Name: B.Guru Brahmam

**Regd.No:1923**65070

D**ept: B.Tec**h-Cyber Security

Date of Submission:27-08-2024

**PYTHON API PROGRAMS DOCUMENTATION**

**1.Real-Time COVID-19 Statistics**

The data flow diagram will illustrate how the application interacts with the external COVID-19 statistics API and how the data is processed and displayed to the user.

**Key Components:**

* **User Input:** The user specifies the region (country, state, or city).
* **API Request:** The application sends a request to the COVID-19 statistics API with the specified region.
* **API Response:** The API returns the latest data on COVID-19 cases, recoveries, and deaths.
* **Data Processing:** The application processes the response data and extracts the relevant information.
* **Display:** The processed data is displayed to the user in a user-friendly format.

**2. code and Implementation**

**code:**

BEGIN

Display a prompt for the user to input a region (country, state, or city)

User inputs the region

Send an API request to the COVID-19 statistics API with the specified region

IF the API request is successful THEN

Extract the number of cases, recoveries, and deaths from the API response

Display the COVID-19 statistics to the user

ELSE

Display an error message indicating that the data could not be retrieved

END IF

END

**Data flow diagram:**

**Start program**

**Enter country**

**Process data**

**Fetch data**

**Display data**

**Implementation:**

import requests

import pandas as pd

def get\_covid\_stats(region):

url = f"https://api.rootnet.in/covid19-in/stats/latest"

response = requests.get(url)

if response.status\_code == 200:

data = response.json()

for country\_data in data["data"]["regional"]:

if country\_data["loc"].lower() == region.lower():

return country\_data

return None

else:

return None

def main():

region = input("Enter the location (country) name: ")

covid\_stats = get\_covid\_stats(region)

if covid\_stats:

print(f"COVID-19 Statistics for {region}:")

print(f"Total Cases: {covid\_stats['totalConfirmed']}")

print(f"Total Deaths: {covid\_stats['deaths']}")

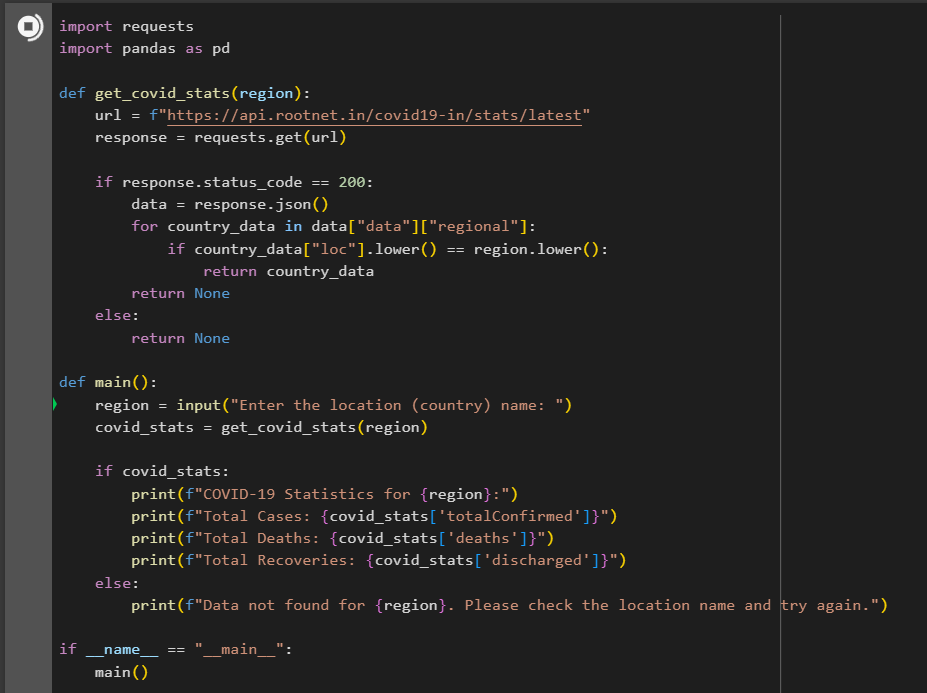
print(f"Total Recoveries: {covid\_stats['discharged']}")

else:

print(f"Data not found for {region}. Please check the location name and try again.")

if \_\_name\_\_ == "\_\_main\_\_":

main()

**Code:**

**Documentation**:

1. API Integration: Using disease.sh API for real-time COVID-19 statistics.

2. Methods: The get \_covid \_stats function handles the API request and response. The

main function manages user input and displays statistics.

3. Assumptions: The user provides a valid country name.

4. Improvements: Enhance error handling, provide historical data, and integrate with vaccination stastics