Jurnal Mantik, 6 (1) (2022) 408-416

Published by:Institute of Computer Science (IOCS)

Jurnal Mantik

Journal homepage: www.iocscience.org/ejournal/index.php/mantik/index

Development of Management Information System Rental Service Photography Web-Based Using PHP Native Case Study at PT Dwipa Photowork Surabaya

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ARTICLE INFO

Article history:
Received: Mar 23, 2022
Revised: Aprl 15, 2022
Accepted:May 30, 2022

Keywords:
Management Information System, rental service photography, web-based, PHP Native.

ABSTRACT

Scheduling is a planning activity to determine when and where each surgery as part of the work in total must be carried out on limited energy sources, and the allocation of energy resources at a certain time by taking into account the available resource capacity. In this research, utilizing the development of information technology, the most important is the application system for data processing or data collection that functions to produce the required information. Every company that wants to develop its business and achieve success, of course, the company must follow the information age by using computer applications that make it easy to process company data. In this study, the author wants to provide a solution by designing an application for processing work service scheduling flow data based on the manual scheduling system that already exists at the Dwipa Photowork Company which is still less effective and efficient, and creates a database system used in a well-computerized scheduling application. between the database system, the user interface, and the user itself.

1. Introduction

Information technology in the current era of globalization causes the flow of information that was previously difficult to obtain today can be obtained easily according to needs. A computer is a feature that is needed for the process of presenting information processing, it can share any data needed by managers or an industry that requires it[1].

Therefore, through a method that has not been computerized, it is still possible for errors to occur in managing income. So through a computerized system in the process of selling services, it is hoped that it will be able to help in terms of managing data on rental services to support this quality. Therefore we need an information system that is easier in terms of time, quickly, effectively and accurately.

Service Scheduling is the most important administrative activity. In the matter of scheduling service rentals, as a service provider who is prepared at every date and time ordered or leased is then recorded in a service schedule information system, so that it is not messy and makes it easier for service providers[2][3].

Information is facts and or data thathas been processed in a certain way so thathave meaning for the recipient. While the data(plural of datum) is a fact thatcontains meaning and is associated withreality, symbols, pictures, numbers, letters ora symbol that denotes an idea, object, condition orsituation.[4]

The web is an application that contains multimedia documents (text, images, sound, animation, video) in it usingHTTP (Hypertext Transfer Protocol) protocol andto access it using the devicesoftware called a browser.[4][3]The web is a collection of information on computer servers that are connected to each other on the internet or intranet networks. While web-based applications (web-based) in principle resemble applications in ordinary computers. The difference is that web-based applications use HTML (Hypertext

Markup Language) tags as the basis for display, while computer program applications use various programming language platforms.PHP (PHP: hypertext preprocessor) is a programming language used to translate the program code base into machine code that can be understood by a server-side computer that is added to HTML[5].

PHP native is a web programming blend of programming languages based on the PHP programming language which can be inserted by text Javascript, CSS, Bootstrap and others. Native itself means original, which is pure PHP programming compiled and coding/built by the programmers themselves without any additional terms for other settings/configurations.In addition to using the language, the author's native php also adds other supports in the form of SQL and other supports.

The method is indispensable in the research stage in order to achieve the success of a system. The data collection method is a way to obtain related data as supporting completeness in a study. The software development methodology used in this research is a *prototype model*. This model is made in a structured manner and has several stages that must be passed in its manufacture, but if the final stage is stated that the system that has been made is not perfect then the system is re-evaluated[6][7].

2. METHOD

2.1 Data Collection

This data collection technique is a way to collect research data that is carried out directly on the object of research[8]. The method used in data collection is by:

a. Interview

The interview method is a method of collecting data by means of dialogue between the interviewer and the respondent[9][10]. In the process of data acquisition, the author uses a structured interview method where the interview process is carried out by asking questions that have been prepared previously. In this case, the interview process was conducted with the owner of PT. Dwipa Photowork,

b. Observation

Observation is a technique or approach to obtain primary data by directly observing the data object[3][6]. In this case, data collection activities are carried out by observing the lack of facilities provided in an effort to facilitate the admin/owner in scheduling dynamically and customers can find out what is ordered for their moment event and also there are features that are beneficial for customers and employees of PT. Dwipa Photowork. This solves the problem of the owner/admin where so far the admin is still using the manual scheduling process and customers sometimes experience confusion when renting services for their events.

