

ABSTRACT

ANALYSIS AND IMPLEMENTATION OF PROCESS MINING IN STUDENT ACTIVITIES BASED ON EVENT LOG GUIDANCE FINAL PROJECT APPLICATION

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The development of information technology has an influence on organizations, one of which is the Telkom University education institute. An online-based information technology at Telkom University, namely the Integrated Academic Information System (I-Gracias). I-Gracias is a portal that has integrated various academic and non-academic systems, which contain all educational processes and facilitate various activities at Telkom University. One menu that is on I-Gracias is TA / PA, on this menu it is intended for students who will take the final assignment and will carry out the final assignment session. Based on the current procedure, the service standards for the TA / PA I-Gracias application provided do not have specific service time limits. This certainly affects the user, because he does not get certainty in the service so that the user cannot continue the next stage of activity. Therefore, to find out the student activities in the TA / PA application, a modeling process is carried out to find activities that have the longest time and know the suitability of the procedures established with the activities carried out by students. There are many ways or methods that can be done to obtain information that is not yet known, one of which is by conducting direct surveys and performing mining processes. Process mining is a method used to obtain an actual business process model originating from the event log. Using the Heuristic Miner modeling technique aims to model the process and find the best fitness value. The heuristic miner algorithm is chosen because of its ability to handle event logs with noise and can display main behavior from existing business processes. After getting the modeling, then analyzing the bottleneck for the activity process. Based on the conformance checking results, the best fitness value is 0.98492914, the precision value is 0.7015873 and the structure value is 1. Modeling in performance analysis shows that there are bottlenecks in the activity of uploading proposals and completeness of print trial activities. Bottlenecks indicate something wrong in the TA / PA application.

Keywords: Event log, Process mining, Heuristic miner