ABSTRACT

Scheduling TA / PA exam is a complex issue because it involves several components that have their restrictions. The components involved in the scheduling are the student participants, faculty (both as a supervisor and examiner), rooms, and sessions. Scheduling the hearings TA / PA has a primary focus on the allocation of examiners. Not only must find that the examiner has the appropriate competence to headline TA / PA that will be tested, allocating examiner must also consider the maximum a teacher can be present in a trial period. In addition, a limited amount of rooms is also a consideration.

Scheduling TA / PA exam is divided into two main processes. The first process is the classification title of TA / PA. Classification titles TA / PA by k-nearest-neighbor classifier. In the process of classification titles TA / PA, titles TA / PA will be compared with titles TA / PA that the competence already known in training data. Scheduling processed by graph coloring techniques. An existing schedule first mapped into a graph. Graph mapping is done by assuming that each schedule is a vertice and edge between two vertices indicates that the two pieces of the schedule can not be scheduled simultaneously.

From the test results of classification titles TA / PA by using the history data from 2004 until 2012, with 250, 1000 and 1500 training data, the best accuracy is obtained by using a value of k = 20. In the classification title TA / PA, the things that affect the results of the classification are the terms of the headings TA / PA and the number of training data. Overall system scheduling hearings TA / PA is feasible to use because there is no hard constraint violations at, but not optimal because there is still the soft constraint violations.

***Keywords** : schedulling final project, data mining, k-nearest-neighbor, graph coloring*