Python Script to visualize COVID-19 Cases in India

On March 11th 2020 we got news that our college will be closed for 2 weeks in response of government advisory to combat COVID-19 during early stages. We all know what happened after that. This is probably the biggest pandemic of our lifetime that has forced the whole World to stop.

One day I found this small article on geeksforgeeks that showed how to extract the number of cases from MoHFW India site ([www.mohfw.gov.in/](https://www.mohfw.gov.in/)) , which is official government of India source. This inspired me learn more about it and so I started working on understanding the code and hence modifying it as per my understanding.

The format on MoHFW site has changed many times during this period which made it necessary to modify the script accordingly. Hence, I had to make a lot of changes to keep the script working.

**Working of Script**

This script uses various Python modules to process the data.

requests :- to download content from MoHFW site

BeautifulSoap :- to extract required data

tabulate :- to tabulate data in formatted way

pyplot :- to plot the data in bar format

datetime :- to print current date

All different parts of code are separated in various functions to modularize the script. Various functions and their working are described as below :-

**processData() :-** This function downloads content from MoHFW site and

then extracts only the relevant data from all contents. It

returns a list of list containing data of all States.

**addTotalCount() :-** This function takes the above-mentioned list and adds an

entry at end of list containing total counts in India. It returns

the same list.

**printTable() :-**  This function prints a nicely formatted table in your console

using standard output stream (STDOUT).

**createStateData() :-** This function takes list containing data about all states and

returns two lists, one containing data about States name

and another containing numbers of cases in each state.

**removeTotalCount() :-** This function removes Total count data from the two

lists returned by above function and then returns the

modified lists.

**plotGraph() :-**  This function takes 3 lists containing Serial number, States name, and number of Cases in Each state. It uses matplotlib

to plot the graph.

At the end there is **main()** function that calls all these functions mentioned above in order. The best thing above this Script is that it can be further expanded to include other features like visualizing data on map of India, or using heat map instead of bar graphs, etc.

The big advantage of using this script rather than going on site directly is that, one can visualize the data in their own way and also the simplicity of getting current stats using just one click of running the script.

Finally, you can check the code here :- <https://github.com/ujjukumar/Small-Projects/tree/master/COVID-19%20India%20live%20status>

**Stats (As of April 28, 2020 ):-**

From MoHFW site :- Total confirmed cases = 29435

Total Cured = 6869

Total Death = 934

From the Script :- Total confirmed cases = 29435

Total Cured = 6869

Total Death = 934

(same as from MoHFW site)

\*\* Screenshots related to above mentioned stats can be found in GitHub link above.