

This Python Script uses Adafruit Python DHT Sensor Library to read the DHT series of humidity and temperature sensors on a Raspberry Pi 3 (Model B+). The sensor used is the DHT22 temperature-humidity sensor. --> <https://www.adafruit.com/products/385>

[Adafruit DHT](#)
[RPi.GPIO](#)
[datetime](#)

[mysql](#)
[os](#)
[pyrebase](#)

[socket](#)
[sys](#)
[time](#)

[uuid](#)

destroy()

Function to to clean up all the GPIO ports used in this script.
It resets ports used in this program back to input mode.
:return: nothing

get_ip()

Function to get the IP address of the Raspberry Pi.
:return: returns the IP address

get_mac()

Function to get the MAC address of the Raspberry Pi.
:return: returns the MAC address

uploadDeviceInformation()

Function to upload or insert the Raspberry Pi information into the database (device table)
:return: nothing

uploadSensorReadings()

Function to upload or insert real-time sensor readings of temperature, light intensity and humidity into MySQL database.
:return: nothing

uploadToFirebase()

Function to upload or insert real-time sensor readings of temperature and humidity into the Firebase database. It also alerts the user if temperature > 25 degrees celcius or humidity >50% (too humid or warm for the cakes) by turning a red LED on.
:return: nothing

```
Config = {'apiKey': 'AIzaSyANky8tRqM9OB-DE7GhGCbsXNrc1miPbi4', 'appId':  
'1:767798854296:web:daf29694c4517a34', 'authDomain': 'database2-3608a.firebaseio.com', 'databaseURL':  
'https://database2-3608a.firebaseio.com', 'messagingSenderId': '767798854296', 'projectId': 'database2-3608a',  
'storageBucket': 'database2-3608a.appspot.com'}
```

```
LightSensorAnalog = 3
```

```
LightSensorDigital = 2
```

```
RedLight = 19
```

```
cnx = <mysql.connector.connection.MySQLConnection object>
```

```
sensor = 11
```