Stable Matching Report

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Results

Our implementation produces the expected results on all input–output file pairs. The current implementation has been developed with python.

Implementation details

The men's preferences are stored in a dictionary where each key consists of a man and its value consists on an ordered list of women. [1] The same dictionary structure is used for the womens priority list. Each match is represented as a list where m,w are [w,m] and such list is stored in the final matchings list. In order to improve the algorithm, once a man (let's call m to these handsome man) has been matched with a women (w), w is removed from man's priority list. Therefore, if the match between m and w is unmatched due another man (m') has a higher priority than m in w, m will not ask again to w because w has been "discarted" for him.

We can check find a free man who has not proposed to every woman in time [. . .], because we store [. . .].

With these data structures, our implementation runs in time $O(n^2)$ [2] on inputs with n men and n women.

[1] { "Wayne": ["Chicago","Boston","Detroit"], "Val":["Boston","Detroit","Chicago"], "Xavier":["Detroit","Boston","Chicago"] }

[2] Replace with your actual running time.