

Assignment1

Graphs

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Deadline

Thursday, 9 May 2019 at 23:55.

Task

- Implement a class representing a Graph of German cities. (10%)
- Implement a class representing a Node of the aforementioned Graph, namely a German city. (10%)
- Implement methods for getting and setting information about both the nodes and the whole graph. (15%)
- Implement methods for manipulating the graph (accessing, adding, removing nodes). (40%)
- Implement a `main` function/script that uses the functions you wrote. (15%)
- Write readable and well-commented code describing what every function does and why you chose it. (10%)

Tips & Suggestions

- The zip file that you send me or the Github repo you link me must be named in the format **SurnameName_MatricNum_AssignmentNum**.
- Using other additional Data Structures is possible, and you do not need to implement everything by hand. However, if you do you will get some more points.
- Write elegant code!

- I expect also a bash script (even just in a `txt` file) in the main directory for compiling and running your code through terminal/powershell!
- If it was not clear, there should be a function that can **PRINT** the graph; there are several different ways of doing it, choose one and motivate your choice (the more elegant is the solution, the higher will be the grade). One method could include the use of Graphviz.
- The basic data for the graph is sketched in the figure below.
- You can add all the information you want about the cities and extend your code as you prefer, as long as you keep the minimal requirements stated in this assignment sheet.

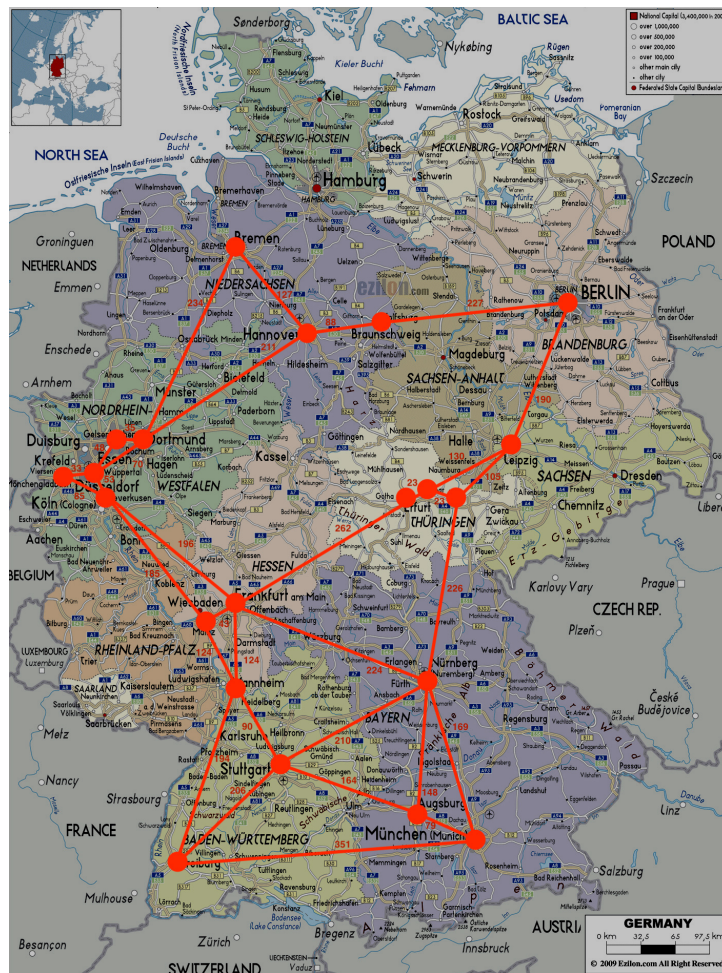


Figure 1: A sketch of the graph, just to give you an idea