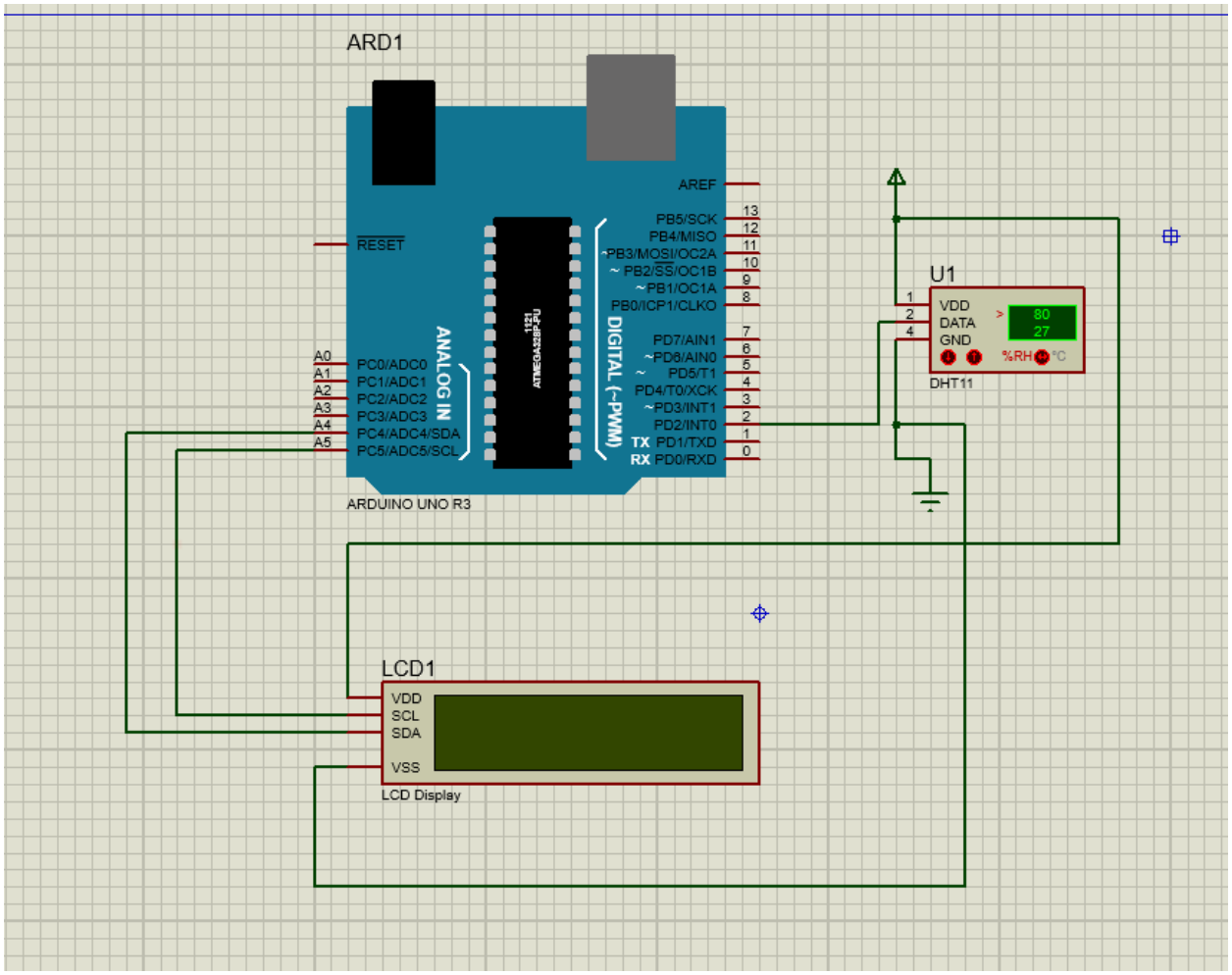




Circuit Setup:



Checking Temperature and Humidity using DHT11 sensor with Aurduino



Checking Temperature and Humidity in LCD Display using DHT11 sensor with Aurduino

Result -

After completion of all the setups and building up the circuits, and codes from the library, we will get our desired output. The temperature and humidity of our surroundings will be demonstrated in the following 16x2 display. If we hold the sensor in our hand for too long or simply blow the sensor we will see an increase of temperature and humidity which confirms that our following build-up is successful.

Last but not least, gratitude thanks to the honorable faculty for guiding us to build up this successful circuit.