ABSTRACT

ANALYSIS AND IMPLEMENTATION OF PROCESS MINING TO DETERMINE STUDENT LEARNING PATTERN ON E-LEARNING OF TELKOM UNIVERSITY CASE STUDY

By

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Telkom University is one of the largest private universities that begin to apply the progress and development of technology in distance learning system, or called Learning Management System in some courss, using Learning Management System called e-learning Telkom University.

Opportunities to process the data recorded in the event log should be maximized, to continuously improve the quality of Telkom University's e-learning usage. This will be maximized if there is a processing of the event log of e-learning Telkom University, by applying Process Mining as a method applied to obtain various information from the event log of each course. Process Mining method is applied to see the pattern of student learning during the lecture, by looking at the pattern of student learning described in a process model, lecturers may learn on later on study on what are alternative learning methods available for a better process learning, and the future can determine what learning method suitable for students taught by the lecturers concerned, so that the use of e-learning becomes more effective.

Using process mining tools such as Disco tools and ProM tools, to perform process model analysis with Disco tools, after that process model analysis applied heuristic miner algorithm with ProM tools. The Petri Net used on ProM tools also helps in the analysis of finding the best process models to provide an overview of actual student learning patterns. Heuristic Miner is used because it is best suited to handle process mining in the event log of the Learning Management System.

Keywords: Event Log, Preprocessing, Process Mining, Petri Net