Raspberry Pi Assignment

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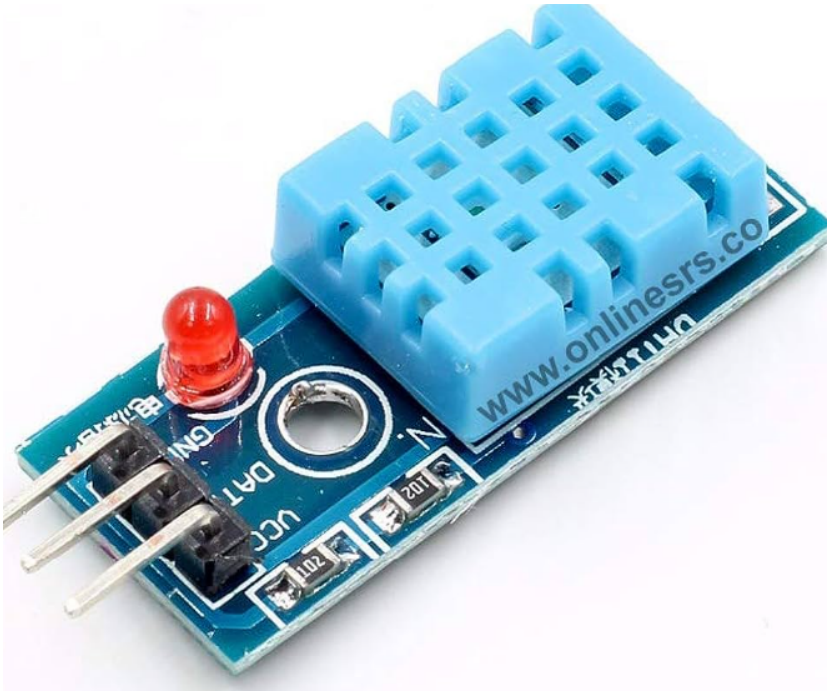
Requirements:

- Raspberry PI (Raspberry Pi 3 Model B)
- SD Card (For flashing OS on raspberry pi)
- DHT11 Sensor
- Female to female jumper wires (3)

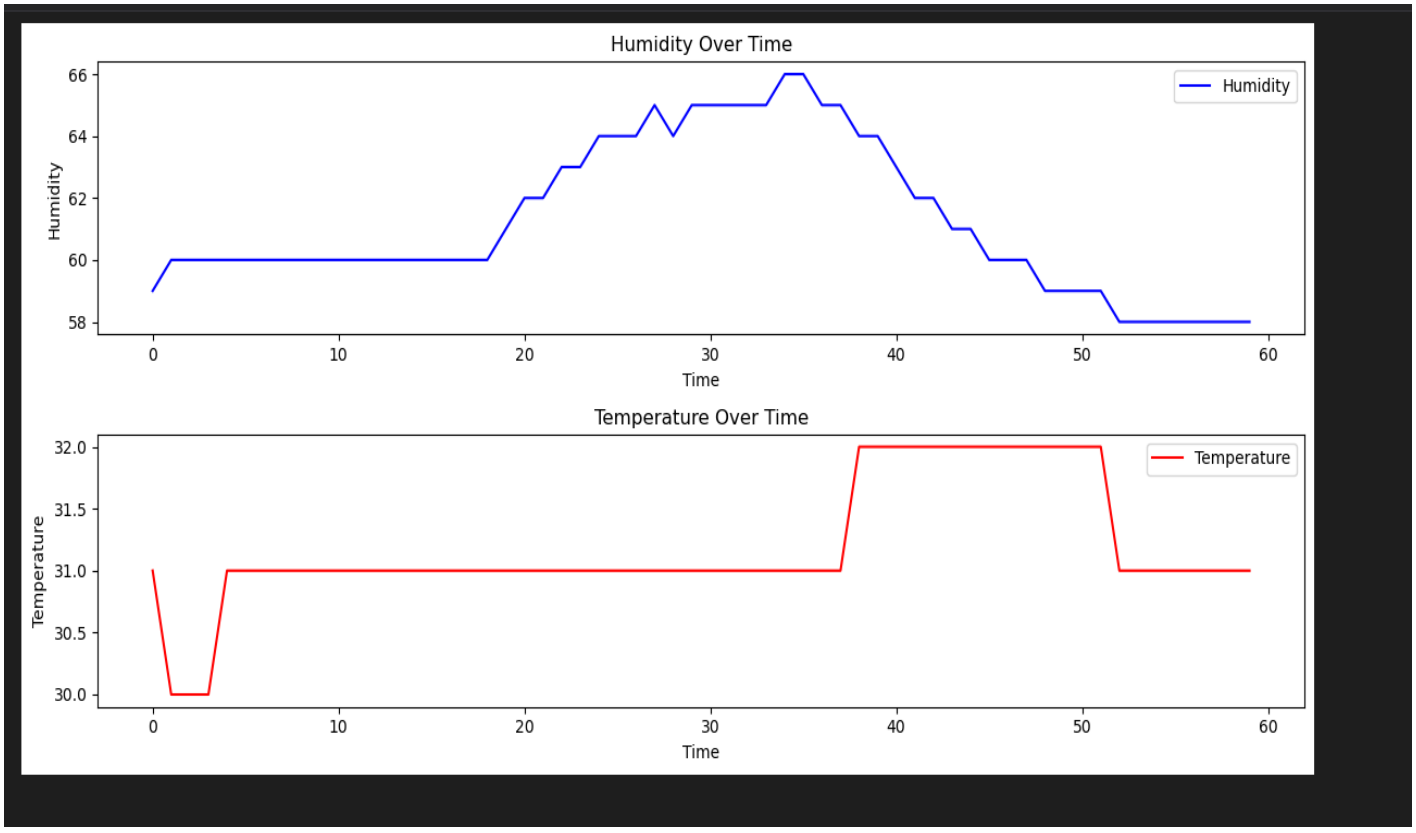


Procedure:

