Program considers a Covid-19 dataset which is published on <u>Github</u>. Please download any document type that you prefer of the dataset. The dataset is updated daily and includes data on conrmed cases, deaths, hospitalizations, testing, and vaccinations as well as other variables of potential interest. The data set has the following basic columns:

- iso code: Short name of the country
- continent: The continent where the country exists
- location: The country name
- date: The date when the data about various variables are taken.

You are responsible to implement a program which reads the given dataset from the file and computes the data for the following questions. Any programming language that you prefer will be accepted. Putting comments on your functions that you implement is must. Each question must be appended to a file which is called "outputf .csv, .txtg ". The file contains the first 16 questions listed below. The 17th question will be written in this document (not coding part).

- 1. How many countries the dataset has?
- 2. When is the earliest date data are taken for a country? Which country is it?
- 3. How many cases are conrmed for each country so far? Print pairwise results of country and total cases.
- 4. How many deaths are conrmed for each country so far? Print pairwise results of country and total deaths.
- 5. What are the average, minimum, maximum and variation values of the reproduction rates for each country?
- 6. What are the average, minimum, maximum and variation values of the icu_patients (intensive care unit patients) for each country?
- 7. What are the average, minimum, maximum and variation values of the hosp_patients (hospital patients) for each country?
- 8. What are the average, minimum, maximum and variation values of the weekly icu (intensive care unit) admissions for each country?
- 9. What are the average, minimum, maximum and variation values of the weekly hospital admissions for each country?

- 10. What are the average, minimum, maximum and variation values of new tests per day for each country?
- 11. How many tests are conducted in total for each country so far?
- 12. What are the average, minimum, maximum and variation values of the positive rates of the tests for each

country?

- 13. What are the average, minimum, maximum and variation values of the tests per case for each country?
- 14. How many people are vaccinated by at least one dose in each country?
- 15. How many people are vaccinated fully in each country?
- 16. How many vaccinations are administered in each country so far?