Project 7

Temperature-Humidity Monitoring using Blynk App

Introduction

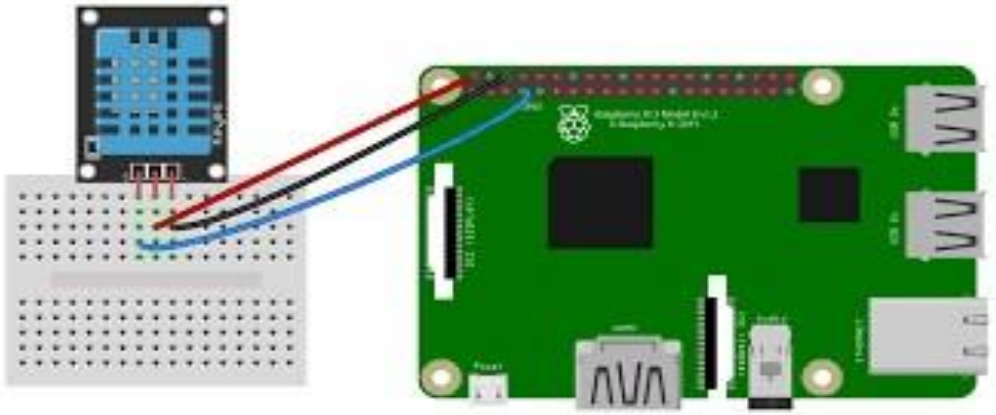
In this project you will do the setup of DHT sensor with Raspberry Pi and Blynk which will let you know the live status of temperature and humidity in the environment on Blynk user interface.

Software and Hardware Required

- Blynk APP
- Raspberry Pi
- Connecting Wires
- Power supply
- DHT11

Hardware Setup

Temperature: Changes its voltage output depending on the temperature of the component. Th e outside legs connect to power and ground. The voltage on the center pin changes as it gets w armer or cooler.



Steps for software setup

- Download Blynk app on your mobile from Google play or Apple store ➢ get the Auth token :
- Create a new account in Blynk App.

- Create a New Project. Then choose the board and connection you will use.
- After the project was created, you will received Auth Token over email.
- Check your email inbox and find the Auth Token.

Python Coding

```
from blynkapi import Blynk import RPi.GPIO as
GPIO import os
import glob
os.system('modprobe w1-gpio')
os.system('modprobe w1-therm')
base_dir = '/sys/bus/w1/devices/'
device_folder = glob.glob(base_dir + '28*')[0]
device_file = device_folder + '/w1_slave'
GPIO.setmode(GPIO.BCM)
GPIO.setmode(GPIO.BOARD) auth_token
= "YOUR TOKEN"
  temp = Blynk(auth_token, pin =
"V3")
  def
read_temp_raw():
   f = open(device_file,
'r')    lines =
f.readlines()
f.close()    return lines
  def
read_temp():
   temp = read_temp_raw()
```

```
   while lines[0].strip()[-3:] != 'YES':

        temp = read_temp_raw()

equals_pos = lines[1].find('t=')

if equals_pos != -1:

      temp_string = lines[1][equals_pos+2:]

temp_c = float(temp_string) / 1000.0


return temp_c
```

Output

Check that your code is correct.
Choose Gauge on blynk App, click on it and choose V3 as pin.
Run the code
Read the data that appear on Gauge.