import tkinter as tk  
from tkinter import messagebox  
from PIL import Image  
import requests  
from bs4 import BeautifulSoup  
  
  
# Define a function to convert the currency  
def convert():  
 """  
 Get the input value and currency selection  
 :return:  
 """  
 input\_currency = input\_currency\_var.get()  
 try:  
 value = float(input\_var.get())  
 except ValueError:  
 messagebox.showwarning("Warning", "Please enter a valid integer amount.")  
 return  
  
 output\_currency = output\_currency\_var.get()  
  
 # Define the conversion rates  
  
 rates = get\_exchange\_rate()  
 rates['RON'] = 1  
 rates\_float = {y: 1 / float(x) for y, x in rates.items()}  
  
 # Convert the input value to RON  
 ron\_value = value / rates\_float[input\_currency]  
  
 # Convert the RON value to the output currency  
 output\_value = ron\_value \* rates\_float[output\_currency]  
  
 # Update the output label  
 output\_var.set("{:.2f}".format(output\_value))  
  
  
def clear():  
 """  
 clear the input and output fields  
 """  
 input\_var.set("")  
 output\_var.set("")  
  
  
def get\_exchange\_rate():  
 """  
 web scrape for exchange rate  
 :return:  
 """  
 r = requests.get('https://www.cursbnr.ro/')  
 if r.ok:  
 soup = BeautifulSoup(r.content, 'lxml')  
 currency\_table = soup.find('div', class\_='table-responsive')  
 currency\_data = currency\_table.find\_all('tr')  
 currency, value = [], []  
 for item in currency\_data:  
 if item.find('td'):  
 currency.append(item.find('td').text)  
 values = item.find\_all('td')  
 value.append(values[2].text)  
  
 stuff = dict(zip(currency, value))  
 return stuff  
  
  
# Define the app icon  
file = r'icon.png'  
img = Image.open(file)  
img.save('icon.ico', format='ICO', sizes=[(100, 100)])  
  
# Define colors and FONTs  
BG\_COLOR = "#3bc43b"  
LABEL\_COLOR = "#ffffff"  
FONT = "Tahoma"  
FONT\_SMALL = 18  
FONT\_MEDIUM = 22  
  
# Create the main window  
root = tk.Tk()  
root.title("Currency Converter")  
root.geometry("800x400")  
root.resizable(False, False)  
root.iconbitmap(r'C:\Users\PC\PycharmProjects\pythonProject\Proiect\\icon.ico')  
root.configure(bg=BG\_COLOR)  
  
# Create title labels  
label\_title = tk.Label(root, text="FAST CONVERTER", font=(FONT, FONT\_MEDIUM), bg=BG\_COLOR,  
 fg=LABEL\_COLOR)  
label\_title.pack(pady=10, padx=10)  
  
# Create the input frame  
input\_frame = tk.Frame(root, bg=BG\_COLOR)  
input\_frame.pack(fill="x", padx=10, pady=10)  
  
# Create the input label and entry field  
input\_label = tk.Label(input\_frame, text="Amount to be converted:", font=(FONT, FONT\_MEDIUM), bg=BG\_COLOR,  
 fg=LABEL\_COLOR)  
input\_label.pack(side="left", padx=5, pady=5)  
  
input\_var = tk.StringVar()  
input\_entry = tk.Entry(input\_frame, textvariable=input\_var, font=(FONT, FONT\_MEDIUM))  
input\_entry.pack(side="left", padx=5, pady=5)  
  
# Create the input currency selection menu  
input\_currency\_var = tk.StringVar()  
input\_currency\_var.set("RON")  
# rates = get\_exchange\_rate()  
# rates['RON'] = 1  
# rates\_float = {y: 1 / float(x) for y, x in rates.items()}  
input\_currency\_menu = tk.OptionMenu(input\_frame, input\_currency\_var, "RON", "EUR", "USD", "GBP", "CHF", "BGN", "HUF")  
# input\_currency\_menu = tk.OptionMenu(input\_frame, input\_currency\_var, \*rates\_float.keys())  
input\_currency\_menu.config(bg='#ffc14e', fg=LABEL\_COLOR, font=(FONT, FONT\_SMALL))  
input\_currency\_menu.pack(side="left", padx=5, pady=5)  
  
# Create the output frame  
output\_frame = tk.Frame(root, bg=BG\_COLOR)  
output\_frame.pack(fill="x", padx=10, pady=10)  
  
# Create the output label  
output\_label = tk.Label(output\_frame, text="Converted Amount:", font=(FONT, FONT\_MEDIUM), bg=BG\_COLOR,  
 fg=LABEL\_COLOR)  
output\_label.pack(side="left", padx=5, pady=5)  
  
output\_var = tk.StringVar()  
output\_entry = tk.Entry(output\_frame, textvariable=output\_var, font=(FONT, FONT\_MEDIUM))  
output\_entry.config(state="readonly")  
output\_entry.pack(side="left", padx=5, pady=5)  
  
# Create the output currency selection menu  
output\_currency\_var = tk.StringVar()  
output\_currency\_var.set("EUR")  
output\_currency\_menu = tk.OptionMenu(output\_frame, output\_currency\_var, "RON", "EUR", "USD", "GBP", "CHF", "BGN", "HUF")  
output\_currency\_menu.config(bg='#ff3333', fg=LABEL\_COLOR, font=(FONT, FONT\_SMALL))  
output\_currency\_menu.pack(side="left", padx=5, pady=5)  
  
button\_frame = tk.Frame(root, bg=BG\_COLOR)  
button\_frame.pack(fill="x", padx=10, pady=10)  
  
# create convert and clear buttons  
  
convert\_button = tk.Button(button\_frame, text="Convert", command=convert, bg='#ffc0db', fg=LABEL\_COLOR,  
 font=(FONT, FONT\_MEDIUM))  
convert\_button.pack(side="left", padx=5, pady=5)  
  
clear\_button = tk.Button(button\_frame, text="Clear", command=clear, bg='#c0cbff', fg=LABEL\_COLOR,  
 font=(FONT, FONT\_MEDIUM))  
clear\_button.pack(side="left", padx=5, pady=5)  
  
root.mainloop()