

ABSTRACT

In this modern era, technology is developing very rapidly, especially in the field of information and communication. Because nowadays technology, especially in the field of information, is very important to support a successful system, as well as carry out various communication and information delivery. One example of technology from the delivery of communication information is in the scheduling of lecturers. Scheduling itself has a meaning, namely the duration of work time needed to carry out a series of work activities. One of the purposes of scheduling is to organize activities so that they run smoothly and in accordance with existing planning. In setting the schedule of extraordinary lecturers manually, obstacles are often found in the form of collisions, both collisions in terms of time, class or room.

In scheduling, lecturers will use web-based information technology. Where scheduling is made using the graph coloring method, which will place each event sequentially into a specified period so as not to cause conflicts between events. This technique uses graph representations, which represent events as vertexes and conflicts as paths or edges.

The lecturer scheduling system using the graph coloring method can solve problems that are often encountered in scheduling manually, namely the problem of inaccuracy in scheduling manually with the process of processing preference data entered by the lecturer. Where in the system, testing was carried out using whitebox testing as many as 4 different scenarios, and the results were obtained that this lecturer scheduling system produced a valid schedule without any conflicts between schedules.

Keywords: *Scheduling, lecturer, graph coloring.*