Assignment 2

Python Programming

AssignmentDate	30 September2022
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Question-1:

Build the python program assume that temperature and humidity values (generated with random function to a variable) and write a condition to continuously detect alarm in case of high temperature.

Solution:

```
import time
import temp_DHT
period = 60 ## Sensor data reporting period (1 minute)
pin = 4 ## Assuming the DHT11 sensor is connected to GPIO pin number 4

temp_resource   = Resource(bbt, 'RaspberryPi', 'temperature')
humid_resource  = Resource(bbt, 'RaspberryPi', 'humidity')

def run():
 while True:
  ### Assume  humidity, temperature = temp_DHT.read_retry( temp_DHT.DHT11, pin )
  if humidity is not None and temperature is not None:
     print "Temp={0:f}*C  Humidity={1:f}%".format(temperature, humidity)
     try:
       #Send temperature to Beebotte
       temp_resource.write(temperature)
       #Send humidity to Beebotte
       humid_resource.write(humidity)
     except Exception:
       ## Process exception here
       print "Error while writing to Beebotte"
  else:
```

```
    print "Failed to get reading. Try again!"

#Sleep some time
time.sleep( period )
```

OUTPUT

```
File  Edit  Shell  Debug  Options  Windows  Help
>>> ========== RESTART ==========
>>>
Temp=26.00*C  Humidity=44.00%
Temp=26.00*C  Humidity=45.00%
Temp=27.00*C  Humidity=43.00%
Temp=27.00*C  Humidity=43.00%
Temp=27.00*C  Humidity=43.00%
Temp=26.00*C  Humidity=44.00%
Temp=26.00*C  Humidity=44.00%
Temp=26.00*C  Humidity=44.00%
Temp=26.00*C  Humidity=44.00%
Temp=26.00*C  Humidity=44.00%
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Temp=26.00*C  Humidity=45.00%
Temp=26.00*C  Humidity=45.00%
Temp=26.00*C  Humidity=45.00%
Temp=26.00*C  Humidity=39.00%
Temp=27.00*C  Humidity=43.00%
Temp=27.00*C  Humidity=47.00%
Temp=27.00*C  Humidity=45.00%
Temp=27.00*C  Humidity=47.00%
Temp=27.00*C  Humidity=48.00%
Temp=28.00*C  Humidity=56.00%
Temp=27.00*C  Humidity=53.00%
Temp=27.00*C  Humidity=52.00%
Temp=27.00*C  Humidity=51.00%
Temp=27.00*C  Humidity=51.00%
                                                    Ln: 1262  Col: 0
```