

AG44 – Project 3 – Water Pipes

Cédric PAQUET – Groupe A

1) Maximum flow : To compute the maximum flow I used the Ford-Fulkerson algorithm with a BFS to generate the paths.

Minimum cut : To provide the minimum cut, we can use the final residual graph from the Ford-Fulkerson algorithm. Then we find the set of vertices that are reachable from the source in the residual graph. Then we just have to cut all the edges which are from a reachable vertex to non-reachable vertex.

Precision : If we wanted to directly get the minimum cut, we could choice to implents an algorithm that we didn't see in course, the Stoer-Wagner algorithm(But it also needs no negative weight).

We the given graph we have a Maxflow of 37 and 4 edges in minimal cut (1-5,2-6,4-7,0-3). You can visualize it on the next page

Data structures :



