SMARTBRIDGE

# COVID CASES TRACKER USING COVID 19 CORONA VIRUS STATISTICS API USING IBM CLOUD

CONTENTS

## 1. ABSTRACT:

To understand the scale of the COVID-19 outbreak, and respond appropriately, we would want to know how many people are infected by COVID-19 to analyze the mortality risk of the COVID-19 outbreak. While governments across the globe are working in collaboration with local authorities and health-care providers to track, respond, and prevent the spread of disease caused by the coronavirus. This project aims at working with an API through which a visualization dashboard for covid statistics can be developed.This tracker provides the number of cases and deaths from novel coronavirus.

## 2. INTRODUCTION:

**2.1 Overview:** Corona viruses are a group of related RNA viruses that cause diseases in mammals and birds. In humans and birds, they cause respiratory tract infections that can range from mild to lethal. Mild illnesses in humans include some cases of the common cold.They have characteristic club-shaped spikes that project from their surface, which in electron micrographs create an image reminiscent of the solar corona, from which their name derives.The name "coronavirus" is derived from Latin *corona*, meaning "crown".Coronaviruses vary significantly in risk factor. Some can kill more than 30% of those infected, such as MERS-CoV, and some are relatively harmless, such as the common cold. Coronaviruses can cause colds with major symptoms, such as fever, and a sore throat from swollen adenoids.Coronaviruses can cause pneumonia

(either direct viral pneumonia or secondary bacterial pneumonia) and bronchitis (either direct viral bronchitis or secondary bacterial bronchitis).The human coronavirus discovered in 2003, SARS-CoV, which causes severe acute respiratory syndrome (SARS), has a unique pathogenesis because it causes both upper and lower respiratory tract infections.To understand the scale of the COVID-19 outbreak, and respond appropriately, we would want to know how many people are infected by COVID-19 to analyze the mortality risk of the COVID-19 outbreak.

**2.2 Purpose:** Since the start of the COVID outbreak, a plethora of applications have been developed to help users to report their symptoms and track the disease.You can use the app to follow the latest facts and figures about COVID-19 in Ireland. You'll also be able to get information that will help you to care for yourself if you are sick.The COVID Tracker has been designed to make the best use of the health advice and technology available. It is part of a number of ways that we can slow the spread of COVID-19 and should not replace the existing public health guidelines.

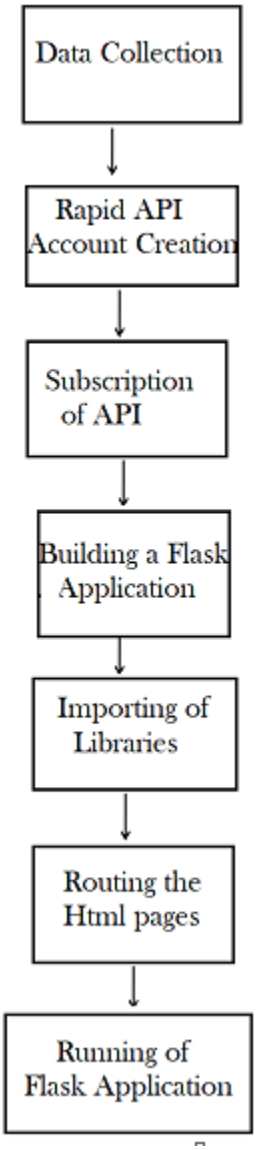
## 3. LITERATURE SURVEY:

**3.1 Existing problem:** officials have confirmed that the numbers of corona cases are higher than what is being presented in the daily media bulletins issued by the State Health department.Online reports on the State's official website and the daily State bulletin are differing in numbers. To Solve this problem this Coronavirus Tracker is used.

**3.2 Proposed solution:** This project aims at working with an API through

which  a visualization dashboard for covid statistics can be developed.This tracker provides the number of cases and deaths from novel coronavirus.

