Assignment -2

Assignment Date	
Student Name	Poornima R
Student Roll Number	20ECL12
Maximum Marks	2 Marks

Question-1:

Build a python code, Assume u get temperature and humidity values (generated with a random function to a variable) and write a condition to detect an alarm in case of high temperature continuously.

Solution:

```
import time
 # import adafruit dht library.
import Adafruit_DHT

 # import Adafruit IO REST client.
from Adafruit_IO import Client, Feed

# Delay in-between sensor readings, in seconds.
DHT_READ_TIMEOUT = 5

# Pin connected to DHT22 data pin
DHT_DATA_PIN = 26

 # Set to your Adafruit IO key. # Remember, your key is a secret, # so make sure not to publish it when you publish this code!
 ADAFRUIT_IO_KEY = 'YOUR_AIO_KEY'

# Set to your Adafruit IO username.
# (go to https://accounts.adafruit.com to find your username).
ADAFRUIT_IO_USERNAME = 'YOUR_AIO_USERNAME'

# Create an instance of the REST client.
aio = Client(ADAFRUIT_IO_USERNAME, ADAFRUIT_IO_KEY)

# Set up Adafruit IO Feeds.
temperature_feed = aio.feeds('temperature')
humidity_feed = aio.feeds('humidity')


# Set up DHT22 Sensor.
```

```python
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))

# Send humidity and temperature feeds to Adafruit IO
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')

# Timeout to avoid flooding Adafruit IO
time.sleep(DHT_READ_TIMEOUT)
```