PROJECT REPORT

Implementation Branch And Bound Algorithm For Travelling Salesman Problem

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APPROVAL AND RATIFICATION PAGE

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Here by certify that this project was made by myself and not copy or plagiarizes from other people, expect that in writing expressed to the other article.

If it is proven that this project was plagiarizes or copy the other, I'm ready to accept a sanction.

Semarang, 13 Julyth 2009

Harjanto Bayu Wibisono

04.02.0017

FOREWORD

Finally, I can finish my final project that have title : ***Implementation Branch And Bound Algorithm For Travelling Salesman Problem***. So in this opportunity, I would like to thanks :

- My Lord and my saviour, Jesus Christ that give me blessing.
- My parents, Budi Rahayu and Liem Kiem Tjoe Nio.
- My brother and sisters, Agus Sutanto, Elisabeth Yulia, Irene Febriana.
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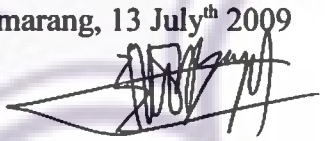
- All of my friends, Aldo,Arief, Stephen, Ika, Heru, Fredy, and many more.

Last, I would like to apologize if I made mistakes in finishing the project and writing this report. Therefore, critics and suggestions are expected.

Semarang, 13 Julyth 2009



Harjanto Bayu Wibisono

ABSTRACTION

Traveling Salesman Problem is one of the most intensively studied problems in computational mathematics. Travelling Salesman problem is a problem in combinatorial optimization studied in operations research and theoretical computer science. Given a list of cities and their pairwise distances, the task is to find a shortest possible tour that visits each city exactly once. Travelling Salesman Problem was invented by Hassler Whitney at Princeton. In the 1950s and 1960s, the problem became increasingly popular in scientific circles in Europe and the USA. These problems will be solved with branch and bound algorithm and using tree data structures. Branch and Bound was first proposed by A.H Land and A.G Doig in 1960. Branch and bound is a general algorithm for finding optimal solutions of various optimization problems, especially in discrete and combinatorial optimization. It consists of a systematic enumeration of all candidate solutions, where large subsets of fruitless candidates are discarded *en masse*, by using upper and lower estimated bounds of the quantity being optimized.

Keywords : Travelling Salesman Problem, Branch And Bound Algorithm

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