Portal Application Development of Sumbawa Unique Souvenir

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Abstract – In this paper, we develop a portal application using Spiral Method, which begins with the stages of Communication, Planning, Modeling, Construction and Application Deployment. The final stage passed through Sumbawa Regency Government subdomain, i.e. umkm.sumbawakab.go.id. The result becomes an appropriate technology product and patented by the Industry and Trade Cooperation Office of Sumbawa. It aims to increase and support the sales of Micro, Small and Medium Enterprises (Usaha Mikro, Kecil dan Menengah/UMKM) in the form of Sumbawa unique souvenir. On the other hand, it also supports the program of Sumbawa government to increase the economy of Sumbawa people.

Keywords – Spiral Method, UMKM, Sumbawa Souvenir.

I. INTRODUCTION

There are some unique souvenirs of Sumbawa, i.e. Honey, Wild Horse Milk, Sumbawa Oil, Coffee, Seaweed Dodol, Milk Candy. They are a top-rated product of Micro, Small and Medium Enterprises (Usaha Mikro Kecil dan Menengah/UMKM). However, in term of developing superior products, UMKM players have several obstacles such as marketing, capital, development, information technology and human resources development [1].

We observe some points that have been reviewed in [2], especially the problem regarding the marketing of the local product. UMKM product needs information technology to improve market activities of Sumbawa souvenir not only for local buyer, but also national and international. Then, people inside or outside Sumbawa could buy the product to the seller directly with affordable price, guaranteed of originality and the best quality of the product. Therefore, we develop a portal application of Sumbawa unique souvenir in order to support and expand the market of UMKM product. The seller can manage products in their application, such as the product description, image, price, and contact number. Industry and Trade Cooperation office of UMKM (DISKOPERINDAG) has the right to provide an account to the seller.

The availability of this portal in the subdomain of Sumbawa government hopefully supports and increase the economy of Sumbawa people in the future.

II. METHODOLOGY

A. Research Stage

In this research, we describe the stages in picture 1 below. We use Spiral Method in [3] [4] in software development. Here is the stage detail of the research.
B. Application Design

The context diagram uses to describe the design of application. Picture 2 shows the detail of context diagram.

In the application, there is an Administrator of DISKOPERINDAG who has the right to provide an account to the UMKM seller. The sellers only have access to manage the UMKM data, category, and product. The visitor can see the data and information which are presented in the application.

III. Result and Discussion

The research was conducted and followed the research stages in the Spiral Method.

A. Communication

We have discussed regarding Sumbawa of Long-Term Development Plan (RPJPD). Also, we observed and confirmed the marketing process of Sumbawa unique souvenir with the head of UMKM sector. We identify some challenges in this research, i.e.:
1. There is a wish of UMKM DISKOPERINDAG to develop a digital application as a place to provide data and information about Sumbawa unique souvenir.

2. Provide data and information about Sumbawa unique souvenir in the subdomain of Sumbawa government which has domain sumbawakab.go.id.

B. Planning

We divided into two planning as follows.

1. Technology Planning

In this stage, we describe the technology material we used, such as XAMPP software, Sublime Text. Also, data storage such as MySQL, and some programming script such as PHP and CSS. Web application will manage the database using Hypertext Preprocessor (PHP) script and fully managed by Administrator [5][6].

2. Information Planning

This planning provide all the information regarding Sumbawa unique souvenir which will appears in the portal application [7], such as Sumbawa unique local drink (Honey, Wild Horse Milk, Tepal Coffee), local snacks (Manjareal, Cow Milk Candy, Atom Atom cracker, Marning corn), traditional (Sumbawa oil, Jereweh oil dan Hazelnut oil), spices product (Masin Jotang, shrimp paste, Labu Bontong), and traditional clothes of Sumbawa (Kre Alang/Songket, Sumbawa batic, Sumbawa t-shirt).

3. Modelling

In this section, we design the database for relational database and flow diagram [8][9] to expand the interface of the application.

a. Database Modeling

We design the database for relational database in the application. Picture 3 describes the design below.

