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OUTBOUND PACKAGE RESERVATION INFORMATION SYSTEM IN KAMPUNG KUTO AGROTOURISM BASED ON CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

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ABSTRACT

Agrotourism is a tourism object that utilizes agricultural businesses with the aim of expanding knowledge, recreational experiences and business relationships in the agricultural sector. The design of the Kuto Village Agrotourism area offers artificial natural tourism and educational entertainment with an approach to the concept of an outbound package in the outdoors. The reservation recording system still relies on handwriting in the reservation book, at risk of miswriting and calculation. The solution, Kampung Kuto Agrotourism implements an Android application-based information system with Customer Relationship Management (CRM). QR-Code technology will replace physical stamps, visitors can make reservations online. This system is expected to facilitate the management of Outbound packages, make Outbound package reservations more efficient, and provide solutions for tourist visitors.

1. INTRODUCTION

Agrotourism is a broad agricultural concept that can be interpreted in general as a plantation area in which there is also a location or land to be used as a tourist visit area. (Tirtawinata, 1996) stated that agrotourism is a tourist attraction with the aim of expanding knowledge, recreational experience, and business relations in the agricultural sector.

Agrotourism or agrotourism can also be interpreted as a development of a natural tourism industry that relies on the cultivation of natural resources. This industry relies heavily on cultivation capabilities in the form of agriculture, fishery livestock or plantations and forestry. The concept of agro-tourism development can be carried out by developing existing areas or existing areas or livestock business areas or plantation industrial areas. The tourism industry is expected to be able to support the development of agribusiness in general.

One of the agro-tourism in Central Java, especially in Kudus Regency, which has the concept of developing agribusiness based on educational tourism is Kampung Kuto Agrotourism which is located in Purwosari district, Kudus Regency.

Based on initial observations, with the existence of Outbond Education for kindergarten-PAUD children as a leading tourism and promotional object for the manager of Kuto Village to attract visitors. Of course, if there are many interested Educational Tourism activities, the amount of profit in Kuto Village will increase. Thus, good service quality will increase the number of reservations for visitors who come to Kampung Kuto.

The problem that exists in Kampung Kuto Agrotourism is in the field of Outbound Education reservations which still use records on ordinary paper and report storage is placed in a book, which sometimes results in archiving over time becoming accumulated and inefficient. In the management of recording reservations for Outbond activities, it still uses conventional methods, namely by collecting data and making it with Microsoft Office and Microsoft Excel. So that it can cause Human Error errors in recording the package reservation. This is certainly still considered very ineffective and it is necessary to hold an update that can facilitate the reservation data collection process. So what is needed in this case is that the system can be accessed through one platform that can be accessed through the Mobile Application.

This information system is based on an Android application based on Customer Relationship Management (CRM) to be able to build and maintain good, profitable relationships and provide satisfaction for visitors. Customer Relationship Management (CRM) is useful for establishing a good relationship between managers and visitors to Kampung Kuto Agrotourism, such as providing information on available outbound packages or promoting tourist attractions to visitors. The implementation of Customer Relationship Management (CRM) in this system is to provide information through push notifications so that with push notifications visitors can know about ongoing events or promotions.

This system uses Quick Response Code (QR-Code) technology which will later replace conventional packages that were previously in the form of paper and require visitors to Kampung Kuto Agrotourism to make reservations directly. So

that with this information system, visitors only need to scan the QR-Code in a short time.

Then this information system was developed with the Waterfall method which was carried out sequentially and linearly. Meanwhile, system design using Unified Modelling Language (UML) is a visual language used to model and communicate a system in which diagrams and supporting text are used. After the existence of this information system, it is hoped that it will be a solution in the process of managing Outbound packages in Kampung Kuto Agrotourism and become a solution for visitors to make Outbound Package reservations that are easier and more efficient.

With the background that has been explained by the author, the author is very interested in compiling a final project with the title "Outbound Package Reservation Information System in Kampung Kuto Agrotourism based on Customer Relationship Management (CRM)".

The Reservation Information System for Educational Outbound Packages at Agrotourism in Kuto Village will accommodate all reservation data and information about the activities that will be carried out. This reservation data and information will later be combined and stored (archived) centrally and systematically in a database. With the centralization of reservation data and information, it will obviously make it easier to collect data on Outbound activities.

2. RESEARCH METHODOLOGY

The literature review contains previous researches that the author uses as a reference material or basic foundation in doing assignments or thesis. The first research that was used as research literature with the title "Design and Build a Website-Based Educational Tourism Management Information System Case Study of Marketer Villages" written (Pangestu & Lasmedi, 2021) in his research explained that the system built using website-based technology, displaying detailed information on tourist villages and Outbound arenas, Outbound package visits, managing the visiting system. However, this system has weaknesses, namely incomplete system management, not yet implementing Quick Response Code (QR-Code) technology as a replacement for conventional package systems, not implementing the concept of Customer Relationship Management (CRM) which functions to build relationships with tourist visitors and the absence of a payment feature.

