Abstract

Lectures timetabling has its own difficulties because there are many things need to be considered. These considerations include number of students, number of class available, number of lecturers who are not equal to the number of subjects and lectures which has been determined. In this study, lectures timetabling at the Telkom University in Bandung was implemented using the hybridization method with algorithm genetic adaptive and ant colony optimization. Ant colony optimization integrated into the genetic algorithm that has been built in advance to determine the probability of crossover and mutation probability values in which the two procedures are part of the genetic algorithm. Based on hybridization algorithm testing that has been done, the value of the solution reached 88.24%, which shows the number of scheduling solution. With these test results, indicating that the hybridization method with adaptive genetic algorithm and ant colony optimization can minimize problem in lectures scheduling.

Keyword*: scheduling, genetic algorithm, ant colony optimization algorithm.*