TEMPERATURE AND HUMIDITY CHECK

WOKWI LINK:

https://wokwi.com/projects/364590164676177921

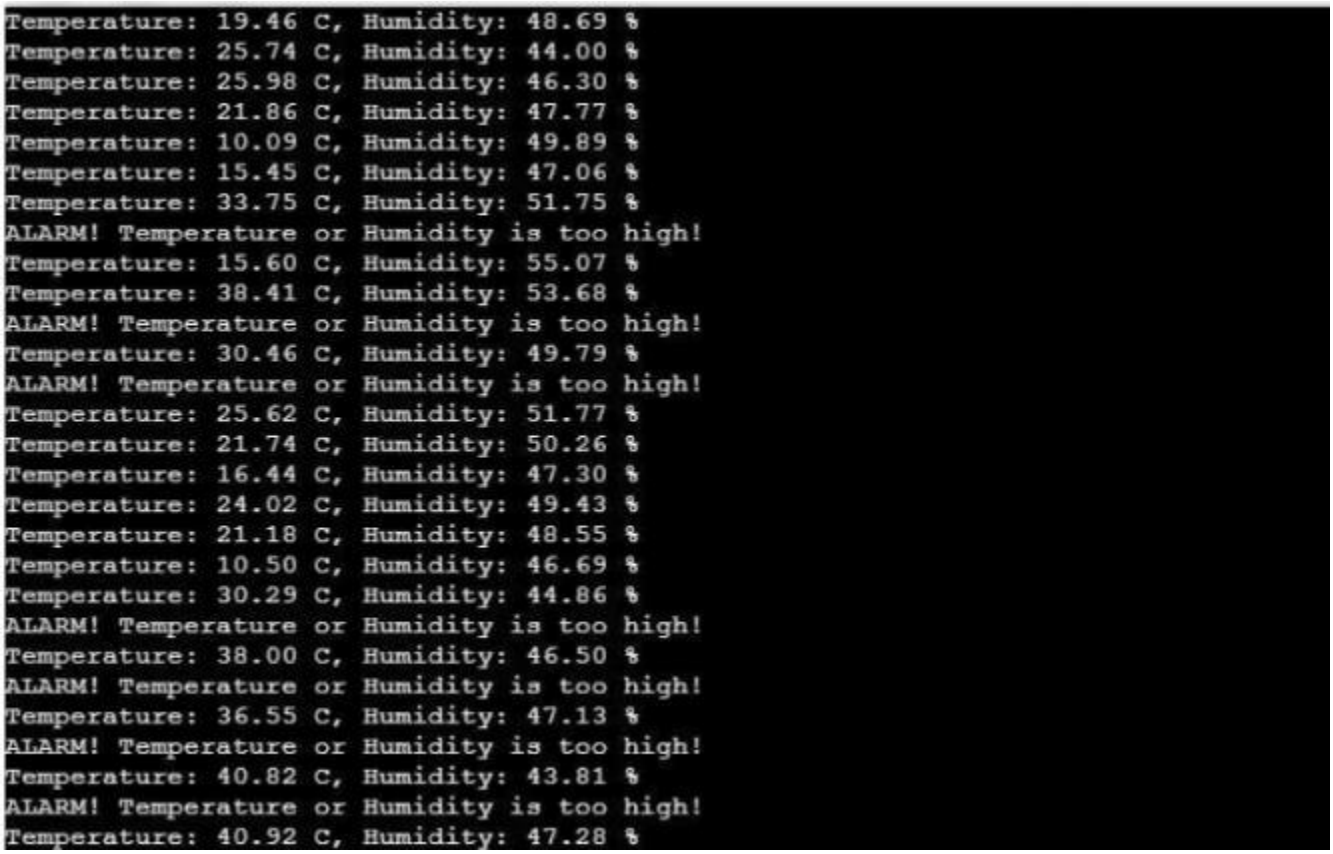
PROGRAM :

```
import random import time from machine

import Pin, PWM, ADC   TEMP_THRESHOLD

= 30

HUMIDITY_THRESHOLD = 70

BUZZER_PIN = 5

BUZZER_FREQ = 2000 BUZZER_DUTY = 512 buzzer =

PWM(Pin(BUZZER_PIN), freq=BUZZER_FREQ, duty=0)

HUMIDITY_PIN = 34 TEMPERATURE_PIN

= 35 adc = ADC(Pin(HUMIDITY_PIN))

adc.atten(ADC.ATTN_11DB)


while True:         temperature =

random.uniform(10, 45)     humidity = adc.read()

/ 4095 * 100          print("Temperature:

{:.2f} C, Humidity: {:.2f}

%".format(temperature, humidity))

if temperature > TEMP_THRESHOLD or humidity >

HUMIDITY_THRESHOLD:        print("ALARM! Temperature or

Humidity is too high!")
```

```
buzzer.duty(BUZZER_DUTY)

time.sleep(0.5)        buzzer.duty(0)

time.sleep(0.5)

time.sleep(1)
```

Connection diagram :

Output:


Temperature: 19.46 C, Humidity: 48.69 %
Temperature: 25.74 C, Humidity: 44.00 %
Temperature: 25.98 C, Humidity: 46.30 %
Temperature: 21.86 C, Humidity: 47.77 %
Temperature: 10.09 C, Humidity: 49.89 %
Temperature: 15.45 C, Humidity: 47.06 %
Temperature: 33.75 C, Humidity: 51.75 %
ALARM! Temperature or Humidity is too high!
Temperature: 15.60 C, Humidity: 55.07 %
Temperature: 38.41 C, Humidity: 53.68 %
ALARM! Temperature or Humidity is too high!
Temperature: 30.46 C, Humidity: 49.79 %
ALARM! Temperature or Humidity is too high!
Temperature: 25.62 C, Humidity: 51.77 %
Temperature: 21.74 C, Humidity: 50.26 %
Temperature: 16.44 C, Humidity: 47.30 %
Temperature: 24.02 C, Humidity: 49.43 %
Temperature: 21.18 C, Humidity: 48.55 %
Temperature: 10.50 C, Humidity: 46.69 %
Temperature: 30.29 C, Humidity: 44.86 %
ALARM! Temperature or Humidity is too high!
Temperature: 38.00 C, Humidity: 46.50 %
ALARM! Temperature or Humidity is too high!
Temperature: 36.55 C, Humidity: 47.13 %
ALARM! Temperature or Humidity is too high!
Temperature: 40.82 C, Humidity: 43.81 %
ALARM! Temperature or Humidity is too high!
Temperature: 40.92 C, Humidity: 47.28 %