An Efficient Scheme for the Single Source Shortest Path Problem based on Dijkstra and SPFA Methodologies

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Abstract

This paper presents detailed comparisons and analysis of various single source shortest path algorithms. The paper proposes comparison among these algorithms on the basis of execution time taken by the algorithms to completely find the shortest path to all the nodes from a starting node. The algorithms have been analyzed on the various parameters: number of vertices, number of edges, and structure of the graph. This analysis will help in selecting the appropriate algorithm to be used in solving a particular real-life problem. This paper also proposes an algorithm that works efficiently over all types of the graph.

References

Mathematik.

Index Terms

Computer Science  Information Sciences

Keywords

Single Source Shortest Path, Execution Time, Performance Analysis