



Application of Apriori and Fp-Growth Methods in Analyzing Book Lending Patterns Penerapan Metode Apriori dan Fp-Growth dalam Analisis Pola Peminjaman Buku

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Abstract

Clustering of book borrowing patterns in the University of Labuhanbatu library aims to identify and understand student preferences and habits in borrowing books. With this analysis, the library can be more effective in managing book collections, ensuring the availability of frequently borrowed books, and improving the quality of service according to student needs. Using clustering techniques also helps in designing a more targeted book procurement strategy, so that existing resources can be optimally utilized to support the teaching and learning process. In this study, the methods used are Kf-Growth and Apriori to identify book borrowing patterns. Kf-Growth is used to find frequent itemsets or collections of books that are often borrowed together, while Apriori is used to generate association rules that reveal the relationships between borrowed books. Both of these methods allow for a more in-depth and comprehensive analysis of book borrowing patterns in the library, with the ability to handle large amounts of data and identify significant relationships between items. This process involves several stages, including data preprocessing, algorithm application, and evaluation of the results to ensure the validity and accuracy of the resulting clustering. The results of the clustering analysis show a very good confidence value, with many male and female students borrowing the book "Pengantar Akuntansi" consistently. This borrowing pattern shows that books related to economics and accounting have a high level of demand. The Kf-Growth and Apriori methods have proven to be very effective in clustering, providing accurate and reliable results. With these results, the Labuhanbatu University library can take more informative and strategic steps in managing book collections, ensuring that frequently borrowed books are always available, and improving the borrowing experience for students.

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