

Dynamic Content-Based Bale Adat and Berugaq of Sasak Ethnic Information System

Dadang Priyanto, Raesul Azhar, Muhamad Nur

College of Informatics and Computer Management (STMIK) "Bumigora" Mataram Jl. Ismail Marzuki_Mataram-NTB, Indonesia

ABSTRACT

Bale Adat (a traditional house) and Berugaq (a kinds of gazebo in Europe) were belongs to Sasak ethnic of Lombok community in Indonesia. Sasak ethnic is rich with the various of cultural products, particularly with both issues which philosophically -functionally meaningful for its community lives. Both products with their uniqueness have not been so widely familiar by the foreign tourists or visitors particularly in terms of their attractiveness and uniqueness. The goals to be achieved in the research were: 1) to introduce or to promote the Bale Adat and Berugaq of Sasak ethnic to the wide world, 2) to eternalize the both product of Sasak ethnic, 3) to enhance the economical of Lombok community particularly, for the craftsman, 4) the availability of web for dynamic content-based bale adat and berugaq of Sasak ethnic, 5) to facilitate the foreign tourists/visitors in information searching of Bale Adat and Berugaq. The research method was through a survey with the data processing by interview, questionnaire, and literature review. While, the design for application systems was used the Agile model with Rational Unified Process (RUP) method. The research showed the output with Android-based application mobile and website of bale adat and berugaq of Sasak ethnic for well-known promotion.

Keywords : Balai Adat, Berugaq, Dynamic Content, Android Application

I. INTRODUCTION

Sasak ethnig of Lombok community in Indonesia that is still strongly uphold their customs and local culture which reflected through their daily life system were tihgtly still run the cultural values of their ancestors. The cultural product such as Bale Adat (a traditional house, henceforth Bale Adat) and Berugaq (a kinds of gazebo in Europe, henceforth Berugaq) were parts of various cultural product of Sasak ethnig among Lombok community, and were traditional building that inseparable one another, since each of those two buildings has meaning, function and philosophy[1]. The ethnic traditional house as such had long been developed when Karang Asem Kingdom of Bali governed in 17th centuries were the combination

architecture patterns of Lombok and Bali ethnics[2]. Traditional house besides as a domicile place also, it has aesthetical value, philosophical, and simplicity life of its inhabitant in the past time that rely their life on the natural resources for both livelihood and building materials.

Berugaq is a building made of wood without wall or partition usually put it down in front of house that has function as a family chamber for guest space, discussion, party, dining room, reciting Qur'an, prayer, even to sit relaxed [3]. Besides, berugaq is taken placed outside of house, without wall or partition so that the people can see from any direction, at a time represent the people of Lombok island that commonly friendly and opend-minded.

Berugaq functionally contain the philosophical elements of life that it would influence the nobility values of Lombok community as a local wisdom custom.

Normatively, the existence of berugaq was not writtenly become an obliged necessary exist in front of the community house of Lombok original Sasak. This is the biggest local market of berugaq handcraft in Lombok. In line with the development era and the increase of tourists visit Lombok, both the rumah adat and berugaq become a special attraction for the tourist to come to Lombok, the tourists who directly come and see the aesthetic elements of berugaq design and its function become an interesting thing to buy and bring it home to their home country. The berugaq that created with the knockdown system and can easily be reassembled so that many tourists directly ordered to the craftman as a Lombok souvenir.

Based on the interview with the craftman that there was no special promotion so far for the berugaq socialization. Berugaq that the tourist known firstly only when they come or visit Lombok. The craftman so far just rely on the local market that limited only to Lombok community. Since the berugaq is a simple with the knockdown system and easily reassemble so, the stuff as such potentially be promoted to the wide world, so the market is opened for both rumah adat and berugaq craftman of Sasak ethnic. Those products bring the attractiveness to tourist as long as their existence could kept the originality for both domestics and foreigners, and these in line with the government program in West Nusa Tenggara (NTB) province that targetted Lombok island as the tourism primary destination. The research results were website and android mobile application as the promotion tools for the products of Sasak ethnic extensively. The application is easily accessible by anyone included tourists through the internet and mobile (handphone) for information searching about

the product of rumah adat and berugaq of Sasak ethnic Lombok.

