



VNIVERSITAT ID VALÈNCIA

**STRUCTURES Laboratory****DATA AND ALGORITHMS*****Degree in Data Science (1st)***

Academic year 2023-24

**Practice No. 6: Dictionaries****Classroom exercise (L1)**

Taking as reference the program "**pr6\_v1.py**", which you must have already done and tested, a new program must be written, called "**pr6\_final.py**", which allows us to determine the total population of the municipalities of the Comunitat Valencia in the last available year and compare it with that of 5 years ago. To do this, it is necessary:

1. Create a dictionary of municipalities in Spain with the information obtained from the file "**EvolMunicipios2022.csv**".
2. Create a dictionary of provinces of Spain with the information from the file "**provinces.csv**".
3. Create a dictionary that contains only the municipalities of the Valencian Community (CV), which are those corresponding to the provinces "03", "12" and "46".
4. For all the municipalities of the CV, their population in the last year must be accumulated in the current total of the CV and their population 5 years ago will be accumulated in the total from 5 years ago.
5. Show on the screen the results of the process: number of municipalities analyzed, the names of the provinces to which they correspond, total current population of the CV, total population 5 years ago in the CV and the absolute difference and in percentage.

The test bench with the expected results is provided below:

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INCREASE IN POPULATION  
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- Municipalities analyzed:      543  
- Provinces:  
    Alicante/Alacant  
    Castellon/Castello  
    Valencia/Valencia  
- Population 2022:      5097967  
- Population 2017:      4941509  
- Difference: 156458 (3.17%)
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