Website-Based Tourism Package Reservation Information System (Case Study at PT. Soka Wisata Kendal, Central Java, Indonesia)

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ABSTRACT: PT. Soka Wisata is a company engaged in tourism that was founded in 2009, serving tour packages, booking domestic and international airline tickets, booking train tickets, hotel vouchers, and managing travel documents. Promotions that have been carried out so far have been manually by word of mouth, through brochures and WhatsApp services. Constraints faced along with the current development of information technology, manual promotion is no longer effective, data processing is also at risk of being damaged and easily lost, because it is not stored in a database file but is still a file spread over several computers. Research conducted using the waterfall method aims to develop a website-based tour package reservation information system that has the functions of selecting tour packages, ordering procedures, customer data and so on. With various facilities owned by the developed system, this research shows maximum results where the system built makes it easy for consumers to choose tour packages, as well as an effective promotional media because more and more parties can easily access the developed system.

KEY WORDS: waterfalls; reservation, information technology

I. INTRODUCTION

PT. Soka Wisata Kendal is a company engaged in the tourism sector that was founded in 2009, serving tour packages, booking domestic and international airline tickets, booking train tickets, hotel vouchers, and managing tourist documents. Based on the company's data, it shows that the sale of tour packages has the highest amount of profit compared to the sale of airline tickets, trains, and hotel vouchers. However, promotions and reservation mechanisms that have been carried out manually by word of mouth, through brochures, and WhatsApp services have become a big obstacle to improving services and making it easier for customers to book tour packages. This research is expected to be able to expand the reach of marketing or promotions so as to increase the company's revenue from the sale of tour packages as well as simplify the reservation mechanism for consumers who are interested in ordering tour packages.

II. RELATED WORK

According to a result experiments, calculations were carried out to determine the degree of metal extraction from metallurgical wastewater production. The results are obtained by using a mathematical formula between parameters and functions [18]. Research related to the sale of tour packages was conducted at PT. Nusa Mitra Utama Semarang using the System Development Life Cycle (SDLC) methodology they developed an information system for selling tour packages that is supported by the Mysql database and the PHP programming language. With this system, customers can see the latest information on PT. Nusa Mitra Utama if there is a change in the package and its price. [Noviyanti Kustifasari (2014)]. Other research on CV. Khans Tour to overcome the existing problems, an online tour package booking information system was designed with the aim of helping to expand promotions and increase company profits. The website-based system is built using the PHP and MySQL programming languages. The research method used is the waterfall method. This website is very helpful in promoting service offerings, this has been proven by the results of a questionnaire of 80% which states that the system is useful and can help promotion. Rahmad Nur Maulidin [9].

Research on CV. Mega Trans Indonesia, which is one of the companies engaged in transportation services as a travel service provider to various regions in the country and car rental. The developed system aims to be able to assist or provide services to consumers in ordering travel tour packages and car rentals. The research method used is descriptive method, which is a method that only describes and summarizes various conditions, situations or various variables. The

system development method used is Prototype. While the information system design used is use case diagrams, sequence diagrams, class diagrams, collaboration diagrams, component diagrams, object diagrams and deployment diagrams, while the implementation of system design is the PHP and MySQL programming languages. The results of this study are the information system software at Mega Trans Indonesia can assist in the ordering process, scheduling, car rental, making reports, and simplifying customer service. [Gilang Rahmana Muhammad (2017)] The research that will be conducted using the waterfall method for the development of a tour package reservation information system is equipped with several menus, especially menus for the promotion of tour packages and at the same time reservation of tour packages selected by consumers. Consumers very easily choose the desired tour package and then make a reservation and order the selected tour package. The system will display several tour packages offered with pictures of tourist locations that are very attractive so that it adds to the attractiveness of consumers to choose them. By using the waterfall method, researchers will be facilitated by the steps that have been determined, namely requirements definition, system and software design, implementation and Unit Testing, integration and unit testing, and operation and maintenance.

