

IBM

ASSIGNMENT 2

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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)

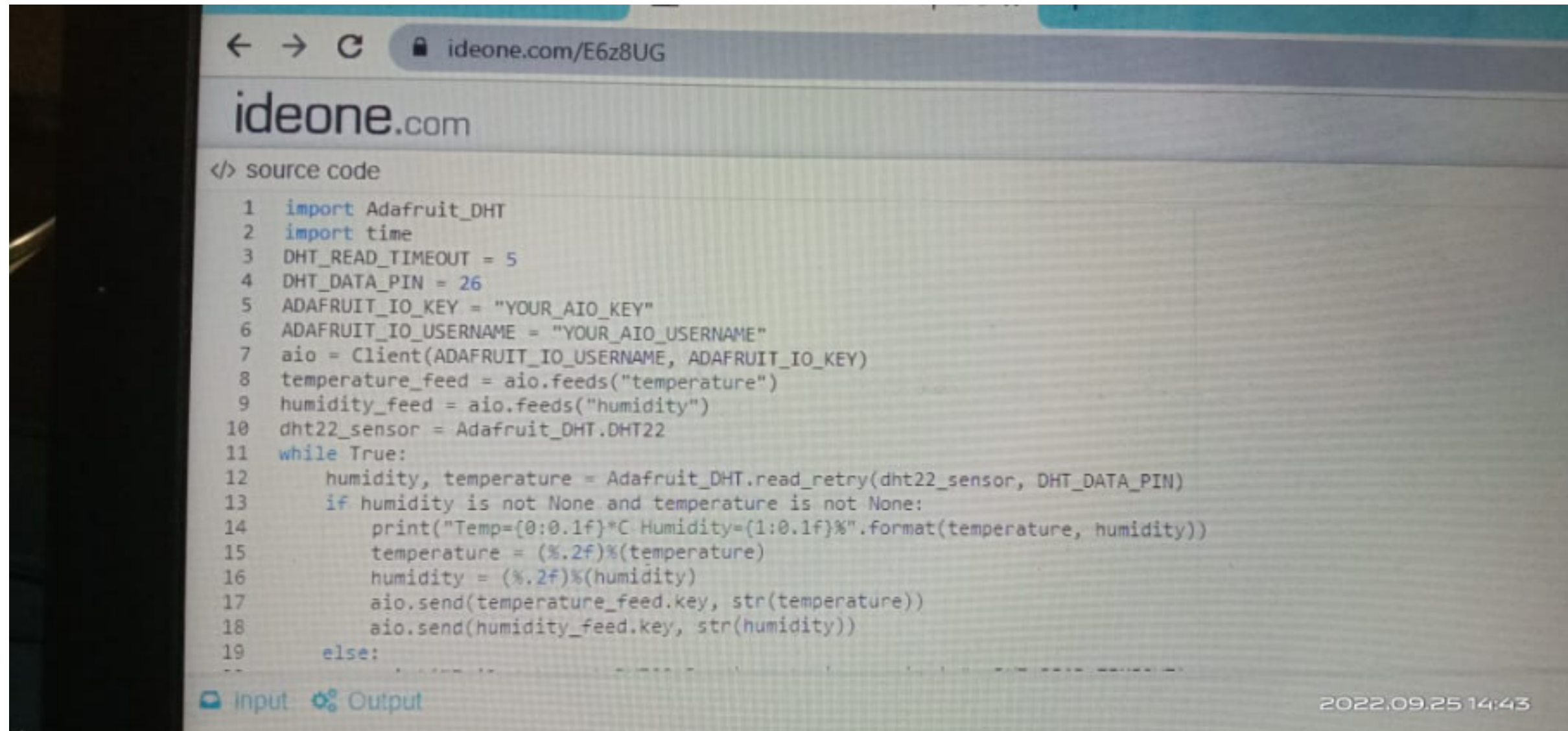
        aio.send(temperature_feed.key, str(temperature))

