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In this experiment, we implement Ford-Fulkerson algorithm which is a greedy approach used to find the maximum flow in a network.

We repeatedly find augmenting paths from source to sink using DFS/BFS and increase flow till no more path.

Residual capacity of edge
 $(u \rightarrow v) = \text{cap} - \text{flow}$

Sum of flow \rightarrow Max flow

Basic DFS

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$O(E \cdot \text{max_flow})$

finding augmenting path

$\rightarrow O(V \cdot E) \approx O(E)$ (sparse)

no. \rightarrow F_max (iterations)

Applications \rightarrow gas flow, traffic management