II. METHOD AND MATERIAL

A. Data Taking Method

The method used in this research were through a survey technic , [5], [6], namely with the data gathering through survey, observation [7] directly to the location of traditional village in Lombok Area, and to the craftman centre of Berugaq in Lombok island. The researcher took note-taking, documents (image/photograph, video, interview, and interpret the taken data in the field of study.

B. Application Design Method

Application design was conducted through the Agile model with the Rational Unified Process (RUP) method and rational unified process, as a framework development of iterative software. Through this model, rational unified process deviding its software development into four (4) phases as follows: [11]

1. Inception, namely an identification system phase that would developed for the system analysis, target formulation of the system made, identification necessity, formulation examination necessity, UML diagram modeling, and documentation formation.
2. Elaboration, is a phase for conducting design completely based on the analysis result in the inception phase. The conducting activity in this phase, among others a design making for subsystem architecture, a system component design, a data format for database design, an interface/performance design, a performance map design, a design pattern determination used, a UML diagram modeling, and a documentation formation.
3. Construction, is a phase for designing result implementation and conducting for implementation result testing. On the early

construction phase, it is better conducting recheck the analysis result and design, particularly designing on the sequence class diagram, component, and deployment. If the design made is synchronized with the system analysis. So, implementation with a certain language programming can be conducted. Activity conducted in this phase among others incomposes examining the analysis result and design (such as using class responsibility collaborator for object-oriented programming case), necessary taking data for completed implementation (guided to the necessary identification in analysis phase), coding pattern determination used, making program, examining, program optimization, identification of any development/refinement possibility furthermore, and documentation creation.

4. Transition, is a phase for the application system submission to consument (roll-out), which generally included the training application for user and application testing beta to the user expectation.



Figure 1. Agile Process Model

PHASES OF RUP

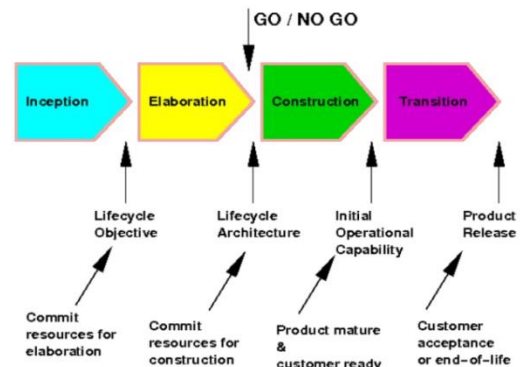


Figure 2. Phase of Rational unified process (RUP) method

III. RESULT AND DISCUSSION

The research resulting two points of application system, namely bale adat application and beruqaq in android-based mobile system format and web system (word wide web) of bale adat and beruqaq information. Mobile format application is able to download in the Play Store with name bale adat and beruqaq, while, web application is accessible in www.baleberuqaq.com. Application system was made using a rational unified process (RUP) method, that can be explained in this model which divided into four phases, namely; Inception, Elaboration, Construction, dan Transition.[12],[13] with each phase can be explained as follows:

A. Inception Phase

The researcher in this phase conducts the analysis of software necessary. Activity was focused on the program character understanding built, information domain understanding, attitude, performance, and interface needed. The pattern activity of researcher, namely:

- ❖ Search and read the literature books of Lombok island history, Sasak ethnic customs, and literature related to the Lombok culture.
- ❖ Collect and desain the needed data, such as; texts, image, voice, video, and etc .

- ❖ Conduct the interview to the local culture figure and the region government.

