HAMILTONIAN PATH

Analysis and implementation of algorithm

The project aims at implementing the existing algorithms and the analysis of complexity of the same. Also, we are intended in improving the existing algorithms.

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02-Apr-2014

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EXECUTIVE SUMMARY

Introduction:

The Hamiltonian path has various existing algorithms that have been successfully implemented. This project aims to **improve** the existing algorithm. The above mentioned problem is a N-P Complete problem with a possibility to form a polynomial time algorithm, but there exists at present only exponential complexity algorithm.

Project Objective:

- To analyze the available algorithms.
- To implement the existing Algorithms.
- To improve the available algorithm for better efficiency and lesser complexity.

PROJECT OUTLINE:

Objective 1:

We are to analyze the available algorithms in the basis of Time and Space Complexity. This would involve the application of the algorithm using the asymptotic analysis. Also, we would perform a run time analysis of the algorithm. We would also be evaluating the run-time Complexity of the given algorithm.

Objective 2:

We are intended to implement the existing algorithm in order to facilitate the comparison of the Existing algorithms and their efficiency.

Objective 3:

We are intending to develop conditions which determines the best case scenario in each of the algorithms and try to include all in one single more efficient algorithm.

COURTESY:

http://www.dharwadker.org/hamilton/

A Fast Algorithm For Finding Hamilton Cycles by Andrew Chalaturnyk