

Ex.No:

## HUMITIDY SENSOR

Date:

### AIM:

To design and simulate humidity sensor using Arduino uno board using proteus 8 and Arduino IDE.

### COMPONENTS REQUIRED:

COMPONENTS	NOS
ARDUINO UNO R3	1
DHT11	1
LM016L	1

### PROCEDURE:

Step 1: Open proteus 8 IDE, file->new project.

Step 2: Select the Arduino uno board from the device list, DHT11 (humidity sensor), and LCD display (LM016L).

Step 3: Place the Arduino board and all the components in the workspace.

Step 4: Connect the Arduino board with the sensor using Wire. In the 2<sup>nd</sup> pin of the board to 2<sup>nd</sup> pin (data pin) in the sensor and connect the VCC in the sensor to power and GND to ground.

Step 5: Connect the 1<sup>st</sup> pin of the LCD display to power and 2<sup>nd</sup> and 5<sup>th</sup> pin to the ground.

Step 6: Establish connection between Arduino uno board and LCD display (LM016L).

Step 7: Open the Arduino IDE.

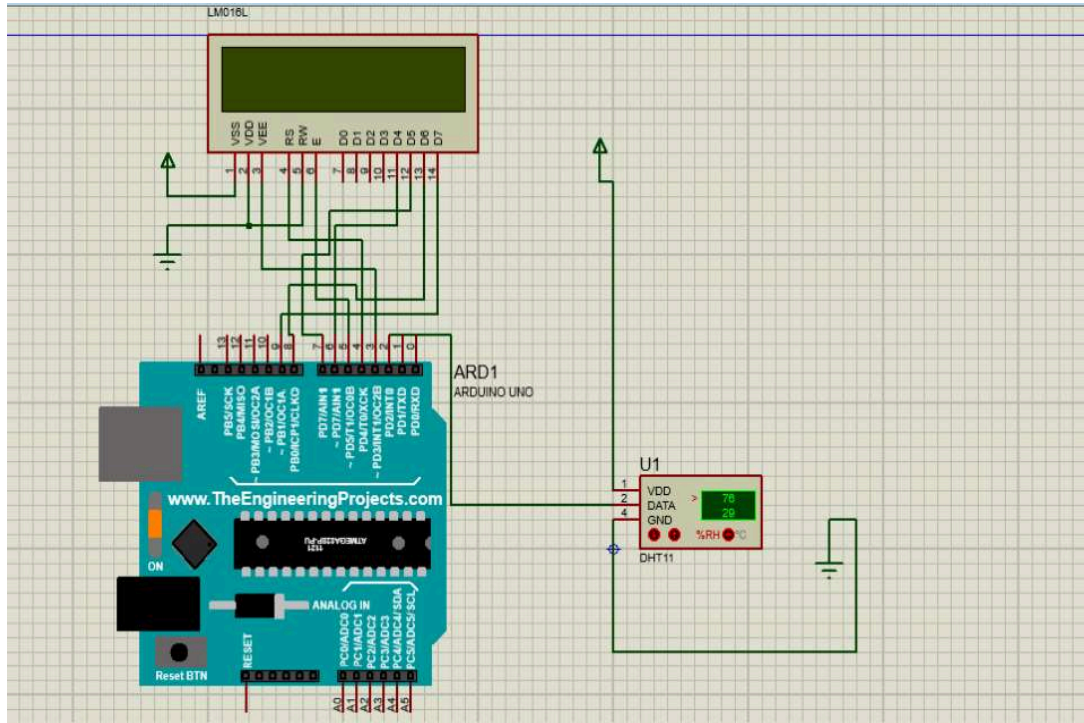
Step 8: Initialize the program in a setup, and then type the program in a loop.

Step 9: Compile the program and copy the .hex file location in the Arduino terminal after compilation.

Step 10: Double-click on it. In the properties window, paste the .hex file path in the "Program File" field. Click OK to close the window.

Step 11: Run the simulation by clicking on the play button. You should see the output according to the sketch.

## SCHEMATICDIAGRAM:



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## PROGRAM:

```
#include<DHT.h>

int sensor=2;

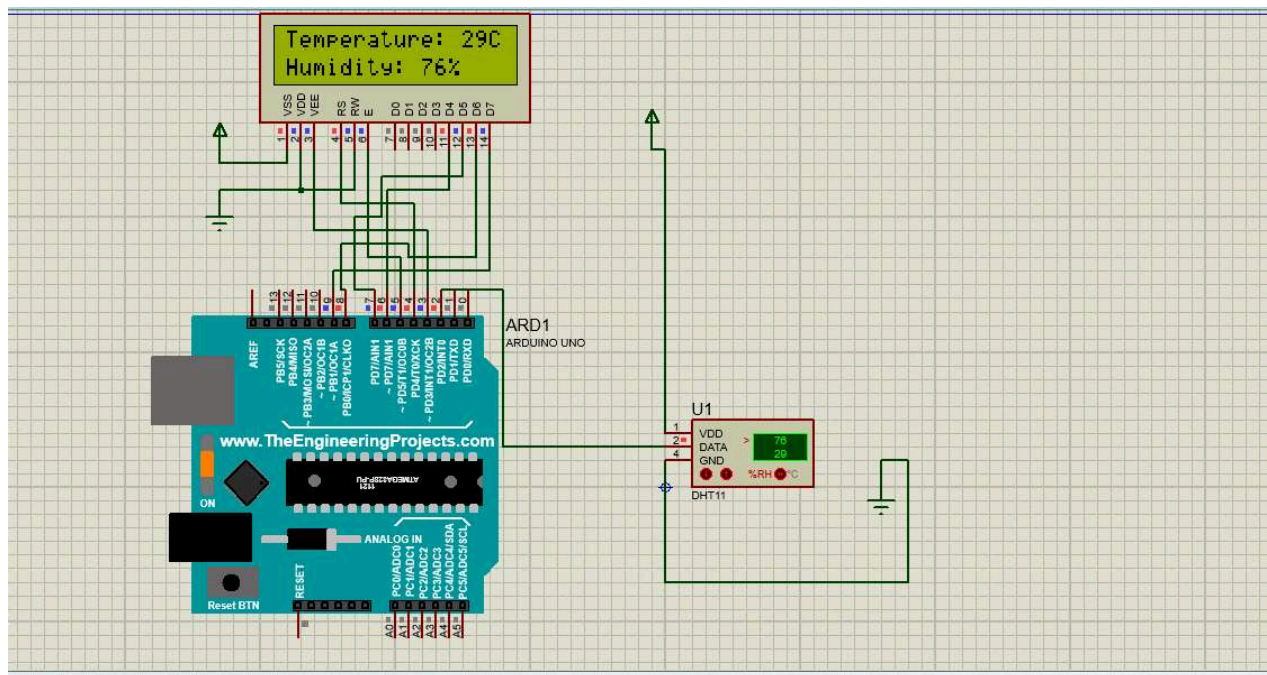
int temp;

int humidity;


DHTdht(sensor,DHT11); void
setup() {
dht.begin();
Serial.begin(9600);
}

void loop(){
humidity=dht.readHumidity();
temp=dht.readTemperature();
Serial.print("Humidity: ");
Serial.print(humidity);
Serial.print("%");
delay (500);
}
```

## OUTPUT:



**RESULT:**

Thus, the above program to measure humidity using humidity sensor and Arduino UNO board was successfully executed and the output was verified successfully.