Reachable Cities Project
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The project has been developed in collaboration with Emily Schmidt.

Files included:

  a. Query.py
  b. Neighbours.py
  c. 1st breadth search.py
  d. Output from main function.pdf

Contents of query.py

The file contains a first draft of the query used in the phpadmin interface, in fact the selected objects are more than the ones needed in the function stored in the neighbours file. A more complete discursus of the query is included.

Contents of neighbours.py

The file contains the function which sources from the database (according to the conditions stated in the query), the URL is built. Successively, the output is formatted into readable strings and pairs of city and country are created.

Finally, the list containing all the pairs is returned.

Contents of 1st breadth search.py

The file contains the main function, so the ones that re-runs the neighbours function up to k steps.

The N(ci) set for the first step is formed, and the output is stored in a queue, these cities will be used again to run the search from, and the process is run iteratively up to k times.

For every step the process is repeated, and the comprehensive lists of reachable cities within every amount of steps is printed out.

Contents of Output from main function.pdf

PDF print of the output from them breadth search function.