Here, we are going to create a **GUI application to track the COVID-19 cases**.

We need to use three different libraries here.

* **tkinter – for GUI**
* **matplotlib – to show data graphically**
* **covid – to get COVID data**

We have many posts based on tkinter so if you have any problem in tkinter then we suggest to read them.

You can install “matplotlib” using the pip command given below

**"pip install matplotlib"**

Python community has made a library to get the COVID-19 information easily.

Library is "**covid**"and its so simple to use.

Visit <https://pypi.org/project/covid/> for more details of this library.

You can download it using the pip command given below.

"**pip install covid**"

***Note*: python>=3.6**

Type this command in your terminal to install and use this library.

Now lets see and understand the code.

***CODE:***

# importing tkinter

from tkinter import \*

# initializing tkinter

root = Tk()

# setting geometry

root.geometry("350x350")

# setting title

root.title("Get Covid-19 Data Country Wise")

# function which will get covid data and will show it

def showdata():

# importing matplotlib which will be used to show data graphically

from matplotlib import pyplot as plt

# to scale the data we are importing patches

import matplotlib.patches as mpatches

# importing covid library

from covid import Covid

# initializing covid library

covid = Covid()

# declaring empty lists to store different data sets

cases = []

confirmed = []

active = []

deaths = []

recovered = []

# using try and except to run program without errors

try:

# updating root

root.update()

# getting countries names entered by the user

countries = data.get()

# removing white spaces from the start and end of the string

country\_names = countries.strip()

# replacing white spaces with commas inside the string

country\_names = country\_names.replace(" ", ",")

# splitting the string to store names of countries

# as a list

country\_names = country\_names.split(",")

# for loop to get all countries data

for x in country\_names:

# appending countries data one-by-one in cases list

# here, the data will be stored as a dictionary

# for one country i.e. for each country

# there will be one dictionary in the list

# which will contain the whole information

# of that country

cases.append(covid.get\_status\_by\_country\_name(x))

# updating the root

root.update()

# for loop to get one country data stored as dict in list cases

for y in cases:

# storing every Country's confirmed cases in the confirmed list

confirmed.append(y["confirmed"])

# storing every Country's active cases in the active list

active.append(y["active"])

# storing every Country's deaths cases in the deaths list

deaths.append(y["deaths"])

# storing every Country's recovered cases in the recovered list

recovered.append(y["recovered"])

# marking the color information on scaleusing patches

confirmed\_patch = mpatches.Patch(color='green', label='confirmed')

recovered\_patch = mpatches.Patch(color='red', label='recovered')

active\_patch = mpatches.Patch(color='blue', label='active')

deaths\_patch = mpatches.Patch(color='black', label='deaths')

# plotting the scale on graph using legend()

plt.legend(handles=[confirmed\_patch, recovered\_patch, active\_patch, deaths\_patch])

# showing the data using graphs

# this whole for loop section is related to matplotlib

for x in range(len(country\_names)):

plt.bar(country\_names[x], confirmed[x], color='green')

if recovered[x] > active[x]:

plt.bar(country\_names[x], recovered[x], color='red')

plt.bar(country\_names[x], active[x], color='blue')

else:

plt.bar(country\_names[x], active[x], color='blue')

plt.bar(country\_names[x], recovered[x], color='red')

plt.bar(country\_names[x], deaths[x], color='black')

# setting the title of the graph

plt.title('Current Covid Cases')

# giving label to x direction of graph

plt.xlabel('Country Name')

# giving label to y direction of graph

plt.ylabel('Cases(in millions)')

# showing the full graph

plt.show()

except Exception as e:

# asking user to enter correct details

# during entering the country names on GUI

# please differentiate the country names

# with spaces or comma but not with both

# otherwise you will come to this section

data.set("Enter correct details again")

Label(root, text="Enter all countries names\nfor whom you want to get\ncovid-19 data", font="Consolas 15 bold").pack()

Label(root, text="Enter country name:").pack()

data = StringVar()

data.set("Seperate country names using comma or space(not both)")

entry = Entry(root, textvariable=data, width=50).pack()

Button(root, text="Get Data", command=showdata).pack()

root.mainloop()

***OUTPUT:***



