

IBM

ASSIGNMENT 2

PYTHON CODE:

```
import time

import Adafruit_DHT

DHT_READ_TIMEOUT = 5

DHT_DATA_PIN = 26

ADAFRUIT_IO_KEY = 'YOUR_AIO_KEY'

ADAFRUIT_IO_USERNAME = 'YOUR_AIO_USERNAME'

aio = Client(ADAFRUIT_IO_USERNAME, ADAFRUIT_IO_KEY)

temperature_feed = aio.feeds('temperature')

humidity_feed = aio.feeds('humidity')

dht22_sensor = Adafruit_DHT.DHT22

while True:

    humidity, temperature = Adafruit_DHT.read_retry(dht22_sensor, DHT_DATA_PIN)

    if humidity is not None and temperature is not None:

        print('Temp={0:0.1f}*C Humidity={1:0.1f}%'.format(temperature, humidity))

        temperature = '%.2f'%(temperature)

        humidity = '%.2f'%(humidity)

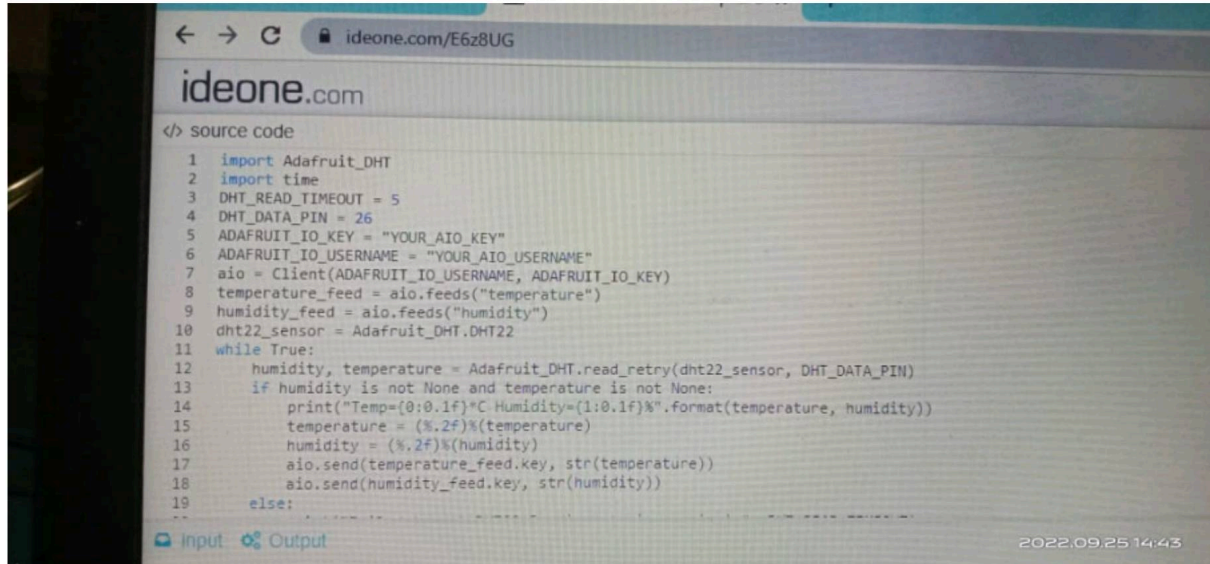
        aio.send(temperature_feed.key, str(temperature))

        aio.send(humidity_feed.key, str(humidity))

    else:
```

```
print('Failed to get DHT22Reading,trying again in', DHT_READ_TIMEOUT, 'seconds')  
time.sleep(DHT_READ_TIMEOUT)
```

OUTPUT:



```
ideone.com/E6z8UG  
ideone.com  
</> source code  
1 import Adafruit_DHT  
2 import time  
3 DHT_READ_TIMEOUT = 5  
4 DHT_DATA_PIN = 26  
5 ADAFRUIT_IO_KEY = "YOUR_AIO_KEY"  
6 ADAFRUIT_IO_USERNAME = "YOUR_AIO_USERNAME"  
7 aio = Client(ADAFRUIT_IO_USERNAME, ADAFRUIT_IO_KEY)  
8 temperature_feed = aio.feeds("temperature")  
9 humidity_feed = aio.feeds("humidity")  
10 dht22_sensor = Adafruit_DHT.DHT22  
11 while True:  
12     humidity, temperature = Adafruit_DHT.read_retry(dht22_sensor, DHT_DATA_PIN)  
13     if humidity is not None and temperature is not None:  
14         print("Temp={0:0.1f}*C Humidity={1:0.1f}%".format(temperature, humidity))  
15         temperature = "{0:0.1f}".format(temperature)  
16         humidity = "{0:0.1f}".format(humidity)  
17         aio.send(temperature_feed.key, str(temperature))  
18         aio.send(humidity_feed.key, str(humidity))  
19     else:  
20         print("Failed to get DHT22Reading,trying again in", DHT_READ_TIMEOUT, "seconds")  
21         time.sleep(DHT_READ_TIMEOUT)
```

Input Output 2022.09.25 14:43

```
celsius: 18.30C  
fahrenheit: 64.94F  
humidity: 34.98%  
  
celsius: 18.20C  
fahrenheit: 64.76F  
humidity: 35.40%
```

Line chart update from ADAFRUIT IO:

DHT22

