ABSTRACT

The i-Gracias information system is an academic portal created to serve various purposes, including leaders, lecturers, students, employees, and parents/guardians of Telkom University students. One of the menus in i-Gracias in the lecturer section is PPM (Scientific Research and Community Service). Permanent lecturers use the PPM menu at Telkom University to submit journal such as research, community service, and patents for products made by the lecturer. Each lecturer has a different history record when carrying out activities on the PPM menu. The recorded data is stored in the information system is called event logs. Event logs can be used to find out the activity patterns of lecturers. Therefore, it is necessary to process data in the event log to find an overview of the existing process and the adjustment process. To find out the pattern of lecturer activities in journal submission on the PPM menu of i-Gracias application based on event logs is carried out using the process mining method using the Heuristic Miner algorithm. The Heuristic Miner algorithm is used to reveal the main events recorded in the event log properly. The event log data taken will be preprocessed to clean the data and add attributes to be processed in the next process. The discovery process is carried out by implementing the Heuristic Miner algorithm to obtain the most suitable model according to the event log and then analyzed in the conformity checking process. The conformity checking process is analyzed based on the actual activity in the event log with the resulting model so that information is obtained regarding the suitability of the resulting model with the behavior in the event log. In this process, the results got a fitness value of 0.903. This value indicates that the process model can model the event log well. The precision value is 0.736, and the generalization value is 0.979. This study also obtained information related to performance activities on the PPM menu by making waiting time a benchmark for the performance of each exercise. From the analysis, it was found that PPM>>Jurnal Evaluation (21.94 minutes), PPM>>Homepage (19.24 minutes), PPM>>Research, Publications, and Abdimas (15.86 minutes) were the activities with the highest waiting time. Results Based on research, the Heuristic Miner algorithm can be appropriately implemented in process mining. So it can be said that the process model from the

mining process results can describe the behavior in the event log. Thus, it is recommended in the future to be able to do process mining to each menu in i-Gracias to get the best process model to help the processes in i-Gracias run properly.

Keywords: ***i-Gracias, Event log, Process Mining, Heuristic Miner algorithm, Conformance Checking.***