import csv

import matplotlib.pyplot as plt

import tkinter as tk

import os

def main():

new\_window = tk.Tk()

new\_window.title("Functions")

new\_window.geometry("400x400")

tk.Label(new\_window, text = "\n\t Welcome to the European Soccer Game Data Analysis Program.\

\nWhat do you want to do?\n").pack()

bnew = tk.Button(new\_window, text = "Create a New File", command = New\_File).pack()

bread = tk.Button(new\_window, text = "Read an Existing File", command = Read\_File).pack()

bapp = tk.Button(new\_window, text = "Append in an Existing File", command = Append\_File).pack()

bsearch = tk.Button(new\_window, text = "Search for a record in a File", command = Search\_File).pack()

bmod = tk.Button(new\_window, text = "Modify a record in a File", command = Modify\_File).pack()

bgraph = tk.Button(new\_window, text = "Plot graph for comparison", command = Graph\_File).pack()

bdel = tk.Button(new\_window, text = "Delete a File", command = Delete\_File).pack()

bex = tk.Button(new\_window, text = "EXIT", command=new\_window.destroy).pack()

new\_window.mainloop()

def Content():

new\_window\_1 = tk.Tk()

new\_window\_1.title("New Record!")

new\_window\_1.geometry("400x400")

def save\_text():

with open("Soccer.csv", 'a', newline='') as fin:

w = csv.writer(fin)

t1 = tb1.get()

t2 = tb2.get()

t3 = tb3.get()

t4 = tb4.get()

w.writerow([t1, t2, t3, t4])

b = tk.Label(new\_window\_1, text = "Contents Added! Do you want to enter more?").pack()

b1 = tk.Button(new\_window\_1, text = "YES", command=input).pack()

b2 = tk.Button(new\_window\_1, text = "NO", command = new\_window\_1.destroy).pack()

def input():

global tb1, tb2, tb3, tb4

tk.Label(new\_window\_1, text = "Enter the country name of the team").pack()

tb1 = tk.Entry(new\_window\_1)

tb1.pack()

tk.Label(new\_window\_1, text = "Enter the matches won by that team").pack()

tb2 = tk.Entry(new\_window\_1)

tb2.pack()

tk.Label(new\_window\_1, text = "Enter player name").pack()

tb3 = tk.Entry(new\_window\_1)

tb3.pack()

tk.Label(new\_window\_1, text = "Enter goals scored by that player").pack()

tb4 = tk.Entry(new\_window\_1)

tb4.pack()

tk.Button(new\_window\_1, text = "Save to Soccer.csv", command = save\_text).pack(pady = 10)

input()

def New\_File():

fin = open("Soccer.csv", 'w', newline='')

w = csv.writer(fin)

w.writerow(["Country Name", "Matches Won", "Player Name", "Goals Scored by the Player"])

fin.close()

Content()

def Read\_File():

global data

data = []

def open\_file():

with open("Soccer.csv", 'r', newline = '') as fin:

r = csv.reader(fin)

for i in r:

data.append(i)

open\_file()

new\_window\_1 = tk.Tk()

new\_window\_1.title("File Reader")

text = tk.Text(new\_window\_1, width=70, height=50)

text.pack()

for i in data:

text.insert("end", ",\t".join(i) + "\n")

def Append\_File():

Content()

def Search\_File():

def search():

pname = search\_entry.get()

with open("Soccer.csv", 'r', newline='') as fin:

r = csv.reader(fin)

for i in r:

if i[2].lower() == pname.lower():

result\_text.insert("end", "\t".join(i) + "\n")

return

result\_text.insert("No such record found!\nPlease open the Functions window to continue.")