B. Elaboration Phase

The researcher on this phase conducts the activity that focused on the four attribute programs, namely; data structure, software architecture, interface representation, procedural detail (algorithm). Design process translates the requirements/necessary into a software representation that its quality is predictable before continued to the coding phase. System activity design can be drawn with the UML model, such as showed on figure 3.1 using the case diagram of Bale Adat and Berugaq. Structure design technic and data streaming that the researcher uses is DFD (data flow diagram). DFD according to Pressman, (1997) is a grafic technical that describes the information streaming and transformation that applied on while the data moved from input become output.

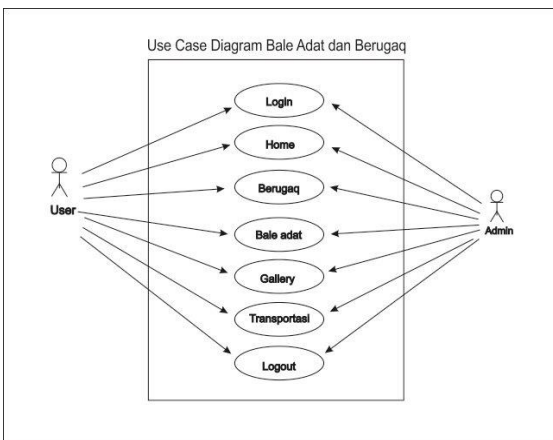


Figure 3.1. Use Case Diagram Bale Adat and Berugaq

Based on the description in diagram Use Case is seen the activity user to be able to login, seeing the available informations on both other sub menu, and out of system by log out. Admin activity is able to login on the system, and also able to update data, change data, delete data, and others in each menu that available on the system, and also out of the system.

• **DFD (data flow diagram)**

DFD Nol Level (context)

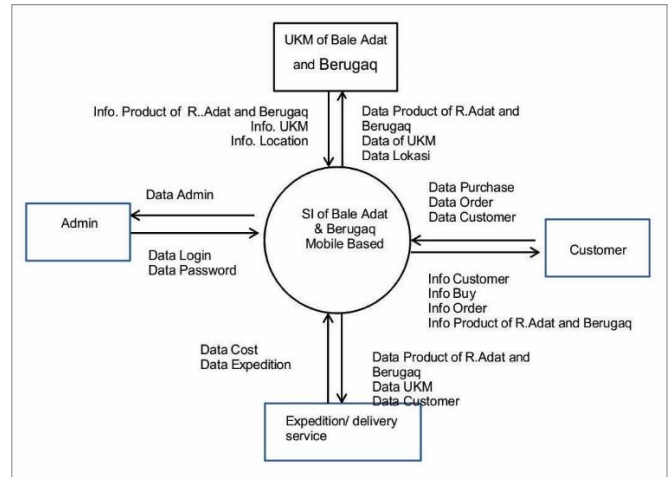


Figure 3.2. Diagram Nol Level (Contexts)

Diagram Level contexts describes all the information stream on the application created, that has four-outer unity. The outer unity or the involved entity in interaction to the system is consist of admin entity, Independent-Small Trade entity (henceforth UKM) of bale adat and berugaq, customer entity, and expedition entity. Each entity is able to give input or receipt data and information from the system. For instance, a customer entity is able to give customer data input, purchasing data, and order data, besides, customer entity is able to receipt output from the system in the form of product data information of berugaq and bale adat, customer information, purchasing information, and ordering information. Other condition of the same activity can be occured with other entity, such as showed on the figure 3 DFD nol level /contexts.

• **Desain Interface web Bale Adat and Berugaq**



Figure 3.3. Main Menu Application

The main menu application of web Bale Adat and Beruqaq are consists of five main menu, namely; Home, Beruqaq, Bale Adat, Gallery and Transportation. Each menu having sub menu that share information about beruqaq and bale adat of Sasak ethnic Lombok community.

