

Experiment 6

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Aim: Max flow network Ford fulkerson.

Theory: The ford-fulkerson algorithm is a widely used algorithm to solve the maximum flow problem in a flow network. The maximum flow problem involves determining the maximum amount of flow that can be sent from a source vertex to a sink vertex in a directed weighted graph, subject to capacity constraints on the edges.

The algorithm works by iteratively finding an augmented path, which is a path from the source to the sink in residual graph i.e. the graph obtained by subtracting the current flow from the capacity of each edge.

The algorithm then increases the flow along this path by maximum possible amount, which is the minimum capacity of the edges along the path.

Algorithm

1. Start with initial flow as 0
2. while there exists an augmenting path, from the source to sink.
3. Find an augmenting path using any path finding algorithms, such as breadth first search
4. Determine the amount of flow that can be sent along the augmented path, which is the minimum

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residual capacity along the edge of the path.

- Increase the flow along the augmenting path by the maximum flow.

Conclusion: We studied and implemented ford-fulkerson algorithm for maximum flow problem.

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