

Question 3

Construct a flow network. We assume computer 1 is source and computer n is sink.

Then, each computer represents a vertex and connect to other computers if there are directed path. And there are M one directional links among 1 to N .

The capacities of the edges are the costing of removing the links.

We are trying to find the minimum total cost to disconnect the computers. Therefore, it is a max flow/min cut problem.

We have already constructed the flow network.

After Edmonds-Karp algorithm executing, we can get the last residual network flow. Then we can find the corresponding cut.

After comparison we can get the minmual cut which is the minimal total cost to disconnect the computer.