FIRST TASK PYTHON PROJECT DESCRIPTION

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For what concerns the first task of data collection, we chose to collect the data regarding “Free Weather API”. Our work can be divided in 2 different phases, such as:

* Data extraction, importing first the “requests” library
* Data assessment through the import of the “Json” and “Pandas” libraries.

**1st STEP**

As it has already been said previously, we imported the “requests” library; after this operation, we created 3 different lists concerning cities (where the name of the cities are strings), latitude and longitude. We then created a “for” loop with a range equivalent to the length of the 3 cited lists (0,3), followed by the making of an association between cities, latitude and longitude for every loop. Worthy of mention is that each association is extracted from the url. As a result we obtained the “Json” file for each city.

**2nd STEP**

First we have imported the “Json” and “Pandas” libraries and then we set 6 empty lists associated with 6 different variables, concerning the weather of each city.

Then for each “for” loop we have opened a file corresponding to each city; thus in the following “for” loop we took our variables of interest: time, temperature, pressure, precipitation, snow height. After doing these operations, we created the last “for” loop in which it’s shown a list with the already cited variables. Concluding, we created first the overall data frame, and then we converted it into a csv file. As a result we obtained 1009 weather forecast for our examined 3 European cities. Clearly our results refer to the cited variables.