code

May 4, 2023

[2]:

# import requests import json

**import tkinter as tk from tkinter import** ttk

*# Set up background image*

bg\_image = **None**

**def** set\_up\_gui():

**global** bg\_image

*# Set up the GUI*

root = tk.Tk() root.geometry("700x400") root.title("Weather App")

*# Load the background image*

bg\_image = tk.PhotoImage(file = "map4.png")

*# Create a label to display the background image* bg\_label = tk.Label(root, image=bg\_image) bg\_label.place(x=0, y=0, relwidth=1, relheight=1)

location\_label = tk.Label(root, text="Welcome to weather App",␣

↪font=("Roffe",20, "italic","bold"),bg="Sky blue") location\_label.pack(pady=20)

*# Create labels and entry fields for location input and unit selection*

location\_label = tk.Label(root, text="Enter location(city only):",␣

↪font=("Roffe",15,"italic"), anchor='center') location\_label.pack(pady=5)

location\_entry = tk.Entry(root, font=("Roffe",15,"italic")) location\_entry.pack(pady=5)

unit\_label = tk.Label(root, text="Select unit:", font=("Roffe",15,"italic")) unit\_label.pack(pady=2)

unit\_var = tk.StringVar()

unit\_var.set("imperial")

unit\_imperial = tk.Radiobutton(root, text="Fahrenheit", variable=unit\_var,␣

↪value="imperial", font=("Roffe",10,"italic"))

unit\_metric = tk.Radiobutton(root, text="Celsius", variable=unit\_var,␣

↪value="metric", font=("Roffe",10,"italic")) unit\_imperial.pack(pady=2) unit\_metric.pack(pady=5)

*# Create a function to retrieve weather data from the API and update the*␣

↪*table*

**def** get\_weather():

*# Get the location input from the user*

location = location\_entry.get()

*# Make an API request to OpenWeatherMap*

url = f"[http://api.openweathermap.org/data/2.5/weather?](http://api.openweathermap.org/data/2.5/weather)

↪q=**{**location**}**&units=**{**unit\_var.get()**}**&appid=4a613c2e952661de99c0f360ed97376c"

response = requests.get(url)

*# Parse the JSON data from the response*

data = json.loads(response.text)

*# Check if the API call was successful*

**if** data["cod"] != "404":

*# Extract the relevant weather information*

temp = data["main"]["temp"] humidity = data["main"]["humidity"] wind\_speed = data["wind"]["speed"]

description = data["weather"][0]["description"]

*# Update the weather data table*

table.delete(\*table.get\_children())

table.insert("", 0, values=("Temperature", f"**{**temp**}**°"))

table.insert("", 1, values=("Humidity", f"**{**humidity**}**%")) table.insert("", 2, values=("Wind Speed", f"**{**wind\_speed**}** mph")) table.insert("", 3, values=("Description", f"**{**description.

↪capitalize()**}**"))

# else:

*# Display an error message if the location was not found*

table.delete(\*table.get\_children())

table.insert("", 0, values=("Error", "Location not found."))

*# Create a button to retrieve weather data when clicked*

button = tk.Button(root, text="Get Weather", command=get\_weather) button.pack()

*# Create a table to display weather data*

table = ttk.Treeview(root, columns=("Label", "Value"), show="headings",␣

↪height=5)

table.heading("Label", text="Label") table.column("Label", width=100, anchor="center") table.heading("Value", text="Value") table.column("Value", width=100, anchor="center") table.pack(pady=10)

*# Run the GUI*

root.mainloop() set\_up\_gui()

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