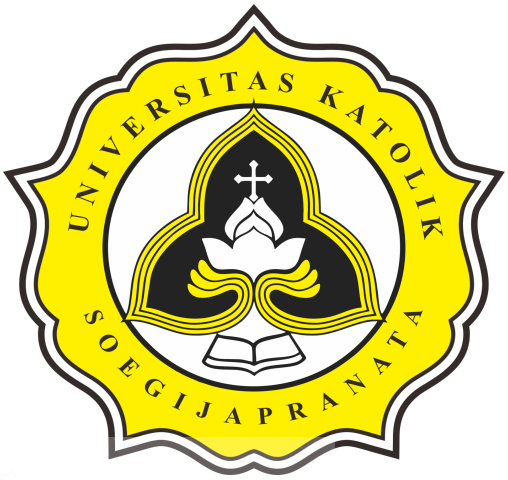

PROJECT REPORT

Modified Genetic Algorithm using Tabu List to Solve Scheduling Problem

Yonathan Prawira Wijaya

12.02.0011

2016

INFORMATICS ENGINEERING DEPARTMENT

FACULTY OF COMPUTER SCIENCE

SOEGIJAPRANATA CATHOLIC UNIVERSITY

APPROVAL AND RATIFICATION PAGE

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Modified Genetic Algorithm using Tabu List to Solve Scheduling Problem

by

Yonathan Prawira Wijaya – 12.02.0011

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ABSTRACT

This Final Project's research is important to give another analysis to solving the scheduling problem. One of the scheduling problem is university courses scheduling. The complexity of university courses scheduling lies on lecturers should not collided and should be only one course for each semester to be scheduled while the number of lecturers are limited.

The problem will be solved using Genetic Algorithm that modified with Tabu List. Genetic Algortihm works by generating solutions. Meanwhile, Tabu List prevent the Genetic Algorithm to generating same possibilities.

The results is displayed in the form of tables for each day result. The result can be viewed through the user interface. There will be options to export into CSV file or image file for user.

***Keywords** : Scheduling, Genetic Algorithm, Tabu List.*

PREFACE

This Final Project is splitted into 6 chapters. The first chapter is telling about the background, statement of the problem, scope, and objectives of Final Project. The second chapter is telling about literature study. The literatue study will telling any result from previous research about solving the scheduling problem using Genetic Algorithm.

The third chapter is telling about research methodologies of this Final Project. The fourth chapter is telling about this Final Project's analysis and design. The use case diagram and class diagram can be found in this chapter.

The fifth chapter is telling about the implementation and testing from analysis and design. This chapter will telling about the data structures and algorithms for this project. Also the figure of User Interface and the results can be found in this chapter. The conclution and further research can be found in sixth chapter.

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