The next research is a study entitled "Website-Based Natural Tourism Package Visiting Information System in Baluran National Park with Php & Mysql" written by (Prayetno, 2022) in his research explained that the system built using website-based application technology, displaying tour package visits, managing tour package visits, and applying Quick Response Code (QRCode) technology as a substitute for conventional package systems. This system has several weaknesses, such as incomplete system management, not implementing the concept of Customer Relationship Management (CRM) which functions to build relationships with tourists, and the absence of a payment feature.

The next research is a research entitled "Design and Build a Mobile-Based Online Visiting Application for Cinema Packages" written by (Putra, 2022) in his research explaining that the system built uses mobile-based application technology, displays movie details, visits to cinema packages, and manages the visiting system. However, this system has weaknesses, namely the lack of complete information on cinema packages because it does not explain the package price, has not implemented Quick Response Code (QR-Code) technology as a replacement for the conventional package system, has not implemented the Customer Relationship Management (CRM) method that functions to build relationships with cinema visitors and there is no payment feature.

The next research is a study entitled "Architectural Design of the Online Tour Package Visiting System Using the Zachman Framework" written by (Saepudin, 2022) in his research explaining that the system built using mobile-based application technology, displays detailed information on tourist attractions, tour package visits, and manages the visiting system. However, this system has weaknesses, namely incomplete system management, not yet implementing Quick Response Code (QR-Code) technology as a replacement for conventional package systems, not implementing the concept of Customer Relationship Management (CRM) which functions to build relationships with tourist visitors, and no payment features.

2.1 Data Collection Methods

In completing the final project proposal or thesis, the author uses data collection methods, including:

1. Observation Method

   In the observation method, the author collects information by visiting the location that will be used as observation material, namely Kuto Village Agrotourism.

2. Literature Studies

   Literature study is a technique for gathering information and knowledge from library sources such as academic journals, books and so on that are used as references.

3. Interview

   The author involves several related parties to conduct interviews as a way to collect information in the field.

2.2 System Development Methods

With the background that has been explained by the previous author, the author uses a method, namely the waterfall method, as a method of developing the system that is built. According to (Sukamto, 2018) explained that the waterfall method is a step-by-step approach to the software life cycle, starting from the analysis, design, coding, testing and supporting stages.

2.3 System Analysis

The actors in the Outbound package reservation information system include the following:

1. Admin
   Admins are actors who are tasked with managing the Application, managing visitor data, managing Outbound activity data, managing payment data, and managing transaction reports.
2. Leader
   Leaders are actors who are tasked with evaluating reviews and receiving reservation transaction reports.
3. Visitors
   Visitors are actors who use this application who aim to make reservations for Outbound packages and provide reviews.

These actors carry out some of the business processes shown in Table 1.

Table 1. Business processes used in the system

No.	Business Process	Actor	System Use Case
1.	Visitors register	Visitors	Registration
2.	Administration and Visitors Log-in to the application system	Administration Visitors	*Login*
3.	Administration explains the Package *Available Outbonds*	Administration	*Outbound*
4.	Visitors make reservations Outbound Package	Visitors	Outbound *Reservations*
5.	Administration provides explanations Available Outbond package promos	Administration	Promo
6.	Administration makes reservations who has entered	Administration	Reservation
7.	Visitors make payments Outbound Reservations	Visitors	Package Payment
8.	Administration verifies Outbound reservation payment	Administration	Validation Payment
9.	Visitors get a QR-Code to be verified by the Administration	Visitors Administration	Package Verification
10.	Visitors leave reviews after *the outbound activity* is completed	Visitors	Reviews
11.	Aministasia provides Outbound package reservation transaction reports Completed	Administration, Leadership	Reservation Report

3 RESULTS AND DISCUSSION

3.1 System Design

The following image shows a use case system diagram that describes the use case business process. This diagram shows who is involved in the system (Actors) and what the system can do see in Figure 2.

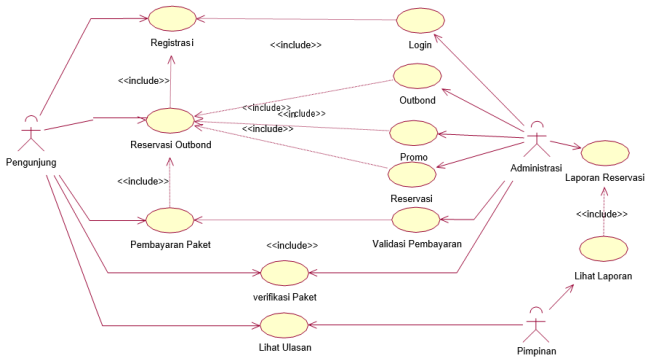

Figure 1. Usecase of Outbound Package Reservation Information System in Kampung Kuto Agrotourism Based on Customer Relationship Management (CRM)

Furthermore, some of the resulting class analyses will be correlated into the class diagram to determine the relationship or coupling of each component in Figure 2.