III. METHODOLOGY

The method used for system development in this research is the waterfall method. The waterfall method is a process of activities from specification, development, validation, and evolution and represents them as separate processes such as requirements specification, software design, implementation, testing, and so on [12].
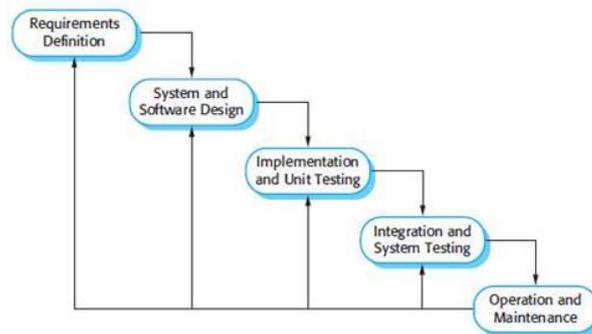
Fig.1. Waterfall Method

The following is an explanation of the steps carried out as follows:
1. Requirements Definition
Services, limitations, and system objectives are determined in consultation with system users so that a search and collection of requirements is carried out in accordance with system specifications from users. At this stage determine the right type of system and can answer the problem in making a web-based tour package reservation information system at PT. Travel Soka.
From the results of discussions with the management of PT. Soka Wisata, found several problems and obstacles faced as follows:
a. The marketing process carried out by PT. Soka Wisata is promoted by word of mouth, through brochures, and WhatsApp services. Customers contact by phone, sms, and WhatsApp or visit the office of PT. Soka Wisata to place orders and get services.
b. Untidy tour package data storage where the data is not stored in a database but is still in the form of files spread across several computers and laptops.
From the marketing process and tour package booking services which are still done manually and data storage of tour packages which are still in the form of scattered files and have not been stored in a database that is organized in a system, then the analysis carried out on the previously running manual system is the need for system development. information to serve tour package reservations and data storage of tour packages offered to customers. The analysis can be described as follows:

Table 1. Analysis of the running system

No.	Problem	Solution
1.	The marketing process carried out by PT. Soka Wisata is promoted by word of mouth, through brochures, and WhatsApp services. Customers contact by phone, sms, and WhatsApp or visit the office of PT. Soka Wisata to place orders and get services.	Designing a website-based tour package reservation information system that allows for inputting tour package data while making it easier for customers to make a reservation for the desired tour package so that it will minimize errors in data input and data storage.
2.	Untidy tour package data storage where the data is not stored in a database but is still in the form of files spread across several computers and laptops.	In the information system that will be developed there is a computerized storage feature for tour packages and stored in an integrated and secure database based on a website.

2. System and Software Design

The process of allocating requirements for either system hardware or software by establishing the overall system architecture. The design identifies and describes the underlying system abstraction relationships. At this stage prepare and develop a new system, then develop it in writing. The activities carried out include designing systems using DFD, ERD, database design and system interface design.

From the analysis carried out the software needed for the development of a web-based tour package reservation information system at PT. Soka Wisata is shown in the following table:

Table 2. System Development Software Requirements

No.	Device Type	Device Name
1.	Operating System	Microsoft Window 7 32 Bit
2.	Web Server	Apache (2.2.4)
3.	Database Server	MySQL (5.1)
4.	Web Browser	Mozilla Firefox 60.0.1
5.	Language Programming	HTML, PHP, JavaScript
6.	Image Editor	CorelDraw X5

