Programming Fundamentals
Lab exercise: World Population
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In this project we will work with data on the evolution of the world population organized by countries, represented by lists. We will implement a series of functions that will allow us to show both graphs of population evolution, and to compare the population among countries.

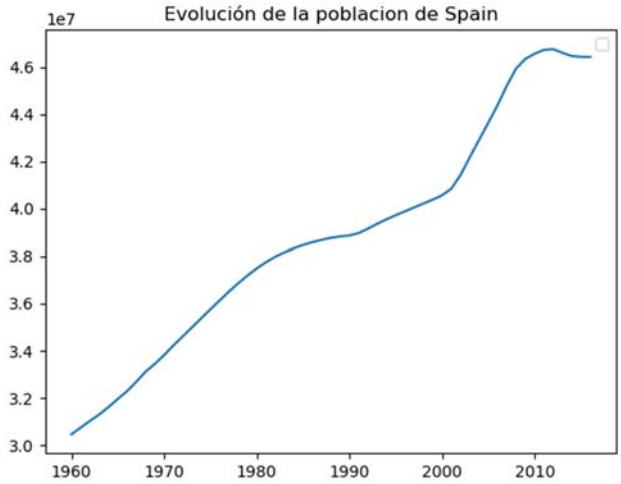
The data from which we start in the project is in the population.csv file in the project's data folder. If you open the file, you will see that it is a CSV file (the data is separated by commas). You can see an extract from it in Figure 1:

```
Spain,ESP,1960,30455000
Spain,ESP,1961,30739250
Spain,ESP,1962,31023366
Spain,ESP,1963,31296651
Spain,ESP,1964,31609195
Spain,ESP,1965,31954292
Spain,ESP,1966,32283194
Spain,ESP,1967,32682947
Spain,ESP,1968,33113134
Spain,ESP,1969,33441054
```

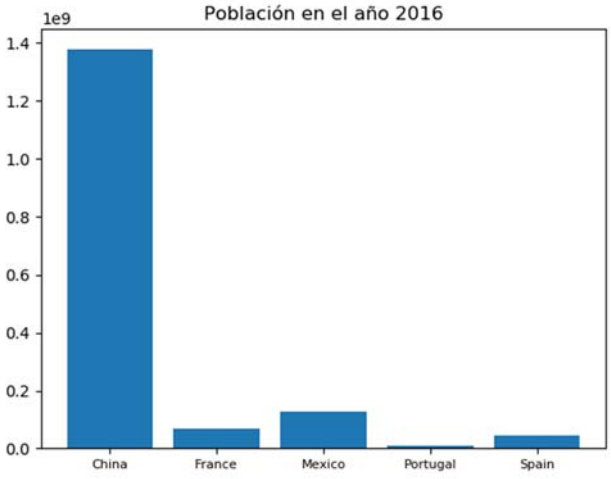
Figure 1. File population.csv

As you can see, each line of the file has the name of a country, the code of that country, the year in which the population data were taken, and the population of the country in that year. For example, from the first line of the extract we can see that Spain had 30,455,000 inhabitants in 1960.

In the project we will have to, on the one hand, find out how many different countries and from which countries we have data, and on the other hand, we will have to show two types of graphs, one that allows us to see the evolution of the population of a country throughout time (Figure 2 (a)), and another that allows us to compare the populations of various countries in a specific year (Figure 2 (b)).



(a) Spanish population evolution



(b) Comparison of the populations of China, France, Mexico, Portugal and Spain in 2016

Figura 2. Graphs generated in the project