Fundamentals of Algorithms Lab
Project Synopsis

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JAYPEE INSTITUTE OF
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on

Internet Routing

Topic

Internet Routing

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Introduction

Routers use routing algorithms to find the best route to a destination. When we say "best route," we consider parameters like the number of hops (the trip a packet takes from one router or intermediate point to another in the network), time delay and communication cost of packet transmission.

Based on how routers gather information about the structure of a network and their analysis of information to specify the best route, we have two major routing algorithms: global routing algorithms and decentralized routing algorithms**.** In decentralized routing algorithms, each router has information about the routers it is directly connected to -- it doesn't know about every router in the network. These algorithms are also known as DV (distance vector) algorithms. In global routing algorithms, every router has complete information about all other routers in the network and the traffic status of the network. These algorithms are also known as LS (link state) algorithms.

Algorithms Covered

- Dijkstra Algorithm
- Bellman-Ford routing algorithms
- Hierarchical Routing