# 4.BLOCK DIAGRAM




## 4.1. HARDWARE REQUIREMENTS:

Processor: Intel® Core™ i3-2350M CPU @ 2.30GHz

Installed memory (RAM):4.00GB

System Type: 64-bit Operating System

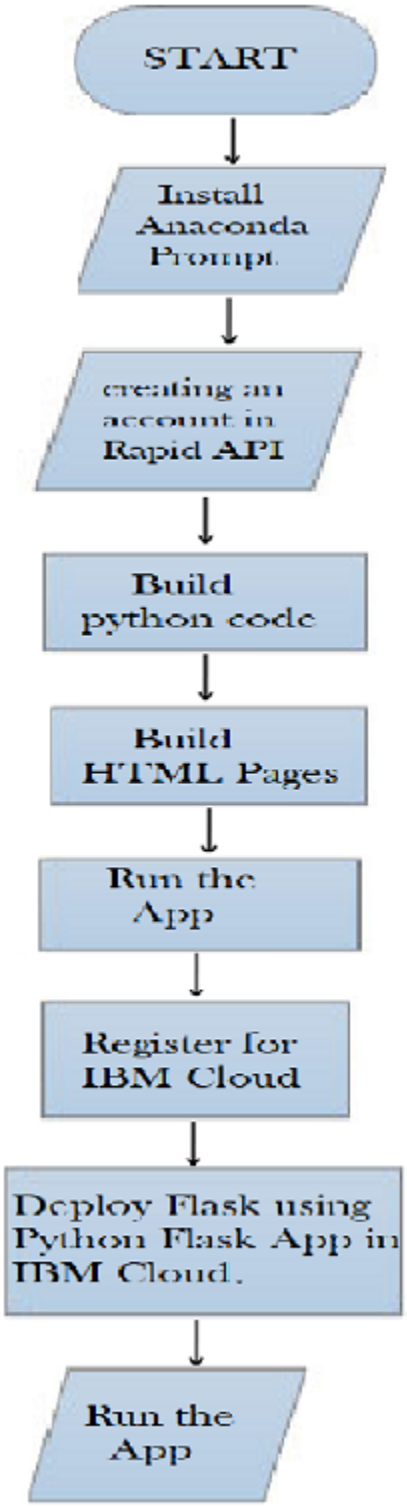
## 4.2 SOFTWARE REQUIREMENTS:

Anaconda Navigator

Python 3.7.3

Flask

## 5.FLOW CHART


START
Install Anaconda Prompt
creating an account in Rapid API
Build python code
Build HTML Pages
Run the App
Register for IBM Cloud
Deploy Flask using Python Flask App in IBM Cloud.
Run the App

## 6.RESULT:


Student Dashboard
SI-2213-1622040091
127.0.0.1:5000/stats
127.0.0.1:5000/stats
Corona Statistics
Home
Statistics
Visualize COVID-19 Statistics
Enter the country name to get the statistics
India
Submit
Type here to search
28°C
ENG
20:05
02-06-2021

Student Dashboard | SI-2213-1622040091 | 127.0.0.1:5000/stats

127.0.0.1:5000/stats

# Corona Statistics

Home Statistics

## Visualize COVID-19 Statistics

Enter the country name to get the statistics

India

Submit

Type here to search 28°C ENG 20:05 02-06-2021

Student Dashboard | SI-2213-1622040091 | 127.0.0.1:5000/statistics

127.0.0.1:5000/statistics

# Corona Statistics

Home Statistics

## Country Name - India

| Status | Cases |
|---|---|
| recovered | 26179085 |
| deaths | 335102 |
| confirmed | 28307832 |

48%

Percentage of Recovered Cases

1%

Percentage of Death cases

52%

Percentage of Confirmed Cases

Type here to search 28°C ENG 20:05 02-06-2021

## 7. ***ADVANTAGES & DISADVANTAGES:***

**ADVANTAGES:**

1. We get the result with high accuracy.

2.API allows content to be embedded from any site or application more easily.

3.This gives us much better information and an integrated user experience.

4.Through API any user or company can customize the content and services that they use the most.

**DISADVANTAGES:**

1.Implementing and providing API capabilities can be costly in terms of development times

2.Ongoing maintenance requirements

3.Providing support

## 8. APPLICATIONS:

The main application of this model is to predict the covid cases tracker using covid 19 corona virus statistics api using ibm cloud.

