PRACTICAL9

Write a program to understand the use of Firebase with Raspberry Pie to control sensors

=>First we have to make a project on firebase console, and give the project name in it. we have create real time database and in it, there is need additional setting for read and write rule.it should be true .

After that copy the link which is mention above database,

Now we have to add firebase module in the python, so we need to give a command:

Pip install python-firebase

All setting is done ,now we can write code and remember that link which is copied from firebase database, we have to paste link in firebase.firebaseApplication() method as a parameter.

```
   import RPi.GPIO as GPIO  from
time import sleep  import datetime
from firebase import firebase
import Adafruit_DHT  import
urllib2, urllib, httplib  import
json  import os
   from functools import partial
 GPIO.setmode(GPIO.BCM)
 GPIO.cleanup()
 GPIO.setwarnings(False)
 # Sensor should be set to Adafruit_DHT.DHT11,  #
Adafruit_DHT.DHT22, or Adafruit_DHT.AM2302.
 sensor = Adafruit_DHT.DHT11
 # Example using a Beaglebone Black with DHT sensor  #
connected to pin P8_11.
 pin = 4
 # Try to grab a sensor reading.  Use the read_retry method which will retry up  #
to 15 times to get a sensor reading (waiting 2 seconds between each retry).
 humidity, temperature = Adafruit_DHT.read_retry(sensor, pin)  firebase
= firebase.FirebaseApplication('
https://raspiberrypi18mca8142.firebaseio.com/', None)
 #firebase.put("/dht", "/temp", "0.00")

 #firebase.put("/dht", "/humidity", "0.00")  def
update_firebase():
```

```
        humidity, temperature = Adafruit_DHT.read_retry(sensor, pin)
        if humidity is not None and temperature is not None:
                    sleep(5)
    str_temp = ' {0:0.2f} *C '.format(temperature)       str_hum   = ' {0:0.2f}
%'.format(humidity)                                      print('Temp={0:0.1f}*C
Humidity={1:0.1f}%'.format(temperature, humidity))

        else:
                    print('Failed to get reading. Try again!')
                    sleep(10)
        data = {"temp": temperature, "humidity": humidity}
        firebase.post('/sensor/dht', data)

 while True:
                    update_firebase()

          #sleepTime = int(sleepTime)
        sleep(5)
```