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

    else:
```

```
print('Failed to get DHT22 Reading, trying again in ', DHT_READ_TIMEOUT, 'seconds')  
time.sleep(DHT_READ_TIMEOUT)
```

OUTPUT:

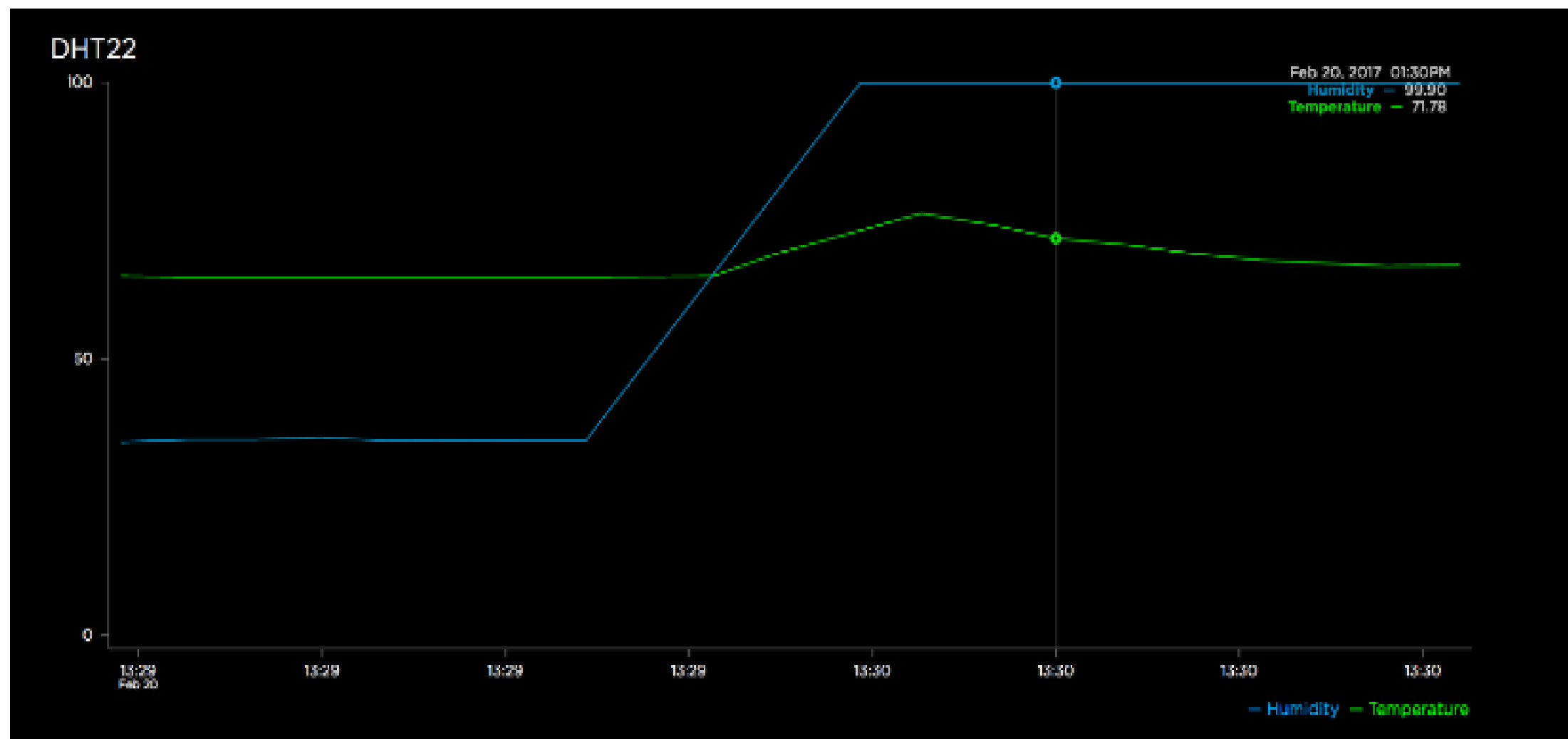


```
</> source code  
1 import Adafruit_DHT  
2 import time  
3 DHT_READ_TIMEOUT = 5  
4 DHT_DATA_PIN = 26  
5 ADAFRUIT_IO_KEY = "YOUR_AIO_KEY"  
6 ADAFRUIT_IO_USERNAME = "YOUR_AIO_USERNAME"  
7 aio = Client(ADAFRUIT_IO_USERNAME, ADAFRUIT_IO_KEY)  
8 temperature_feed = aio.feeds("temperature")  
9 humidity_feed = 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 = (0.2f)(temperature)  
16         humidity = (0.2f)(humidity)  
17         aio.send(temperature_feed.key, str(temperature))  
18         aio.send(humidity_feed.key, str(humidity))  
19     else:  
20         print("Failed to read DHT22 sensor, retrying...")  
21         time.sleep(DHT_READ_TIMEOUT)
```

Input Output 2022.09.25 14:43

```
celsius: 18.30C  
fahrenheit: 64.94F  
humidity: 34.90%  
  
celsius: 18.20C  
fahrenheit: 64.76F  
humidity: 35.40%
```

Line chart update fromADAFRUIT IO:



USING PYTHON without adafruit

CODE:

```
import random
```

```
While(True):
```

```
    a = random.randint(10,99)
```

```
    b = random.randint(10,99)
```

```
    if(a>35 and b<60)
```

```
        print(" High temperature and humidity of:" a,b," %" ,alarm is on)
```

```
    elif(a<35 and b>60)
```

```
        print(" Normal temperature and humidity of:" a,b," %" ,alarm is off)
```

```
    break
```

OUTPUT:

← → ↻ raw.githubusercontent.com/IBM-EPBL/IBM-Project-49483-1660820029/main/Assignment/Lakshya%20P%20(Team%20Lead)/Assignment%202/Online%20Python%20Co...

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Interactive Python Course

main.py Run Shell Clear

```
1 import random
2 while(True):
3     a=random.randint(10,99)
4     b=random.randint(10,99)
5     if(a>35 and b<60):
6         print("high temperature and humidity of:",a,b,"%","alm is on")
7     elif(a<35 and b>60):
8         print("Normal temperature and humdity of:",a,b,"%","alarm is off")
9     break
```

high temperature and humidity of: 60 25 % alm is on
high temperature and humidity of: 95 45 % alm is on
high temperature and humidity of: 56 11 % alm is on
high temperature and humidity of: 84 28 % alm is on
high temperature and humidity of: 96 50 % alm is on
high temperature and humidity of: 82 34 % alm is on
Normal temperature and humdity of: 26 69 % alarm is off
>

Type here to search

16:24
25/09/2022