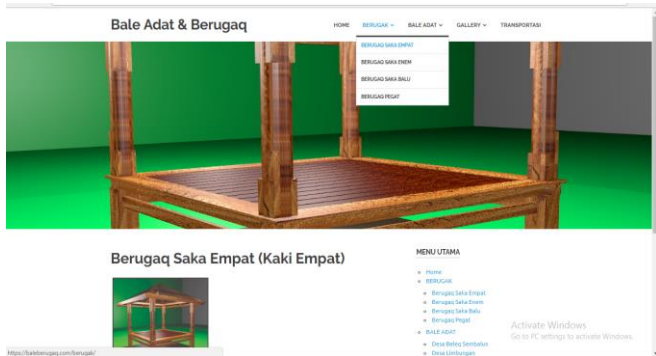


Figure 3.4. Menu Beruqaq

The menu Beruqaq is consist of sub menu; Beruqaq-Saka Four, Beruqaq- Saka Six, Beruqaq- Saka eight, and Beruqaq- Pegat (separate). Menu performance of Bale Adat, as showed on figure 6



Figure 3.5. Menu Bale Adat

Bale Adat menu are consists of sub menu, as follows; Desa Beleq Sembalun, Desa Limbungan, and Desa Rambitan. The web application of Bale Adat and Beruqaq is usable for getting information about types of beruqaq, material made of beruqaq, Price and other information related to beruqaq. Besides, the web is usable for getting information about the location or village that keep eternity the culture, like bale adat, reach distance from the town centre, usable

transportation and others, as the early information for visitor or tourists.

• Design Interface Application Mobile

The main menu mobile application of rumah adat and beruqaq are consists of 3 (three) main knobs, namely; knob of Beruqaq, knob of Bale Adat, and knob of Information. Each the knob will have relation with the next sub menu to show the wanted information by the user.

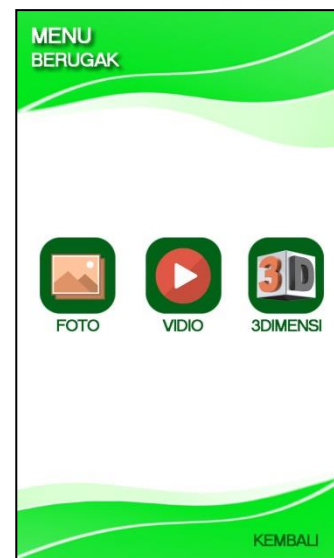


Figure 3.6. Menu Beruqaq

Menu Beruqaq are consist of 3 (three) sub menu, namely; photo menu, video menu, and three dimation (3D) menu. Foto menu will perform information, such as; image/photo of all types of beruqaq. video menu will perform beruqaq video, and 3D menu will perform beruqaq image in pattern of 3D that visible from different point of view.



Figure 3.7. Menu Video Berugaq

Berugaq menu video posses four of video knobs, namely; Four Leg Berugaq, Six Leg Berugaq, Eight Leg Berugaq, and Pegat (separate) Berugaq. Each knob describes the original berugaq video in the community. The following is performane example of four Leg Berugaq video, as seen on the figure 3.8.



Figure 3.8. Menu Video Four Leg Berugaq



Figure 3.9. Menu 3Dimension Berugaq

Menu of 3D berugaq posses four knobs menu that capable of giving berugaq information and it visible from different user's point of view. To return back to main menu, the user can press the knob "KEMBALI" /return.

The application is usable by the user, particularly by the tourist in terms of information about rumah adat and berugaq in Lombok island. The presented information of rumah adat, such as; pattern of rumah adat, building structure, and location. Besides, its types, pattern, dimension, and price. The information is expected to be able to describe information for tourists or users, and prospective buyers before visiting or doing transaction.

IV. CONCLUSION

The research resulting the output and conclusion as follows:

- 1) The availabelity of rumah adat and berugaq database of Lombok community.
- 2) The availability of virtual tour 3D application about rumah adat and berugaq of Lombok community on the mobile content format.

- 3) The existence of rumah adat and berugaq application with the Site/web format.
- 4) To simplify the user in searching the information about rumah adat and berugaq in Lombok area.
- 5) As the solution of promotion media of rumah adat and berugaq to enhance the economical of Lombok community.

