

Abstract

Exam timetabling is one of several timetabling problem that appear in the beginning of semester in a university. There are several important variables that should be considered to make an exam timetabling such as total course, students, rooms and time so it will be complicated problem to solve manually. The difference between exam timetabling problem in one university and the others depends on the amount of important variables. Student conflict and room conflict are the most consideration constraint that make exam timetable become acceptable.

This final task implements Asynchronous Island Model Informed Genetic Algorithm to solve exam timetabling problem with case study fakultas Teknik Universitas Telkom. First semester academic data 2010/2011 being used for testing with generation number, population number, mutation rate and slave island configuration as testing parameters to make the best fitness as a result.

Best fitness result of implementation Asynchronous Island Model Informed Genetic Algorithm for exam timetabling in this final task is 440 that consist of 44 SC without HC. This best fitness reached by using configuration 5 slave island, 200 generation number, 10 population and 0.9 mutation rate.

Key word: asynchronous, island model, genetic algorithm, IGA