## 9.CONCLUSION:

We have taken a basic API. It gives us the covid-19 statistics of our country. When we give the input as “India” it gives us the total confirmed cases, recovered cases and total deaths of the country. A coronavirus is a kind of common virus that causes an infection in your nose, sinuses, or upper throat. Most coronaviruses aren't dangerous.In early 2020, after a December 2019 outbreak in China, the World Health Organization identified SARS-CoV-2 as a new type of

coronavirus. The outbreak quickly spread around the world.It spreads the same way other coronaviruses do, mainly through person-to-person contact. Infections range from mild to deadly.The virus can lead to pneumonia, respiratory failure, heart problems, liver problems, septic shock, and death. Many COVID-19 complications may be caused by a condition known as cytokine release syndrome or a cytokine storm. This is when an infection triggers your immune system to flood your bloodstream with inflammatory proteins called cytokines. They can kill tissue and damage your organs.This tracker provides the number of confirmed cases and deaths from novel coronavirus by country, the trend in confirmed case and death counts by country, and a global map showing which countries have confirmed cases and deaths. The data are drawn from the Johns Hopkins University (JHU) Coronavirus Resource Center's COVID-19 Map and the World Health Organization's (WHO) Coronavirus Disease (COVID-2019) situation reports.

## 10.FUTURE SCOPE:

The World Health Organization has declared the outbreak of the novel coronavirus, Covid-19 as pandemic across the world. With its alarming surge of affected cases throughout the world, lockdown, and awareness (social distancing, use of masks etc.) among people are found to be the only means for restricting the community transmission. In a densely populated country like India, it is very difficult to prevent the community transmission even during lockdown without social awareness and precautionary measures taken by the people.The application further tracks the user's location and provides notification alert if the user has entered a containment zone. The application also provides daily Covid-19 case statistics to the users to keep them updated.The Android application shows the location of the containment zones to the users. It also notifies the user when he or she trespasses the boundary of a containment zone or stays in the containment zones.

## 11. BIBILOGRAPHY:


1.https://www.kff.org/coronavirus-covid-19/fact-sheet/coronavirus-tracker/

2.https://www.technologyreview.com/2020/05/07/1000961/launching-mittr-covid-tracing-tracker/

3.https://en.wikipedia.org/wiki/COVID-19

4.https://www2.hse.ie/conditions/coronavirus/covid-tracker-app/why-use-the-covid-tracker-app.html

5. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7328652/



## 12. Appendix



```
 from flask import Flask, request, render_template

import numpy as np

import re
import requests
import json
import csv
import pandas as pd

from gevent.pywsgi import WSGIServer
import os
app= Flask(__name__)
def check(output):
    url="https://covid-19-coronavirus-statistics.p.rapidapi.com/v1/total"
    querystring = {"country":output}

    headers = {
      'x-rapidapi-key': "e724d1bb4dmsh63f19b36cf70e33p17a260jsn178c17c9cf44",
      'x-rapidapi-host': "covid-19-coronavirus-statistics.p.rapidapi.com"
    }

    response = requests.request("GET", url, headers=headers, params=querystring)
```

```
 print(response.text)

    value=response.text
    output=json.loads(value)
    return response.json()

@app.route('/')
def home():
    return render_template('index.html')

@app.route('/stats')
def stats():
    return render_template('stats.html')

@app.route('/statistics',methods=['POST'])
def statistics():
    total=0
    output=request.form['country']
    print(output)
    essay=check(output)
    print(essay['data'])
    data_file=open('data_file.csv','w')
    csv_writer=csv.writer(data_file)
    count=0
    for emp in essay['data']:
        print(emp)
        if count==0:
            header=['Status','Cases']
            csv_writer.writerow(header)
            count+=1
        if (emp=='recovered' or emp=="deaths" or emp=="confirmed"):
          d=[emp,essay['data'][emp]]
          total=total + essay['data'][emp]
          print(d)
          csv_writer.writerow(d)

    data_file.close()
    df = pd.read_csv("data_file.csv")
    temp=df.to_dict('records')
    columnNames=df.columns.values
    recovered=essay['data']['recovered']* 100/total
    deaths=essay['data']['deaths']   *100/total
    confirmed=essay['data']['confirmed']* 100/total
```

```
    return render_template('result.html',essay=essay['data']['location'],records=temp,
                                                                                    11
colnames=columnNames,recover_percentage=recovered,death_percentage=deaths,confirmed_p
ercentage=confirmed)


port = os.getenv('VCAP_APP_PORT','8080')

if __name__ == "__main__":
    app.secret_key = os.urandom(12)
    app.run(debug=True, host='0.0.0.0', port=port)
```

EXTERNSHIP PROGRAM