Stable Matching Report

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Results

Our implementation produces the expected results on all input–output files.

For instance, on input `sm-bbt-in.txt`, we produce the following matching:

Sheldon–Amy, Rajesh–Penny, Howard–Bernadette, Leonard–Priya.

Implementation details

We start by loading the specific file, by copying all the file content into a String. Hereafter we split this by *newlines* into a String array. Next we parse the string array, by using our Transformerclass. This data is saved into our datastructures, which is Integer and String arrays and multidimensional String arrays. We then create a stack which we fill with un-matched men. We start iterating through the stack of un-matched men, and basically just follow the pseudo implementation of the Gale Shapley algorithm [1]

The FileParser and Transformer classes both have complexity of O(n). In our Gale Shapley implementation, we run some *for* loops inside of the *while* loop, which both runs at O(n). Since they are nested, the complexity of our implementation is n*n (n in the power of 2).

[1] Introduction and Stable Matching slides p. 9