new\_window\_1 = tk.Tk()

new\_window\_1.title("Search Record")

tk.Label(new\_window\_1, text="Enter player name whose record you wish to search:").pack()

search\_entry = tk.Entry(new\_window\_1)

search\_entry.pack()

tk.Button(new\_window\_1, text="Search", command=search).pack()

result\_text = tk.Text(new\_window\_1, width=90, height=30)

result\_text.pack()

def Modify\_File():

def checkmodify():

pname = modify\_entry.get()

playeristhere = False

with open("Soccer.csv", 'r', newline='') as fin:

data = list(csv.reader(fin))

for row in data:

if row[2].strip().lower() == pname.lower():

playeristhere = True

break

if playeristhere:

add\_data()

else:

result\_text.insert(tk.END, "No such record found!\nPlease open the Functions window to continue.\n")

def modify():

pname = modify\_entry.get()

modified = False

newrows = []

with open("Soccer.csv", 'r', newline='') as fin:

data = list(csv.reader(fin))

for row in data:

if row[2].strip().lower() == pname.lower():

row = [tb1.get(), tb2.get(), tb3.get(), tb4.get()]

modified = True

newrows.append(row)

with open("Soccer.csv", 'w', newline='') as fout:

w = csv.writer(fout)

w.writerows(newrows)

if modified:

result\_text.insert(tk.END, "Record updated.\nPlease open the Functions window to continue.\n")

else:

result\_text.insert(tk.END, "No such record found!\nPlease open the Functions window to continue.\n")

def add\_data():

tk.Label(new\_window\_1, text="Enter the country name of the team").pack()

tb1.pack()

tk.Label(new\_window\_1, text="Enter the matches won by that team").pack()

tb2.pack()

tk.Label(new\_window\_1, text="Enter player name").pack()

tb3.pack()

tk.Label(new\_window\_1, text="Enter goals scored by that player").pack()

tb4.pack()

tk.Button(new\_window\_1, text="Modify Record", command=modify).pack()

new\_window\_1 = tk.Tk()

new\_window\_1.title("Modify Record")

tk.Label(new\_window\_1, text="Enter player name whose record you wish to modify:").pack()

modify\_entry = tk.Entry(new\_window\_1)

modify\_entry.pack()

tk.Button(new\_window\_1, text="Next", command=checkmodify).pack()

result\_text = tk.Text(new\_window\_1, width=80, height=10)

result\_text.pack()

tb1 = tk.Entry(new\_window\_1)

tb2 = tk.Entry(new\_window\_1)

tb3 = tk.Entry(new\_window\_1)

tb4 = tk.Entry(new\_window\_1)

def Delete\_File():

def delete():

os.remove("Soccer.csv")

new\_window\_1 = tk.Tk()

tk.Label(new\_window\_1, text = "Warning! You're going to delete the file. Do you want to go ahead?\n").pack()

# lambda is used for multiple commands

tk.Button(new\_window\_1, text = "YES", command=lambda: [delete(), new\_window\_1.destroy()]).pack()

tk.Button(new\_window\_1, text = "NO", command = new\_window\_1.destroy).pack()

def Graph\_File():

data = []

with open("Soccer.csv", 'r', newline = '') as fin:

r = csv.reader(fin)

for i in r:

data.append(i)

def t():

x = []

y = []

for i in data:

print(i)

if i[0] == "Country Name":

continue

else:

x.append(i[0])

y.append(int(i[1]))

plt.bar(x, y, label = "Goals Scored")

plt.title("Team VS Goals")

plt.xlabel("Countries")

plt.ylabel("Goals Scored")

plt.legend()

plt.show()

def p():

x = []

y = []

for i in data:

if i[0] == "Country Name":

continue

else:

x.append(i[2])

y.append(int(i[3]))

plt.bar(x, y, label = "Goals Scored")

plt.title("Player VS Goals")

plt.xlabel("Players")

plt.ylabel("Goals Scored")

plt.legend()

plt.show()

new\_window\_1 = tk.Tk()

new\_window\_1.geometry("400x400")

tk.Label(new\_window\_1, text = "Select one of the following")

g1 = tk.Button(new\_window\_1, text = "Plot graph between Team and Goals Scored by the Team", command=t).pack(pady = 20)

p1 = tk.Button(new\_window\_1, text = "Plot graph between Player and Goals Scored by the Team", command=p).pack()

main()