![Database Design](image-url)
Database in application is presented as table admin (admin table), data_umkm (umkm data), kecamatan (district), kategori (category), produk (product), katagori_produk (category of product), jenis_katagori_produk (kind of product category), slider, welcome speech and about.

b. Modelling Interface

We present the interface model of this research in picture 4 below.

![Interface Design](image)

In the application, the appearance of the interface consists of the Admin’s side, which contains UMKM data management, slider, welcome speech and about the application. In the user’s side, means UMKM seller contains the management of the product data. Furthermore, on the visitor’s side, it contains the presentation of data and information on slider data, welcome speech, about the application and product based on categories such as honey, processed milk, oil, coffee product and unique clothes of Sumbawa.

IV. CONSTRUCTION

In this stage, we build the application using database management system of MySQL and PHP programming language and follow modelling stage in the previous section. We present the implementation as follows.

A. Implementation of the Database on MySQL

![Database Implementation](image)
B. The Implementation of Admin Login

Fig. 6. The Display of Admin Login.

C. Implementation of Admin Dashboard

Fig. 7. The Display of Admin Dashboard

D. Implementation of UMKM Login

Fig. 8. The display of UMKM Login.
E. Implementation of UMKM Dashboard

![UMKM Dashboard Image]

Fig. 9. The display of UMKM Dashboard.

F. Implementation of Main Menu

![Main Menu Image]

Fig. 10. The display of Main Menu.

G. Application Deployment

The final stage of this research is to implement the application through subdomain umkm.sumbawakab.go.id and submit its management to DISKOPERINDAG of Sumbawa Government as an appropriate technology to increase the market of UMKM product.
With this submission, we expect more benefit for the sellers to extend the market of their product.

V. CONCLUSION

This research has been done and completed through the communication, planning, modelling, construction and application deployment stage. It has been presented on the official subdomain website of the Sumbawa Regency government, umkm.sumbawakab.go.id. This work describes our initial effort to support UMKM seller and Sumbawa government to increase the economy of Sumbawa people.

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REFERENCES

AUTHORS PROFILE’

Sumbawa Besar, July 14th 1986, finished Bachelor Degree in Computer Science - STT-PLN Jakarta, 2008. Achieved Magister Degree in Computer Science - Bina Nusantara University Jakarta, 2015. She has been a Lecture at Computer Science Department, Sumbawa University of Technology, Indonesia since 2015. She research interest is management infrastructure of technology information, develop information system and applications. Now she became a government team for Sumbawa Smart City.

Rodianto obtained a Bachelor's degree in Computer Science at Respati University, Yogyakarta and a Masters in Computer Science at STMIK Eresha, Jakarta. Currently, he works as a lecturer and serves as chair of the computer science department at the Faculty of Engineering, Sumbawa University of Technology, Indonesia.

Authors have provided the English translation of fig. 11. Application Submission Letter.

SUMBAWA REGENCY GOVERNMENT
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LETTER OF RESEARCH COMPLETION
Number :027/11-46/X/0/M/INADAG/V/2019

The person who undersigned below:

Name : Drs. H. Afif, M.Si.
NIP : 196012301599301003
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Address : Manggis street No. 16 Sumbawa Besar

explain that lecturer with identity below:

Name : Shinita Etiabella, S.T., M.T.
NIP : 
Position : Lecturer of Sumbawa University of Technology
Subdomain Name : umkm.sumbawakab.go.id

has finished her research in SME cooperative industry and commerce department of Sumbawa government, start from April 1 – June 25, 2019 in developing "Portal Application of Sumbawa Unique Souvenir" which is an appropriate technology and will support our department to expand UMKM product in the future.

This letter was made to be used as it needs.

Sumbawa Besar, Juli 18, 2019

SME Cooperative Industry and Commerce Sumbawa Regency,

Signature

Drs. H. Afif, M.Si.
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