Maximum flow in a flow network problem

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Team

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Crux of the problem[1]

How to get the maximum flow in a flow network

Overview

A flow network is a directed graph, where each edge has a *capacity* and a *flow*. Maximum Flow is defined as the maximum amount of flow that the network would allow to flow from the source vertex **S** to the destination vertex **T**[2]. In this project we will explore 4 algorithms that solve this problem listed below.

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[1] Inspired by Operating Systems: Three Easy Pieces.
[2] Hackerearth - maximum flow tutorials

Algorithms

1. Dinic's Algorithm

   Fatima Nadeem

2. Ford-Fulkerson Algorithm

   Kabir Kumar

3. Edmonds-Karp Algorithm

   Muhammad Shahrom Ali

4. Push-Relabel Algorithm

   Mazeyar Moeini Feizabadi

References

1. **Wikipedia** - Maximum Flow Problem | Flow Network

   https://en.wikipedia.org/wiki/Maximum_flow_problem

   https://en.wikipedia.org/wiki/Flow_network

2. **Hackerearth** - Maximum Flow

   https://www.hackerearth.com/zh/practice/algorithms/graphs/maximum-flow/tutorial/