# Utilization Of The Moora Method In Determining The Best Quality Of Woven Fabric At Rehani Ulos Shop

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**ABSTRACT**

Rehani Ulos is one of the shops that sell ulus cloth which is located in the Medan City area. If you want to use the sing system, the Rehani Ulos shop is filled with manual and semi-computerized family members and the process of selecting the best quality kanthi ulos cloth, you must choose the best quality kanthi siji every time you can do the sing cloth. As a result, Asring runs out of time in choosing Ulos cloth, which wae sing is of good quality and suitable for kanggo to be sold by consumers. Departing from the example above, the author tries to build a decision support system application. Decision support system is an information system that provides information, modeling, and manipulating data. The method applied is the Multi Objective Optimization by Ratio Analysis (MOORA) method. This relatively new sing method, kaping pisanan, was used by using the Brauers ing sawijining method for taking multi-criteria kanthi. This Panliten can build a kanthi decision support system using the Multi Objective Optimization On The Basic Of Ratio Analysis (MOORA) method which can help rehabilitate Ulos kanggo nemtokake, which one is the best.

**Keyword : Rehani Ulos, Decision Support System, Moora**



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## 1. INTRODUCTION

Technology is no stranger to the public's view. Along with technological developments that are developing at a significant speed, both in the family environment, educational environment, community life and the business world. In this era of globalization, many fields have implemented information technology which has the aim of increasing the performance of the running system. With the development of this technology, it will make the business processes run by the company more effective and can increase profits and answer the problems that occur in the company. Rehani Ulos is a shop that sells ulus cloth which is located in the Medan City area. Where the system that runs at the Rehani Ulos shop is still classified as manual and semi-computerized because in the process of selecting the best quality ulos cloth you have to choose one by one which fabrics can be sold with the best quality. As a result, time often runs out in choosing which ulos fabrics are of good quality and suitable for sale to consumers. Departing from the problem above, the author tries to build a decision support system application. decision support systems namely decision support systems are information systems that provide information, modeling, and data manipulation. This system aims to assist decision making in semi-structured situations and unstructured situations, where no one knows for sure how decisions should be made [1]. The method applied is the Multi Objective Optimization by Ratio Analysis (MOORA) method. This relatively new method was first used by Brauers in a decision with multiple criteria. The MOORA method has a degree of flexibility and ease of understanding in separating the subjective part of an evaluation process into decision weight criteria with several decision-making attributes [2]. Based on the introduction above that has been explained, the authors try to conduct research with the title "Utilization of the Moora Method in Determining the Best Quality of Woven Fabrics at Rehani Ulos Stores"..

## 2. RESEARCH METHOD

At the system analysis and design stage, at the system analysis and design stage, researchers used the waterfall method. As for the waterfall system development stage, it consists of several activities which are of course in accordance with the stages described in the system development process flow. These stages are:

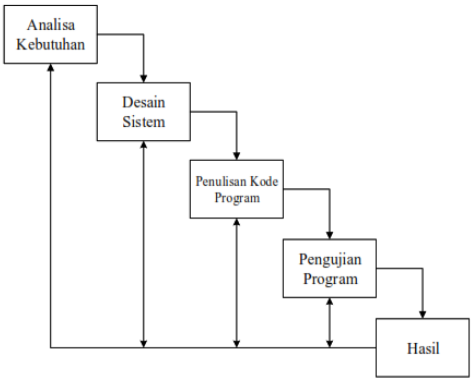



**Figure 1**. Waterfall Method

The description of the stages of the waterfall method is as follows:

1. Stage of Analysis (Analysis). At this stage the process of collecting data needs is complete to be analyzed and defined. By recording ulos products that are in the Medan Ulos Rehani shop.\
2. Design Stage (Design). The process of converting requirements into a characteristic form that is understood by the software before starting to write the program. Later the design uses UML (Unified Modeling Language)
3. Coding Stage. A process of writing about a programming language, after the design stage of a system software. The programming language used in this thesis is PHP database mysql, xampp, and the codeigneiter framework
4. Testing Phase. After the process of writing the program, the testing phase is carried out by looking for all possibilities and checking whether they are in accordance with the desired results, at this testing stage using the blackbox method.
5. Stage of Maintenance (Maintenece).Includes adjustments or changes that develop along with the adaptation of the software to the actual conditions or situation after being delivered to the user.