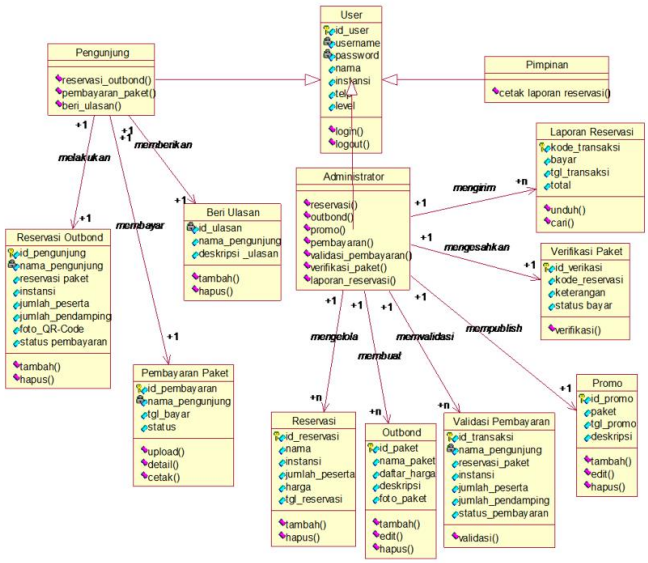

Figure 2. Class diagram of Outbound Package Reservation Information System in Kuto Village Agrotourism Based on Customer Relationship Management (CRM)

3.3 System Results

The implementation of the atarmuka screen in the research of the Outbound Package Reservation Information System in Kampung Kuto Agrotourism Based on Customer Relationship Management (CRM) uses the Java programming language, the Firebase Realtime Database database, and is supported by the Android Studio editor text and the Android operating system device.

1) Login Page View

The registration page can be seen in Figure 4.

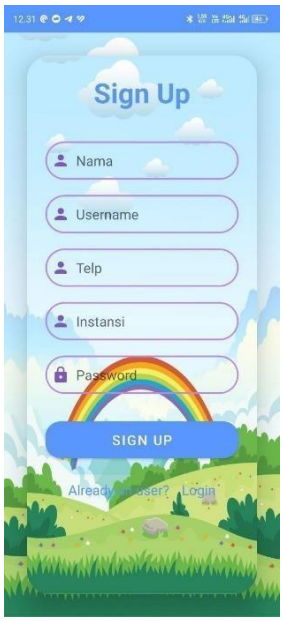

Figure 4. Registration Page View

2) Login Page View
The login page can be seen in Figure 5.

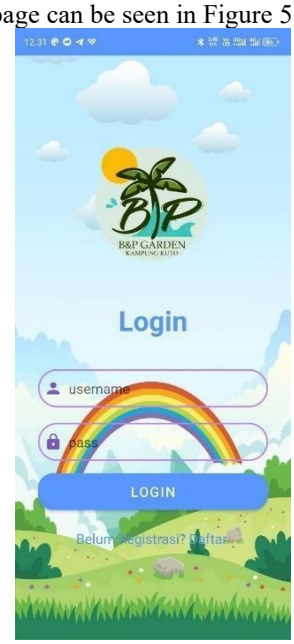

Figure 5. Login Page View

3) Visitor Home Page View
The main page of visitors can be seen in Figure 6.

Figure 6. JIT Counting Page View

4) Administration Home Page View
The main page of administration can be seen in Figure 7.

Figure 7. Administration Home Page View

5) Reservation Input Page View
The reservation input page can be seen in Figure 8.

Figure 8. Reservation Input Page View

6) Payment Page View
The payment page can be seen in Figure 8.

Figure 8. Payment Page View

7) Payment validation page view
The payment validation page can be seen in Figure 8.

Figure 8. Payment validation page view

4 CONCLUSION

4.1 Conclusion

The results of the research discussion of the Outbound Package Reservation Information System in Kampung Kuto Agrotourism Based on Customer Relationship Management (CRM) can be concluded as follows:

1 The information system created can facilitate promotions, outbound package reservations and transaction records.
2 The information system is based on an Android application with Customer Relationship Management (CRM) technology which is used to build a good relationship between managers and visitors.
3 QR-Code technology is used to replace paper notes, facilitating the verification process of Outbound packages.

4.2 Advice

The results of the research discussion of the Outbound Package Reservation Information System in Kampung Kuto Agrotourism Based on Customer Relationship Management (CRM) therefore, the author provides a number of suggestions that can help to improve the weaknesses in this system, including:

1. The information system created can be developed by adding the Food Package Reservation feature and the Cancel feature for Outbound package reservations, complaints, and refunds.
2. A security system that is not so strong will be an obstacle to information systems, it is hoped that information system developers in the future can provide a higher and more secure level of security.
3. The information system created can be developed by adding Customer Service features to be able to better serve tourist visitors.

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