The hardware needed in the development of a web-based tour package reservation information system at PT. Soka Wisata, namely:
1. Processor Intel (R) Celeron (R) 2957U @ 1.40GHz 1.40GHz
2. Memory (RAM) 2 GB
3. 14" LCD Monitor
After analyzing the software and hardware requirements, the next step is to design a system using DFD, ERD and database design on the interface to be built. Context diagram is a data flow that serves to describe the linkage of flows in a data between the system and the outside. Context Diagram can be seen in the following image:
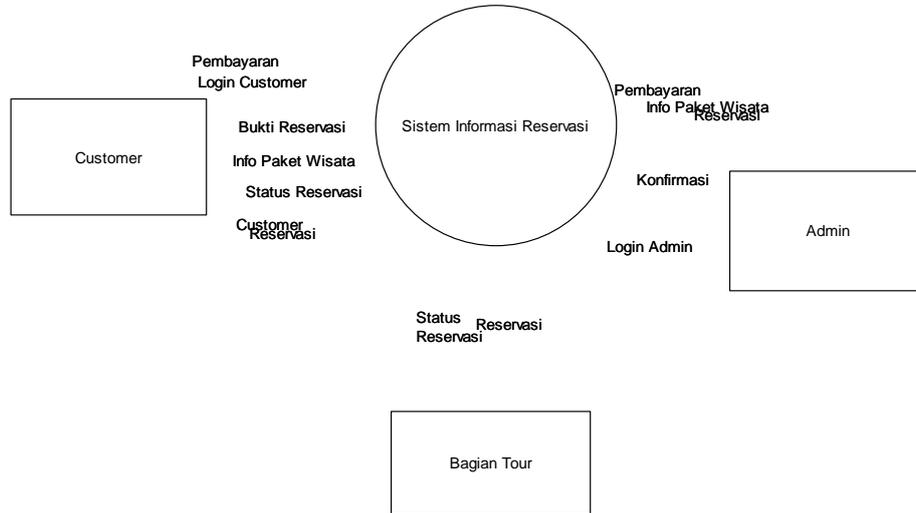
Fig.2. Context Diagram

ERD is used in building a database to describe the relationship or relationship of two files or two tables more systematically. ERD consists of 2 main components, namely entities and relationships. The two components are further described through attributes. The ERD diagram can be seen in the following figure:
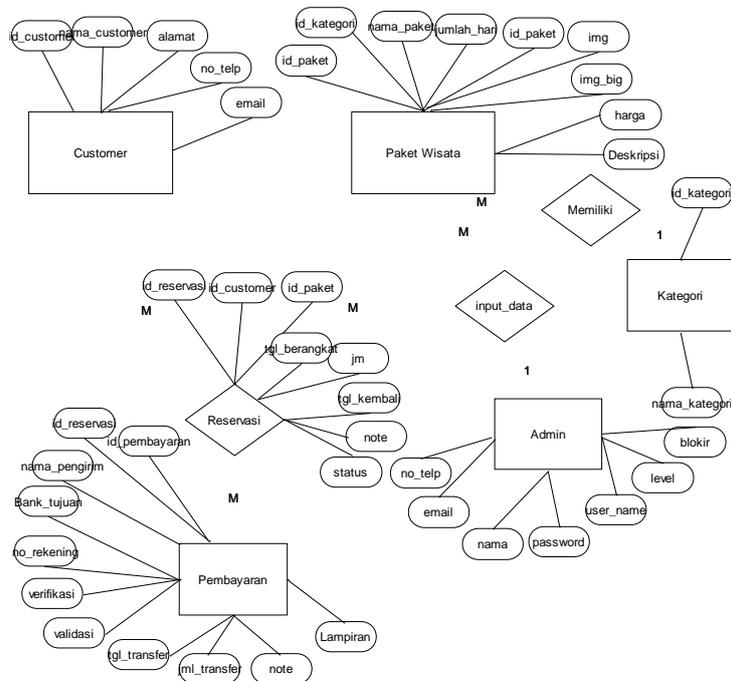
Fig.3. Entity Relational Diagram

Database is a dynamic information as a place to store data for processing. Database design can be accessed properly by a system. In designing a web-based tour package reservation information system database at PT. Soka Wisata consists of several tables.

3. Implementation and Unit Testing
During this stage, the software design is realized as a series of programs or program units. Unit Testing is involved to verify that each unit is met according to specifications. At this stage create a web-based tour package reservation information system PT. Soka Wisata using PHP programming language, MySQL database. Software design in web page format starts from the main page menu which contains a header in the form of a company profile picture and several displays of featured tour packages. Customers can search and login to enter the ordering system.