## 3. RESULTS AND DISCUSSION

After this research is carried out, the next stage is implementing the system and testing the system. The system that has been designed consists of several pages that have their respective functions. The page that will be displayed is as follows

**1. Halaman *Login***

Halaman ini berguna untuk masuk ke Halaman selanjutnya,yang dimana untuk *admin,* dapat menggunakan fitur yang tersedia yang telah dirancang. Adapun tampilannya sebagai berikut:


Figure 2. Halaman *Login*

**2. Menu *Dashboard***

Halaman ini berguna untuk mengelola fitur aplikasi yang telah tersedia di aplikasi yang sudah dirancang. Adapun tampilannya sebagai berikut:

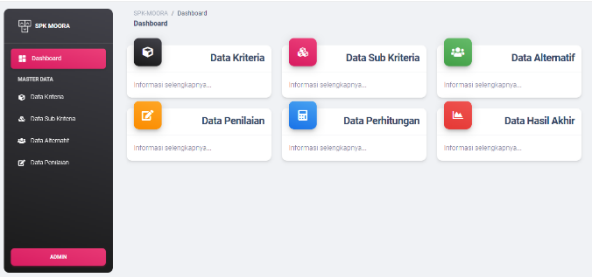



**Figure 3**. Menu *Dashboard*

**3. Halaman Data Kriteria**

Halaman ini berfungsi untuk menambah kriteria di dalam sistem. Adapun tampilannya sebagai berikut:

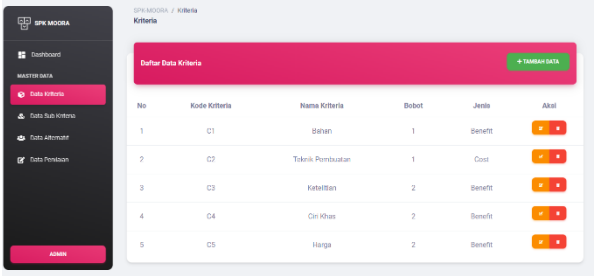
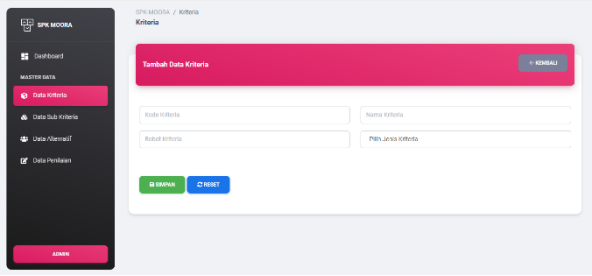



Figure 4. Halaman Data Kriteria

**4. Halaman Tambah Kriteria**

Halaman ini berfungsi untuk menambah tambah kriteria ke dalam sistem. Adapun tampilannya sebagai berikut :




Gambar 5. Halaman Tambah Kriteria

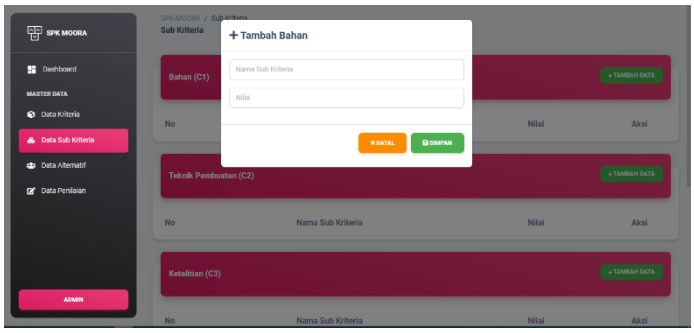
**5. Halaman Sub Kriteria**

Halaman ini berfungsi melihat sub kriteria di dalam sistem. Adapun tampilannya sebagai berikut:


