Assignment 2: Advanced Bash Scripting

We will be using the **shell commands** to accomplish a simple task here. The task is related to covid data extracted from www.covid19india.org. Download the json(you may use wget) from https://api.covid19india.org/v4/data.json. Name the file as **covid_Data.json** and place it in the home folder of the unzipped cs253_assign_2.zip.

Following is a small snippet showing how to access json data using jq(may have to install separately). Following is a sample json:

{

"A" : "a",

"B" : "b",

"C" : "c",

"D" : {

    "d" : "4"

    }

}

To retrieve the value "c" one way to get is: -

jq ".C|values" <path_Of_The_JSON_File>   --output c

To retrieve the value "4" we get it like this: -

jq ".D.d|values" <path_Of_The_JSON_File> --output 4

Task

Explore and access the downloaded covid_Data json file from within the solution shell file. Make a csv file named processed_Covid_Data_<your_Roll_Number>.csv. with the format as shown,

<state>, <district>, <confirmed_Cases>, <recovery_Rate> where,

- state is the state code, example AN, KA etc.,
- district is the district name with maximum recovery rate,
- confirmed_Cases is the number of confirmed cases for this district name (district with max recovery rate),
- recovery_Rate is the recovery rate for this district name (district with max recovery rate).

    Recovery rate is calculated as [(recovered/confirmed) * 100]

Note: Consider the following while performing the task:
- For every state code, consider districts with **more than or equal to 5000** number of confirmed cases for processing, ignoring the rest.

- Avoid including the state code entry in csv, if the number of confirmed cases for all of its districts is **less than 5000.**
- While processing, you may get "**Unknown**" as a district name, ignore the processing for that district. In the csv, we should not have "Unknown" as a district name for any state code.
- Recovery rate may be **equal** for two districts, include the one in csv that comes later while processing. Example, for a state code(st), db district (98 percent recovery rate) and da (98 percent recovery rate) are there, csv should consist of da as the district name.
- Ignore errors at any stage (you may create log file).
- You may add headers to the generated csv file if you wish.

A csv file for a sample data on marks shown below,
```
-------------------------------------------------------------------------
            Name            Marks_Sub_1             Marks_Sub_2
            Preeti          25                      31
            Ravi            25                      30
            Ankit           24                      31
-------------------------------------------------------------------------
```
looks like this,


```
Preeti,25,31
Ravi,25,30
Ankit,24,31
```

Final Submission

- Name your solution shell file as **cs253_assign_2_<your_Roll_Number>.sh** and place this and your generated **processed_Covid_Data_<your_Roll_Number>.csv** in the home folder of the unzipped cs253_assign_2.zip.
- Rename this unzipped folder as **cs253_assign_2_<your_Roll_Number>.**
- Tar zip the folder cs253_assign_2_<your_Roll_Number>.
- Please make sure the solution shell script, generated csv and the covid_data json file along with the previous contents of the assignment are there in cs253_assign_2_<your_Roll_Number>.zip before submission.
- Submit your zipped file on the submission site.