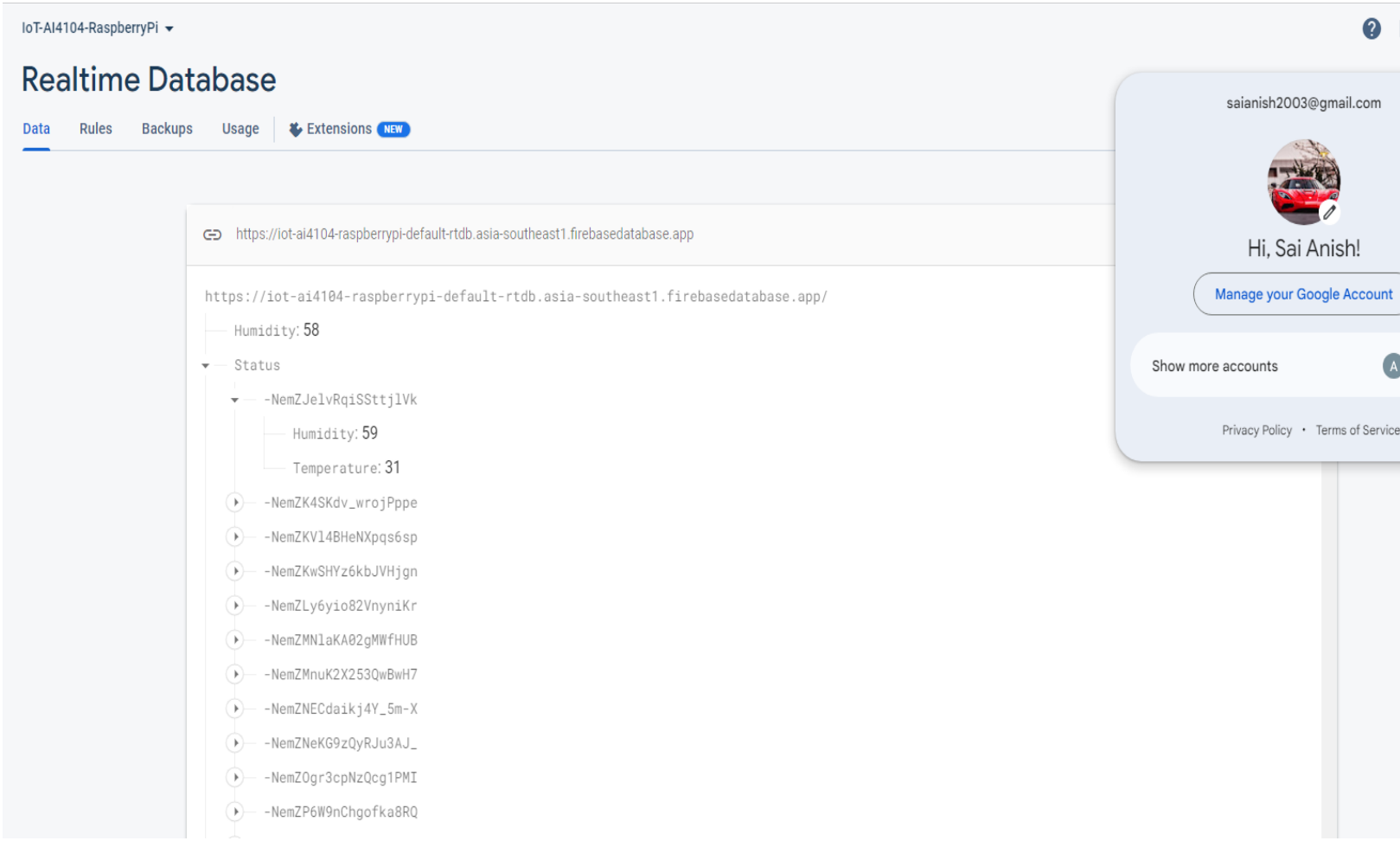
1. First, create a real time database on Google Firebase for storing the sensor data on cloud.
2. Downloading Putty and VNC viewer for using the Raspberry PI.
3. First, we should download all the required libraries (Pyrebase, Adafruit DHT)

4. After doing the above steps, we should change config files on Raspberry Pi to our own Hotspot credentials for using the internet.
5. Using the jumper wires, we should connect the VCC of the DHT11 sensor to the 5V pin on the Raspberry Pi's GPIO Pin 2.
6. Connect the ground pin of the sensor to the GND pin on the Raspberry Pi.
7. Connect the data pin of the sensor to the GPIO pin on the Raspberry Pi.(We connected it to **PIN 4**)
8. In the simple_test.py file, firebase credentials were changed to our own firebase realtime database.
9. After connection, run the python simple_test.py (Present in the folder)
10. The code will upload the humidity and the temperature data onto the database.
11. To check the working of the sensor, the sensor was covered with hands to see the change in the temperature and the humidity (Graph attached below)
12. The code was run for 60 seconds to capture the temperature and humidity.

Results:



Data on the Realtime Database (Firebase):



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