

ABSTRACT

Scheduling system in a college course, still be an interesting issue and is still widely studied by many people. It is intended to obtain the optimum results desired and scheduling system for courses, especially in the universities that have a lot of students, faculty and courses.

In this study, the authors implement genetic algorithms to generate optimal combination with the course scheduling. The genetic algorithm is a heuristic method that was developed based on the principles of genetics and natural selection process. Struktur Darwin's theory of evolution genetic algorithm used in the present study using the initialization process, elitism, roulette wheel selection, crossover, mutation and keep the best people and the last generation. At This research maximum population of 15 individuals and the probability of crossover appeal mutation probability of 0.9: 0.1.

Results of the testing that has been done resulted in the fitness value of 0.98 with less than 22 hours or less than 24 hours and for the results of import incorporation of the relational database to the genetic algorithm generates fitness values are better with a shorter time than the process of running only the genetic algorithm. There are major and minor restrictions on Implementing a scheduling testing at the University of Telkom. Major limitations include lack clashed course, the absence of conflicts of lecturers and professors teaching the suitability of the day is expected to be filled. There is also a minor restrictions covering the ideal suitability of more than 1 day, the room capacity and suitability of the faculty room. Where this minor restriction be tolerated if not entirely met. With the results of fitness value has reached 0.98 The major limitation has been entirely fulfilled, and there are some minor restrictions that can not be fulfilled, but not more than 2% of the possible solutions that exist.

Keywords: Genetic Algorithm, Scheduling