2.2 System Development

The method is a suggested way to do something in this case is a stage to develop a system development technique to be built. The systems approach is the basic methodology for solving problems. Methodology of computer-based information system development[11]. The method that will be used is to use the prototype method[12].

Iterations of prototyping are designed quickly and modeling (in the form of rapid designs) is carried out. A quick design focuses on representing all aspects of the software that will be visible to end users (eg user interface design or display format)[13].

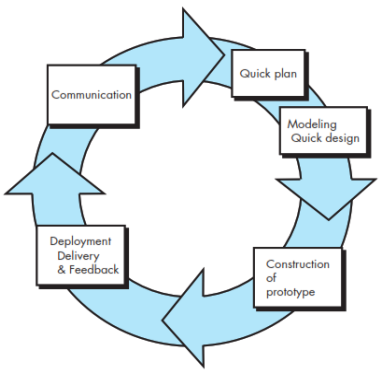

Figure 1 Prototype method in research [12]

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2.3 Scenario Test

The website that is built must be integrated so that it becomes a complete system to ensure that the system requirements have been met through testing. In this stage, the design of the system that has been made, then entered into an online website is carried out by BlackBox testing. BlackBox is useful for testing website functionality without knowledge of the internal structure of website navigation and ensuring that the site is ready to operate.[14][2]

3. RESULT AND DISCUSSION

3.1 System Design Stage

Requirements analysis activities are activities that start in determining the software that will be produced when software developerscarry out projects in software development. The result of a good software that is in accordance with the needs of the user is very dependent on the success of the needs analysis stage[11][15].

a. User Analysis

Analysis of the need for using an information system for renting photographer services at PT. Dwipa Photowork includes admin needs, employee needs, and tenant needs. Which will be explained as follows.

1) Admin Requirements
   - Admin log in
   - Admin manages transaction data
   - Admin manages schedule data
   - Admin manages data packages sold
   - Admin manages user data
   - Admin manages ContactUs data
   - Admin manage pages
   - Admin manages transaction reports
   - Admin manages company information contact data
2) Employee Requirements
   - Employees log in on the employee page
   - Employees view schedule data
   - Employees manage photo Gallery
   - Employees Manage Profile
3) Tenant's Requirements
   - Tenants log in
   - Tenants can view photo gallery
   - Tenants can view the package page
   - Tenants can fill out the contact us page
   - Tenants can manage profiles
   - Tenants can view rental history

b. System Analysis

Analysis of system requirements in this web-based photography service rental information system is admin needs, employee needs, and tenant needs. Which will be explained as follows.

1) Tenants make transactions in a simple and easy to understand way by first accessing the website and viewing the gallery from the company. If the tenant is interested, please go to the package page and select the package first. If the tenant will rent a package, the tenant must register/login first. If so, all you have to do is choose the schedule that has been set. When choosing a date, the tenant is expected to:
   - Determine the minimum rental date H-1
   - Check in advance whether the selected date is available or not, by submitting the date first

   And the last is financing by transfer or via other payments.
2) Employees must login first to view the work schedule by entering the username and password given by the admin. Employees can also add their photos obtained from each event obtained from each given job.

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3) The admin must first login to enter the photography service rental information system application by entering a username and password. The admin must add packages that are being sold which will be displayed on the website. Admin can manage transactions for rentals.

c. Use Case Diagram Design

In figure 2 explains that the admin has many accesses in this information system. one of which admin can manage employee data, package data, transaction data, manage pages, print reports. and also admin can delete, edit, add data.to be able to go to the admin dashboard page. admin can enter the admin page by accessing a special page. on the dashboard page you can see various information about transactions and work schedules.

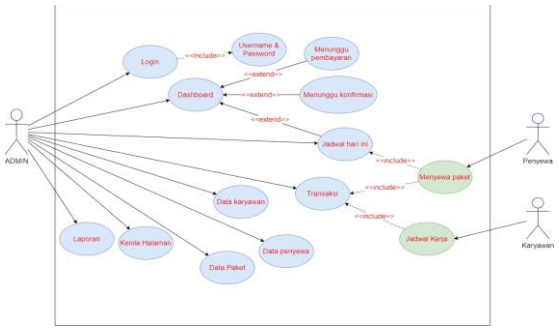

Figure 2 Admin Use Case diagram design

Figure 3 explains that Tenant can register with an email account to validate the account. You can also view dashboard pages and service offerings without logging in first. In the dashboard there is also a gallery for website visitors to watch.

