

Abstrak

College scheduling is a multiobjective problem because many aspects determine the course schedule. Course scheduling is a complex problem and have a lot of restrictions that must be filled such as a clashed class, clashed lecturer, clashed room and etcetera. The restrictions are divided into 2 types, namely hardconstraint and softconstraint. In this thesis, SPEA2 algorithm is a multiobjective optimization method that can be used to build a system that can solve the course scheduling problems. Dataset that used for testing is the data classes S1 Informatics IT Telkom Bandung, with the parameter that being tested is the number of population, number of archive size, crossover and mutation probability. The addition of the population will have an impact on the magnitude of the opportunity every individual to obtain a solution. The size of archive size that getting smaller will lead to the best individuals in the copy of the population. The better the individual, the greater the chances of solutions creation for the next generation. The greater the crossover probability can result in the exchange of genes between individuals more often. The more frequent exchange of individual genes, the greater the possibility of the creation of solutions. The greater the probability of mutations can eliminate the possible solutions of the previous individual genes. With a large probability of mutation, each individual will frequently changes the genes, which can eliminate the solutions that may be obtained by the previous gen.

Kata Kunci: course scheduling, multiobjective, SPEA2, population, *archive size*, generation.