ASSIGNMENT 2

PYTHON CODE FOR DETECTING TEMPERATURE

Code:

|  |
| --- |
|  |
|  | import tkinter as tk |
|  | import random  import datetime  import numpy as np |
|  | import time |
|  |  |
|  | import threading |
|  | import Adafruit\_DHT |
|  |  |
|  | pin = 4 |
|  | sensor = Adafruit\_DHT.DHT22 |
|  |  |
|  | def tick(): |
|  |  |
|  | time2=time.strftime('%H:%M:%S') |
|  | clock.config(text=time2) |
|  | clock.after(200,tick) |
|  |  |
|  |  |
|  | defget\_data(): |
|  |  |
|  | threading.Timer(5, get\_data).start() |
|  |  |
|  | humidity, temperature = Adafruit\_DHT.read\_retry(sensor, pin) |
|  |  |
|  | if humidity is not None and temperature is not None: |
|  | print('Temp={0:0.1f}\*C Humidity={1:0.1f}%'.format(temperature, humidity)) |
|  | l\_display.config(text = temperature) |
|  | else: |
|  | print('Failed') |
|  |  |
|  |  |
|  | return temperature |
|  |  |
|  |  |
|  |  |
|  | mainwindow = tk.Tk() |
|  | mainwindow.geometry('640x340') |
|  | mainwindow.title("Sensor Data Live Feed ") |
|  |  |
|  | clock=tk.Label(mainwindow,font=("Arial",30), bg='green',fg="white") |
|  | clock.grid(row=0, column=0, padx=10, pady=10, sticky="nsew") |
|  |  |
|  | l\_m=tk.Label(mainwindow,text="Sensor Data ",font=("Arial",30),fg="Black") |
|  | l\_m.grid(row=0,column=1, padx=10, pady=10, sticky="nsew") |
|  |  |
|  | l\_t=tk.Label(mainwindow, text="Temperature C",font=("Arial",25)) |
|  | l\_t.grid(row=1,column=0, padx=10, pady=10, sticky="nsew") |
|  |  |
|  | l\_display=tk.Label(mainwindow,font=("Arial",25),fg="red") |
|  | l\_display.grid(row=1,column=1, padx=10, pady=10, sticky="nsew") |
|  |  |
|  |  |
|  | tick() |
|  | get\_data() |
|  |  |
|  | mainwindow.mainloop() |