V. REFERENCES

- [1]. <http://www.rumah-adat.com/2014/11/rumah-adat-nusa-tenggara-barat.html> site of traditional house in west nusa tenggara province.
- [2]. Mulyadi, L, "Sejarah Gumi Sasak Lombok 'History of Sasak Lombok island' " ITN Malang, 2014, dalam <http://arsitektur-lalu.com/wp-content/uploads/2016/09/Buku-Sejarah-Lombok-OK.pdf>. in site past architecture – Lombok history book.
- [3]. Simatupang, L.L, "Laporan Penelitian Penjajagan Komuntias Kreatif II 'Research report of creative community II' ".2013, dalam'in <http://psflibrary.org/catalog/repository/Laporan%20Penelitian%20Penjajagan%20KK%20II.pdf>.
- [4]. Tague, N. R. "The quality toolbox. (2th ed.). Milwaukee, Wisconsin: ASQ Quality Press, 2005, p. 247 Available from <http://asq.org/quality-press/display-item/index.html?item=H1224>
- [5]. Gumilar, G.R," Kontribusi Pelatihan Kewirausahaan Terhadap Motivasi Berwirausaha Bagi Peserta Pelatihan Persiapan Purna Bakti Di Lembaga LP2ES Bandung, 2013, 'Entrepreneurship training contribution towards entreprenoured motivation for training participant in preparation of Purna Bakti program in LP2ES institution in Bandung. dalam http://repository.upi.edu/3889/6/S_PLS_0900209_CHAPTER3.pdf
- [6]. Santyadiputra, Saindra.G, Agustini, Ketut, " Surve Kualitas Lulusan Jurusan Pendidikan Teknik Informatika" 'Survey graduate quality of Informatic Engineering education department', Jurnal Pendidikan Teknologi dan Kejuruan' Technology and Vovational Journal Education, Vol 13, No 1 (2016): Edisi Januari 2016, dalam <http://ejournal.undiksha.ac.id/index.php/JPTK/article/view/6843>, 2016.
- [7]. Novianti, Ria, "Teknik Observasi Bagi Pendidikan Anak Usia Dini 'Observation technic for early childhood" .Jurnal Pendidikan Sosial Dan Budaya 'Journal Education of Social and Culture, dalam <http://ejournal.unri.ac.id/index.php/JPSBE/article/view/1621>, 2012.
- [8]. Wirosasmito, Ginanjar, "Penerapan Metode Waterfall Pada Desain Sistem Informasi Geografis Industri Kabupaten Tegal 'Application of Waterfal Method on the System Design of Industry Geographycal Information in Tegal Region' ", JURNAL INFORMATIKA : Jurnal Pengembangan IT, dalam <http://ejournal.poltektegal.ac.id/index.php/informatika/article/view/435>, 2017.
- [9]. Usada, Elisa; Prasetyo, Heru Adi, "Perancangan Sistem Pintu Gerbang dengan'System Design of Gateway with' Sensor Radio Frequency Identification (RFID) menggunakan Metode Waterfall", Jurnal Informatika, Telekomunikasi dan Elektronika 'with Waterfall Method, Telecommunication Informatic and Electronic Journal' , dalam <http://ejournal.st3telkom.ac.id/index.php/infotel/article/view/60>, 2013.
- [10]. Presman R. S., 1997, Software Engineering : A Practitioner's Approach, The McGraw-Hill.
- [11]. Scott W. Ambler, (2005), "A Manager's Introduction to The Rational Unified Process (RUP)

- [12]. Juyun Cho, Colorado State University-Pueblo, (2009), "A Hybrid Software Development Method For Large-Scale Projects: Rational Unified Process With Scrum", Volume X, No. 2, 2009.
- [13]. <https://www.slideshare.net/sharadsrivastava12/presentation-rational-unified-process>.