Improvement of the POLISAS e-Request Transcript System using Query Optimization

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Abstract:
This paper is about the improvement of the ERequest Transcript system used by POLISAS to be a systematic and effective system. The improvement is implemented to solve the current problem, whereby, students need to access the E-Request Transcript system according to the graduation session in individual file. This situation makes it difficult for the administrators to access more than one E-request transcript system if the application is from different sessions. It is because of the data-access issues to generate reports. To achieve the system improvement, an integrated database using the query optimization technique is implemented. Next, the query statement is analyzed to produce an optimum performance. Research results show that the technique is able to improve the query time processing, thus resolving the issues discussed. A user acceptance test for this system consists of a black box test and a beta test has been deployed. A black box test was conducted to test the main menu functions in the E-Request transcript and is found to be able to succeed. Furthermore, the beta test is carried out using a survey form distributed to all students who have graduated. Survey questionnaire showed that 57% of respondents were satisfied using this system and 14% were very satisfied with this system. All respondents have provided a good scaling rate for all items assessed. For overall system assessment, the mean score obtained is 3.78 which is interpreted as a good rate based on the scale of interpretation used. In conclusion, this system has met the needs of consumers as well as simplifying their business based on surveys conducted.

Keywords: Integrated; Transcript; Optimization Technique; Query Optimization

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