

QUESTION 18/10 SOLUTION (Cantele Alberto/Cancelliere Biagio)

To solve the matching game problem we can use the maximum flow problem approach. We consider a directed graph with unweighted paths: $G = (N)$ and two nodes $s, t \in N$.

To define as many couples (F-M) as possible we have to send as much flow as possible from s to t .

We can link to s all the possible women's traits, and in the same way we can do the same operation with the men's traits with a link to t .

In the end we can link all the women's traits to all the men's traits that have at least one trait in common.

Down below is showed the graph's scheme:

