

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 containing 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Windows', and 'Help'. The terminal content starts with a prompt '>>>' followed by a dashed line and the word 'RESTART'. Below this, there are two more '>>>' prompts. The main body of the terminal displays a list of 28 lines, each containing a temperature and humidity reading in the format 'Temp=X.XX*C Humidity=XX.XX%'. The temperatures range from 26.00 to 28.00, and the humidities range from 39.00 to 56.00. The data is as follows:

| Temp | Humidity |
|-------|----------|
| 26.00 | 44.00 |
| 26.00 | 45.00 |
| 27.00 | 43.00 |
| 27.00 | 43.00 |
| 27.00 | 43.00 |
| 26.00 | 44.00 |
| 26.00 | 44.00 |
| 26.00 | 44.00 |
| 26.00 | 44.00 |
| 26.00 | 44.00 |
| 26.00 | 44.00 |
| 26.00 | 44.00 |
| 26.00 | 44.00 |
| 26.00 | 45.00 |
| 26.00 | 45.00 |
| 26.00 | 45.00 |
| 26.00 | 45.00 |
| 26.00 | 39.00 |
| 27.00 | 43.00 |
| 27.00 | 47.00 |
| 27.00 | 45.00 |
| 27.00 | 47.00 |
| 27.00 | 48.00 |
| 28.00 | 56.00 |
| 27.00 | 53.00 |
| 27.00 | 52.00 |
| 27.00 | 51.00 |
| 27.00 | 51.00 |