Assignment 11

Problem Statement: Write an application on Raspberry Pi to read the environment temperature. If temperature crosses a threshold value, the application indicated user using LEDSs

Objectives:

To facilitate the learners to -

1. Learn and Understand the fundamentals of sensor based applications.

Outcomes:

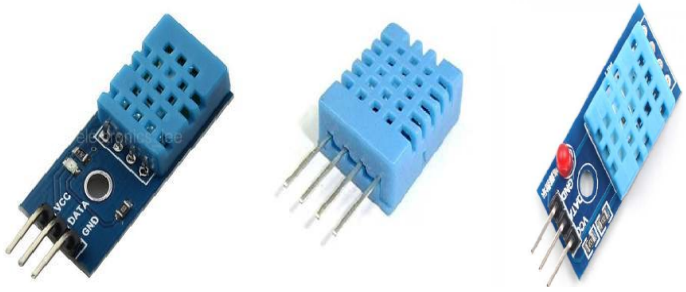
The learner will be able to :–

1. Design the minimum system for sensor based application.

Theory:

Temperature sensor DHT11

The DHT11 temperature and humidity sensor is a nice little module that provides digital temperature and humidity readings. It's really easy to set up, and only requires one wire for the data signal. These sensors are frequently used in remote weather stations, soil monitors, and home environment control systems. The DHT11 contains a surface mounted NTC thermistor and a resistive humidity sensor. An IC on the back of the module converts the resistance measurements from the thermistor and humidity sensor into digital outputs of degrees Celsius and Relative Humidity.



Install the Adafruit DHT11 library

1. Enter this at the command prompt to download the library:

git clone https://github.com/adafruit/Adafruit_Python_DHT.git

2. Change directories with:

cd Adafruit_Python_DHT

3. Enter this:

sudo apt-get install build-essential python-dev

4. Install the library with:

sudo python setup.py install

Output: Attach Program

Conclusion: Understood the connectivity of Raspberry-Pi circuit with temperature sensor.