

SMART SOLUTION FOR RAILWAYS

ASSIGNMENT 2

Date	08.10.2022
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Maximum marks	2 MARKS

Question:

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
```

```
if humidity,temperature=temp_DHT.read_retry(temp_DHT.DHT11,pin)
```

```
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*
```

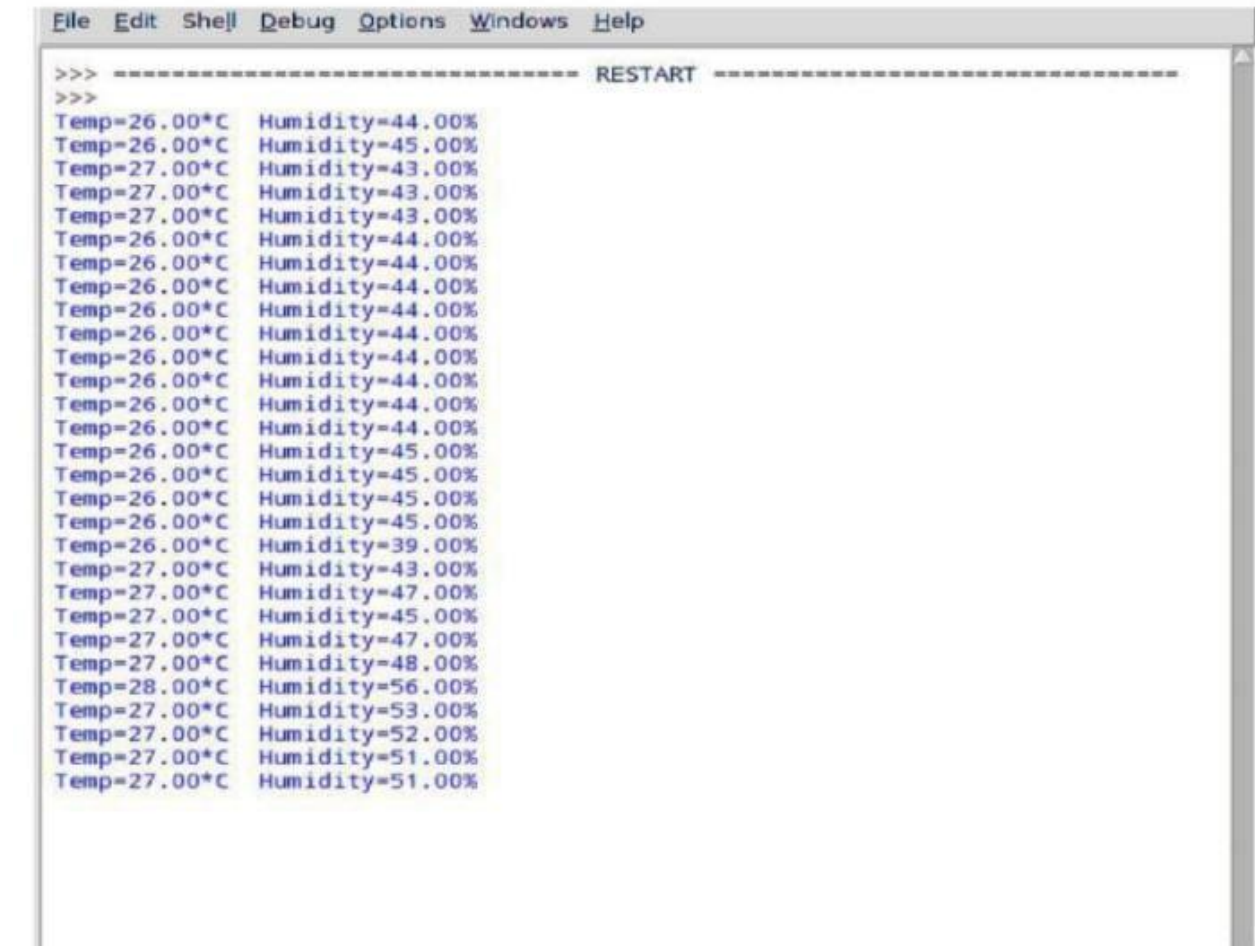
```
else:
```

```
print *Failed to get reading. Try again!”
```

```
#Sleep some time
```

```
time.sleep(period)
```

OUTPUT:



The screenshot shows a terminal window with a menu bar (File, Edit, Shell, Debug, Options, Windows, Help) and a title bar. The terminal content displays a series of temperature and humidity readings. The first line is a separator line with the word 'RESTART' in the center. The data is presented as a list of pairs: 'Temp=26.00*C' followed by 'Humidity=44.00%' on the same line. The temperature remains at 26.00*C for the first 18 lines, then increases to 27.00*C for the next 6 lines, then to 28.00*C for one line, and finally returns to 27.00*C for the last 4 lines. The humidity values fluctuate between 39.00% and 56.00%.

```
>>> ----- 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%  
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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=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%
```