Gambar 6. Halaman Sub Kriteria

**6. Halaman Tambah Sub Kriteria**

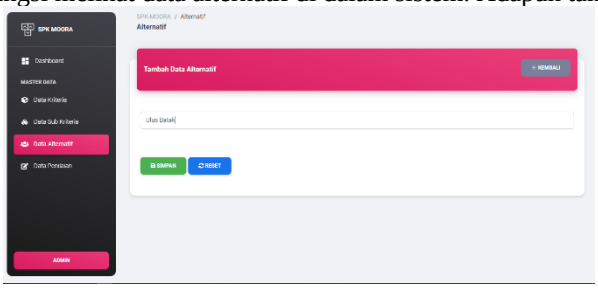
Halaman ini berfungsi untuk menambahkan data sub kriteria ke dalam sistem. Adapun tampilannya sebagai berikut :




Gambar 7. Halaman Tambah Sub Kriteria

**7. Halaman Alternatif**

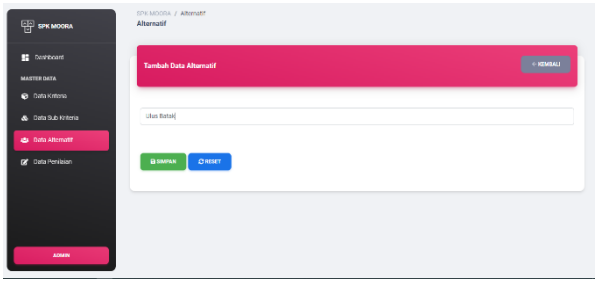
Halaman ini berfungsi melihat data alternatif di dalam sistem. Adapun tampilannya sebagai berikut:




**Gambar 7. Halaman Alternatif**

**8. Halaman Tambah Alternatif**

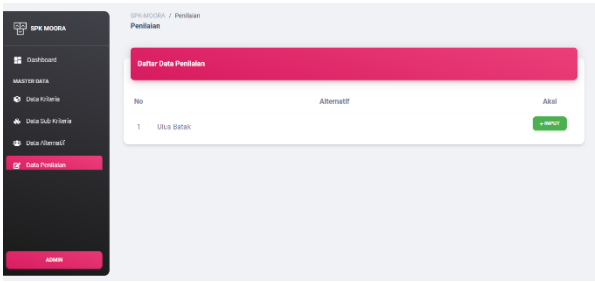
Halaman ini berfungsi untuk menambahkan data alternatif ke dalam sistem. Adapun tampilannya sebagai berikut :




**Gambar 9. Halaman Tambah Alternatif**

**9. Halaman Data Penilaian**

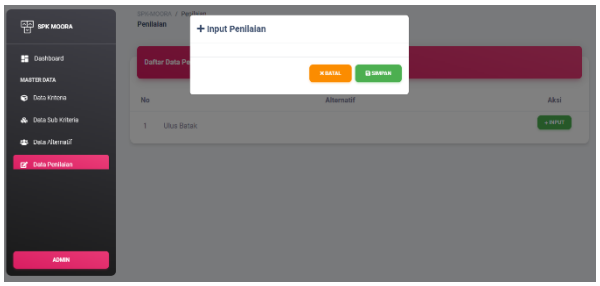
Halaman ini berfungsi untuk melihat data penilaian terhdap alternatif ke dalam sistem. Adapun tampilannya sebagai berikut :




**Gambar 10. Halaman Data Penilaian**

**10. Halaman Pengisian Penilaian**

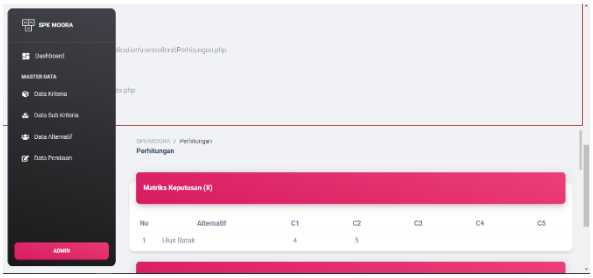
Halaman ini berfungsi mengisi nilai pada alternatif di dalam sistem. Adapun tampilannya sebagai berikut:




