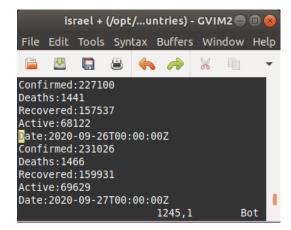
Covid-19 statistics applications

Part 1:

- Write a bash program that retrieves statistics for each country(except USA) in the world using REST APIs from the following link:
 - https://documenter.getpostman.com/view/10808728/SzS8rjbc?version=latest and saves them to local directory.
 - * Relevant fields to store print are "Date", "Confirmed", "Deaths", "Recovered", "Active".
 - * Each country should be represented by a file in the local directory
 - * Using "jq" is **not** allowed
 - * Hint: Use tr '\{' '\n' to separate string into lines

Examples:

```
gabi@gabi-ubuntu:/opt/yocto/targil1$ ./get-covid-data-per-country.sh
Written ethiopia
Written niger
Written peru
Written syria
Written faroe-islands
Written saint-martin-french-part
Written svalbard-and-jan-mayen-islands
Written nicaragua
Written south-sudan
Written western-sahara
Written benin
Written fiji
gabi@gabi-ubuntu:/opt/yocto/targil1$ ll countries/
total 4484
drwxr-xr-x 2 gabi gabi 12288 Sep 28 16:34 ./
drwxr-xr-x 3 gabi gabi 4096 Sep 28 17:23 ../
-rw-r--r-- 1 gabi gabi 22486 Sep 28 17:26 afghanistan
rw-r--r-- 1 gabi gabi
                           0 Sep 28 17:26 ala-aland-islands
rw-r--r-- 1 gabi gabi 22002 Sep 28 17:25 albania
rw-r--r-- 1 gabi gabi 22635 Sep 28 17:25 algeria
 rw-r--r-- 1 gabi gabi
                             0 Sep 28 17:26 american-samoa
rw-r--r-- 1 gabi gabi 21486 Sep 28 17:25 andorra
rw-r--r-- 1 gabi gabi 21325 Sep 28 17:25 angola
rw-r--r-- 1 gabi gabi
                           0 Sep 28 17:26 anguilla
rw-r--r-- 1 gabi gabi
                            0 Sep 28 17:24 antarctica
 rw-r--r-- 1 gabi gabi 20667 Sep 28 17:24 antigua-and-barbuda
rw-r--r-- 1 gabi gabi 22927 Sep 28 17:25 argentina
rw-r--r-- 1 gabi gabi 22418 Sep 28 17:25 armenia
```



Part 2:

- Write 3 C programs that read the data and perform the following(empty values can be skipped):
 - 1. Print all countries specific data according to:
 - i. Date
 - ii. Key (Confirmed, Death, Recovered, active)

```
gabi@gabi-ubuntu:/opt/yocto/targil1$ ./print_by_date.out --date 2020-09-27 --key Deaths
afghanistan: 1453
albania: 377
algeria: 1714
andorra: 53
angola: 174
antigua-and-barbuda: 3
argentina: 15749
armenia: 951
australia: 875
austria: 787
azerbaijan: 586
bahamas: 89
bahrain: 242
bangladesh: 5161
barbados: 7
belarus: 818
belgium: 9980
belize: 24
benin: 40
bhutan: 0
bolivia: 7858
bosnia-and-herzegovina: 822
botswana: 16
brazil: 141741
```

- 2. Print a "graph" according to:
 - i. country name
 - ii. Key (Confirmed, Death, Recovered, active)

(here displayed with resolution divided by 8 to fit the screenshot)

```
gab

0

0

0

1

1

9

59

239

2306

4518

5825

8871

9615

9798

9645

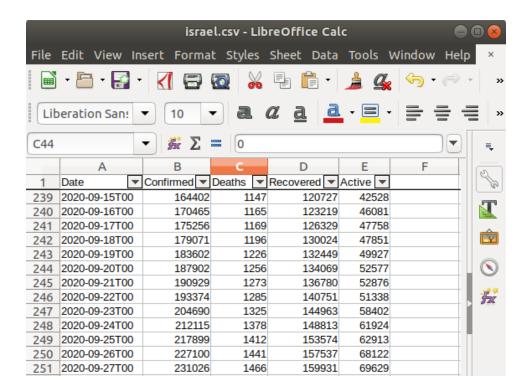
9251

8861

7772
        gabi@gabi-ubuntu:/opt/yocto/targil1$ ./print_graph.out --country israel --key Active
                 886
7772
6227
4405
               4052
3485
2946
             2343
1909
2103
2632
               15
4021
4742
5014
5335
5796
9176
11677
                                                      20872
                                                                25305
29434
                                                                                     34461
                                                                26602
25803
25097
25891
                                                            23450
                                                         22122
22463
                                                      20305
                                                                               31689
                                                                                            38123
40662
                                                                                                                             52577
                                                                                                                                                     62913
```

3. Export data by country to CSV:

```
gabi@gabi-ubuntu:/opt/yocto/targil1$ ./country_data_to_csv.out --country israel
gabi@gabi-ubuntu:/opt/yocto/targil1$ head -10 countries/israel.csv
Date;Confirmed;Deaths;Recovered;Active
2020-01-22T00;0;0;0;0
2020-01-23T00;0;0;0;0
2020-01-24T00;0;0;0;0
2020-01-25T00;0;0;0;0
2020-01-25T00;0;0;0;0
2020-01-27T00;0;0;0;0
2020-01-27T00;0;0;0;0
2020-01-28T00;0;0;0;0
2020-01-29T00;0;0;0;0
2020-01-30T00;0;0;0;0
2020-01-30T00;0;0;0;0
```



- Write a shared library that provides functionalities like load_db, load_country, iterate_by_key, get_next_element, etc... this library should be compiled as a separate .so and used by all first 3 programs
 - o input handling and printing should be done in the executables(.out) or as separate library(not the same one as described above)
- Write a makefile that compiles all C programs (3 binaries and the shared library)