4. Integration and System Testing
Individual program units or programs are integrated and tested as a complete system to ensure that software requirements are met. After testing, the software system is delivered to the customer. At this stage, a complete system integration is carried out to ensure that the system is complete, then a system test is carried out so that when it is handed over to the customer, the system does not have problems. At this stage the system is implemented and at the same time testing is carried out to ensure that the system is running well without any errors.
The implementation is the result of the design that has been carried out for further testing or system evaluation. This test or evaluation uses the blackbox method, which is an approach to be able to test every function in a program so that it can run properly. Black box testing is specifically designed to find errors by testing the software interface. The purpose of this test is to determine the usefulness of the software that has been made by checking whether the input is well received, and the output results are in accordance with what is expected and ensure that the software that has been developed has quality and is in accordance with what was previously designed. , namely by presenting the main study of the specifications, design analysis and coding of the software itself.

5. Operations and Maintenance
The system is installed and put into practical use. Maintenance is carried out correcting errors that are not found in the early stages of each cycle, improving the implementation of system units and improving system services. At this stage the system that has been submitted to the customer is prepared for operation as well as maintenance is carried out to make corrections if there are errors or deficiencies.

IV. USER INTERFACE

During this stage, the software design is realized as a series of programs or program units. Unit Testing is involved to verify that each unit is met according to specifications. At this stage create a web-based tour package reservation information system PT. Soka Wisata using PHP programming language, MySQL database. Software design in web page format starts from the main page menu which contains a header in the form of a company profile picture and several displays of featured tour packages. Customers can search and login to enter the ordering system. Here's what the image looks like :
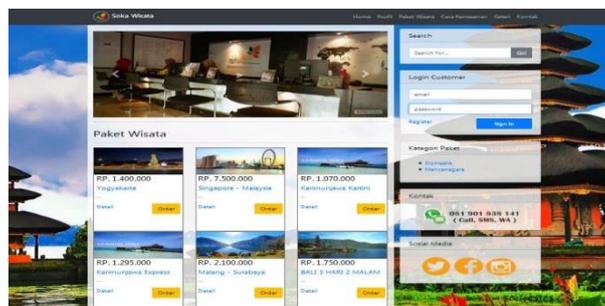
Fig.4. Main Page Design

Next is the design of a company profile image that contains profiles and information about the company as shown in the following figure:

Fig.5. Profile Page Design

Next is the design of the tour package page where on this tour package page, the customer can see the details of the tour package, the itinerary, what tour package prices are available and order tour packages. The following is a picture of the design of the tour package page:

Figure 6. Design of Tour Packages

Next is the design of the ordering page which contains procedures and information about ordering. Here's a picture of the page design how to order:

Fig.7. Designing How to Order Pages

Next is the design of the contact page which contains a form that can be filled in by the customer to send a message to PT. Soka Wisata. Here's a picture of the design of the contact page:

Fig.8. Contact Page Design

Furthermore, the design of this order page appears after the customer logs in, this page is useful for viewing a list of any orders ordered by the customer and the payment history from the customer. The page design images can be seen below:

Fig.9. Order Page Design

Next is the design of the admin login page which contains a form to enter the administrator page, which will be able to process data on this system. Here's what the admin login page looks like:

Fig.10. Admin Login Page Design

V. CONCLUSION

From the results of the application of the initial waterfall method, the application is given to users, namely customers, admins and the tour section at PT. Soka Wisata Kendal, makes it easier for developers to design applications to produce an application that can be used optimally and easily adapted to needs and is able to overcome the problems faced so far by PT. Soka Wisata is related to the mechanism for ordering tour package tickets and managing customer databases and so on. In the future, this system is expected to be developed on an android or mobile platform to make it easier for customers to book tour packages.

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