THESIS

WEB-BASED WOVEN FABRIC SALES INFORMATION SYSTEM WITH INTEGRATION OF AHP AND MOORA FUZZY METHODS

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It is hereby stated that the contents of part or all of the dissertation with the title:

WEB-BASED WOVEN FABRIC SALES INFORMATION SYSTEM WITH INTEGRATION OF AHP AND MOORA FUZZY METHODS

is truly the work of an independent intellectual, completed without the use of unauthorized materials and is not the work of another party that I acknowledge as my own work. All references cited or referenced have been written in full in the bibliography. If it turns out that this statement is not true, I am willing to accept sanctions in accordance with the applicable regulations.

Surabaya, May 19 2026
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ABSTRACT

Student Name / NPM :	Mulyani Satya Bhakti / 22081010331
Thesis Title :	Web-Based Woven Fabric Sales Information System with Integration of AHP and MOORA Fuzzy Methods
Supervisor :	1. Retno Mumpuni, S.Kom, M.Sc 2. Afina Lina Nurlaili, S.Kom, M.Kom

Yuyun Gallery "UKM DINA" is a business engaged in the sale of traditional woven fabrics typical of Bima. However, the process of managing sales, recording transactions, managing stock, and marketing products is still done manually, causing problems in data management and narrowing the reach of product marketing. In addition, SMEs do not yet have a system that is able to provide product recommendations to consumers based on certain preferences such as the type of fabric, motif, color, and price. Therefore, a Web-Based Woven Fabric Sales Information System was developed with the integration of the Fuzzy Analytical Hierarchy Process (Fuzzy AHP) and Multi-Objective Optimization on the Basis of Ratio Analysis (MOORA) methods. This system is designed to help the sales management process in a computerized manner while providing recommendations for woven fabric products that suit the needs of users. The Fuzzy AHP method is used to determine the importance level weight of each criterion based on user preferences, while the MOORA method is used to perform the process of ranking alternative products. The system was developed using the Laravel framework with MySQL databases. The system test was carried out using *the Black Box Testing* and *User Acceptance Test methods*. The test results showed that the system was able to run in accordance with the designed function and obtained a UAT score of 81.5% in the aspect of system convenience, 84.5% in the aspect of system utility, and 83.2% in the aspect of system functionality. In addition, the system's recommendation testing resulted in a precision rate of 90.6% which indicates that the system is able to accurately provide recommendations that match the user's preferences. Thus, the system built is able to help the sales management process and provide recommendations for woven fabric products more effectively and efficiently.

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Keywords : Fuzzy AHP, MOORA, Recommendations, Weaving, Website

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The author realizes that this thesis is still far from perfect and may contain shortcomings in terms of content, analysis, and presentation. Finally, with all the limitations possessed by the author, it is sincerely hoped that this thesis will provide benefits, references, and valuable contributions for readers, future researchers, and all parties in general, as well as become a meaningful achievement for the author personally.

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TABLE OF CONTENTS

LIST OF TABLE

LIST OF FIGURE