**Gambar 11. Halaman Pengisian Penilaian**

**11. Halaman Perhitungan**

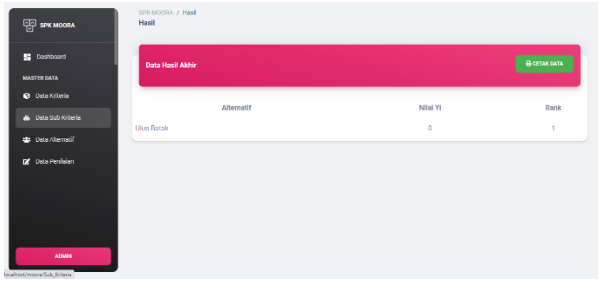
Halaman ini berfungsi untuk melihat perhitungan di dalam sistem. Adapun tampilannya sebagai berikut :




**Gambar 12. Halaman Perhitungan**

**12. Halaman Hasil Akhir**

Halaman ini berfungsi untuk melihat hasil akhir di dalam sistem. Adapun tampilannya sebagai berikut :




**Gambar 13. Halaman Hasil Akhir**

**13. Halaman Cetak Data**

Halaman ini berfungsi mencetak data dalam bentuk pdf. Adapun tampilannya sebagai berikut:

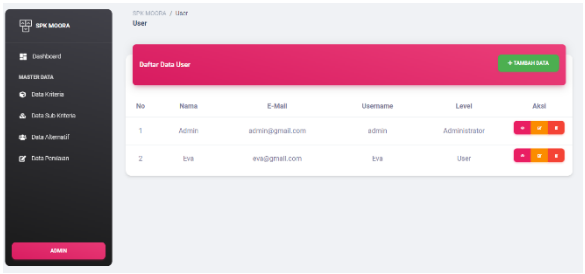
**Hasil Akhir Perankingan**

| Alternatif | Nilai Yi | Rank |
|---|---|---|
| Ulus Batak | 2 | 1 |

**Gambar 14. Halaman Cetak Data**

**14. Halaman Data User**

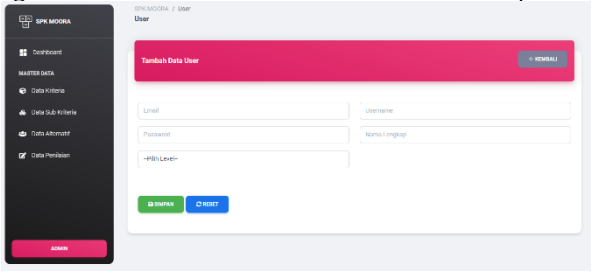
Halaman ini berfungsi untuk melihat user di dalam sistem. Adapun tampilannya sebagai berikut :




**Gambar 15. Halaman Data User**

**15. Halaman Tambah User**

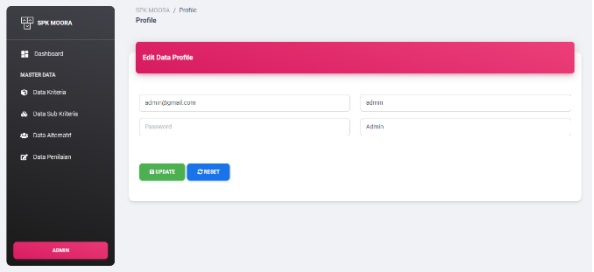
Halaman ini berfungsi untuk menambah user di dalam sistem. Adapun tampilannya sebagai berikut :




**Gambar 15. Halaman Tambah User**

**16. Halaman *Profile***

Halaman ini berfungsi untuk melihat *profile* di dalam sistem. Adapun tampilannya sebagai berikut :




**Gambar 17. Halaman *Profile***

## 4. RESULTS AND DISCUSSION

Based on the results of the research and discussion that the authors have done, it can be concluded that This research succeeded in building a decision support system using the Multi Objective Optimization On The Basic Of Ratio Analysis (MOORA) method which can help rehani ulos in determining the best ulos cloth. The calculation of the MOORA optimization value produces good output in determining ranking.3. The decision support system application using the MOORA method was successfully built using the Codeigneiter framework. UML has been successfully used to describe how the system performs in general.

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