

JIE MEI z5173405

Question 3

Construct a flow network as a directed graph where computers are the vertices of the graphs each edge is represented by one-directional edge which connect pair of computers and each of capacity equal to the cost to disconnect the computers. We will set the computer 1 is source point S, and set the computer n is the sink point T. Then we will run the Edmonds-Karp algorithm to find the maximal flow through such a network. After the algorithm has converged, we construct the last residual network flow and look at all the vertices to which there is a path from the source S. This will define a minimal cut, so we look at all the edges crossing such a minimal cut. The number of such edges determines the minimum cost needed to remove the edges from S to T.