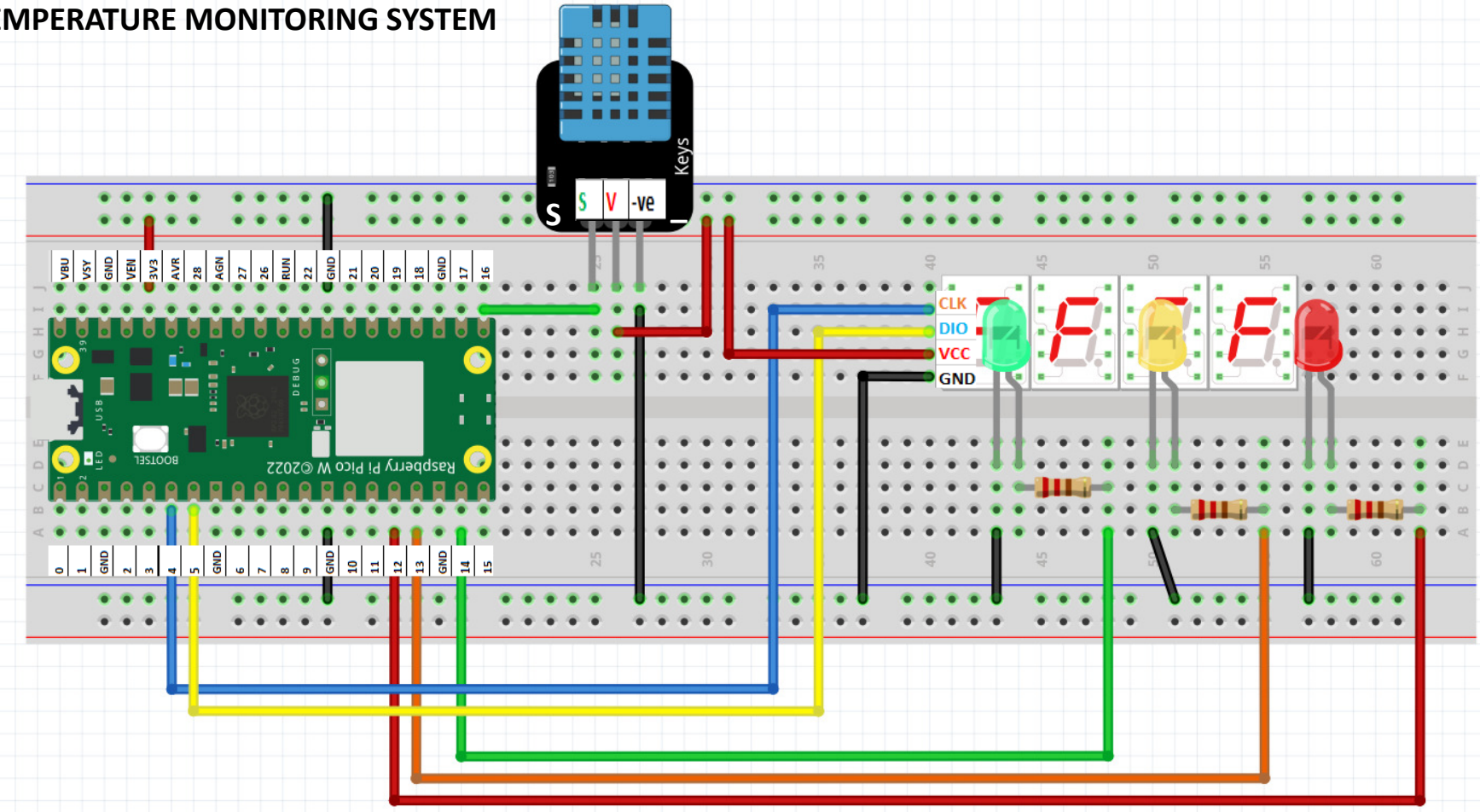
TEMPERATURE MONITORING SYSTEM



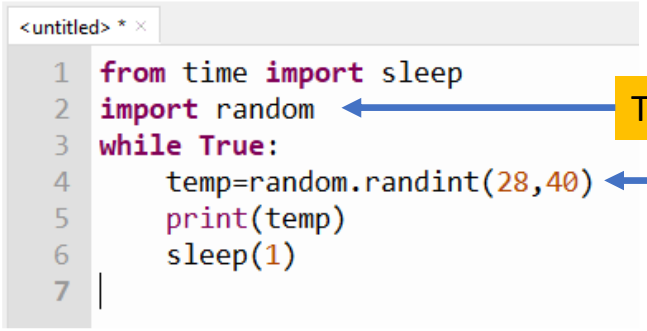
PYTHON – RANDOM INTEGERS AND CONDITIONAL STATEMENTS

THIS PROJECT SIMULATES A TEMPERATURE MONITORING SYSTEM

TO ACCOMPLISH THIS PROJECT, WE WILL NEED TO USE THE "IF" CONDITIONAL STATEMENTS

The temperature and humidity readings from a dht11 can be said to be random. It is not predictable. For our demonstration we will use a random number generator to simulate the temperature reading of the dht11
In python it is random library

import random



This is the random number generator **library**

Getting the Random number Generator to give us a random number from 28 to 40

If you run this program with the plotter Turned on, you can see the data display graphically

[simulation.py]

```
1  from time import sleep
2  import random
3
4  while True:
5      temp=random.randint(28,40)
6
7      if temp <= 30:
8          print(temp)
9          print('normal')
10
11
12     if temp >=30 and temp <=35:
13         print(temp)
14         print('watch out')
15
16     if temp >35 :
17         print(temp)
18         print('danger')
19
20
21     sleep(1)
22
```

We use a random number generator
To simulate temperature data from
The dht11. We will get integer values ranging from 28 to 40

What actions to take depends on the values given or read
By the dht11

This is the sampling time for the dht11. You can use this to
Determine how much time in between each temperature and
Humidity reading.

This is Ex 4.

Using the knowledge gained so far modify the simulation.py program to achieve the following:

Temp below or equal to 30 Deg C – display green led, turn off the other two
Temp above 30 but below 35 Deg C – display yellow led, turn off the other two
Temp above 35 Deg C – display red led, turn off the other two

Temperature Readings to be displayed on the 7 segment display

Additional Challenge: Add a buzzer on your own and sound buzzer for Temp above 35 Deg C