

ABSTRACT

Telkom University is a higher education institution that carries out the process of education, research, and community service. To ensure the continuity of its activities, Telkom University needs to maintain the quality of academic and non-academic business processes in a sustainable manner. For this reason, Telkom University adopts and implements a Quality Management System based on ISO 9001: 2015 and implements the National Higher Education Standards (SN DIKTI) based on the Ristekdikti Regulation No. 44 of 2015.

The Internal Audit Unit (SAI) of Telkom University has the authority to oversee and supervise the implementation of every ongoing process so that it is in accordance with applicable standards through the Internal Quality Audit (AMI) process. In AMI activities used an audit management system application web-based so as to simplify the audit process and the process of reporting audit results. However, the reporting results generated by this application are still very simple and do not provide in-depth analysis.

Final project analysis features have been made for reporting audit results. The output of this application is in the form of grouping the average value of each clause for each auditee using the k-means clustering technique based on the clause or audit standard being used. The application was developed with the PHP-based CodeIgniter framework by utilizing the model, view and control (MVC) framework.

The application design went through two tests, namely Blackbox testing and UAT (User Acceptance Test) testing to support the success of this Final Project in conducting the auditee clusterization process, so that the application can display output in the form of a chart display and the position of the cluster so that further analysis can be carried out. The result of this test is that the system successfully performs the clustering process in each part of the study and standard groups and can display the standard achievement values in accordance with what SAI has set.

Keywords: Audit, K-Means, ISO 9001