

DEVELOPING E-COMMERCE APPLICATION USING THE MARKET BASKET ANALYSIS METHOD

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ABSTRACT

The development of digital technology has intensified competition in the business world, particularly within the e-commerce sector. One of the primary challenges businesses face is understanding customer purchasing behavior to enhance marketing strategies. This research aims to develop an e-commerce application that uses Market Basket Analysis to analyze customer purchasing patterns. This method identifies relationships between frequently purchased products, enabling the system to provide relevant product recommendations based on transaction history. The research process involved analyzing user and business needs, system design, implementation, and testing through a prototype approach. Transaction and product data were stored in a database to support accurate analysis. Test results demonstrated that the developed application effectively identified significant purchasing patterns and delivered impactful product recommendations. By implementing Market Basket Analysis, this e-commerce application can increase sales, strengthen customer loyalty, and help businesses optimize marketing strategies. Consequently, this research produced an application that functions not only as a sales platform but also as an analytical tool to support business decision-making in the digital era.

Keywords: Application, E-commerce, Market Basket Analysis, Retail Store, Sales