

Abstract

Students Timetabling problem is a problem which has different complexity in every institutions . That depends on many factors, such as, the students, the courses, classes and the constraints which are used . In general a students timetable that can be called good is a schedule which doesn't have any students who has 2 or more course schedule of different subjects in a same time slot. Therefore, those constraints became the standart constraints that have to be fulfilled in the Student Timetabling problem.

To overcome this problem, we need a good optimization method. One of the optimization method that quite good to overcome this scheduling problem is Genetic Algorithm. Genetic Algorithm is a searching and optimization technique that inspired by evolutioner biology like heritance, mutation, natural selection and crossover. Genetic Algorithm will create a population of abstract representation (chromosome) from candidate of solutions (individual) od a optimization problem that which later will be evolve became better solutions. And also used priority based initialization for generate an initial solution or initialization.

On this Final Task, datasets being used for testing the system are Academic data from odd semester and from even semester school year 2009/2010 of ITTelkom Bandung with parameter that will be tested is maximum of generation . Based on the results from the testing that has been done, it is known that the greater the maximum of generation and the generation that has been achived then the smaller or better of fitness value will be obtained. Moreover by varying the capacity of a class can also affect the fitness value will be obtained.

Keywords: student timetabling, Genetic Algorithm (GA), Priority Based Initialization