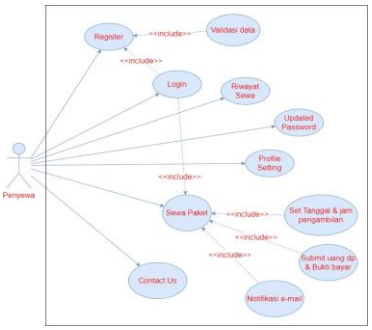

Figure 3 Tenant Use Case Diagram Design

3.2 Software Design Stage

a. **Class Diagram Design**

Class Diagram is a specification that when instantiated will produce an object and is the core of object-oriented development and design. Class diagrams describe the state (attributes/properties) of a system, as well as offer services to manipulate these states (methods/functions).

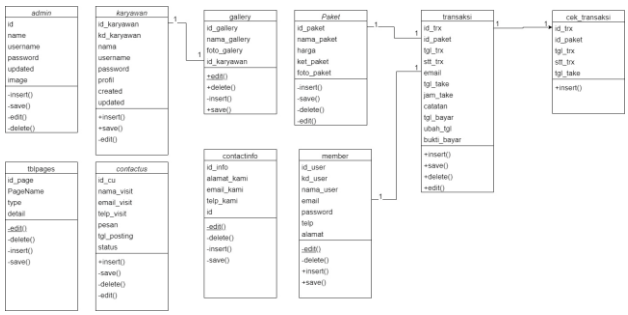

Figure 4 Class Diagram Design

b. Sequence Diagram Design

Sequence Diagrams are commonly used to describe scenarios or a series of steps taken in response to an event to produce a certain output. This diagram shows a number of examples of objects and messages that are placed between the objects in the use case. The main component of a sequence diagram consists of objects that are written in a named rectangular box. Messages are represented by lines with arrows and time indicated by vertical progress. Starting from what triggers the activity, what processes and changes occur internally and what outputs are produced.

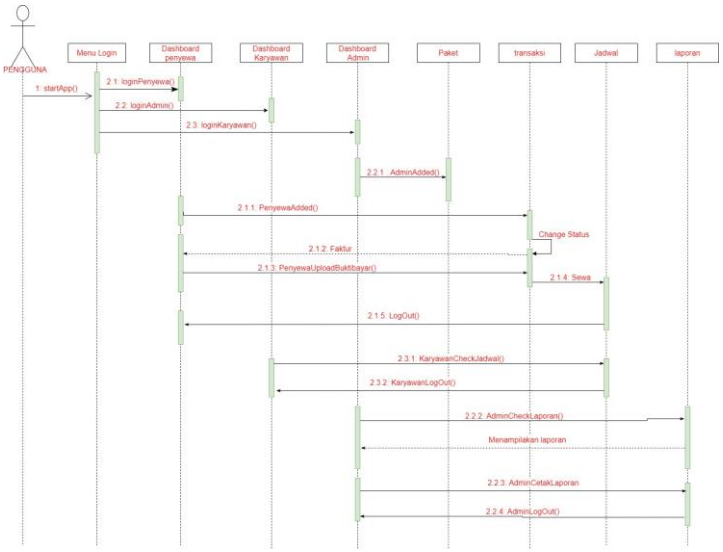

Figure 5 Sequence Diagram Design

c. Mock up Design

1) User Main Page("Tenant")

On the main page of the created website. There are several menus and information related to the services provided by the company. The following is an explanation of the navigation menu from the main website page.

Table 1
User Main Page

Menu	Function
Home	Which shows the user interface display, directs to the main page
Daftar Paket	This is a product listing page for services from the company
FAQS	A page for users to accommodate frequently asked questions or general questions
Tentang kami	Pages to explain about PT. Dwipa Photowork
Hubungi Kami	A page for users if you want to write suggestions and criticism
Profil Setting	Page to set up tenant profile ("Logged")
Update password	Page for setting tenant password ("Logged")
Riwayat sewa	Page to view tenant transaction history ("Logged")

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Sign out	LogOut page
Login	Login Page
Register	Account list page

2) Flow Pages for Rent

In this explanation, I will tell the flow of renting from the Website page by opening the "Package List" page, then choosing the available packages, in the package details will explain the description, price.

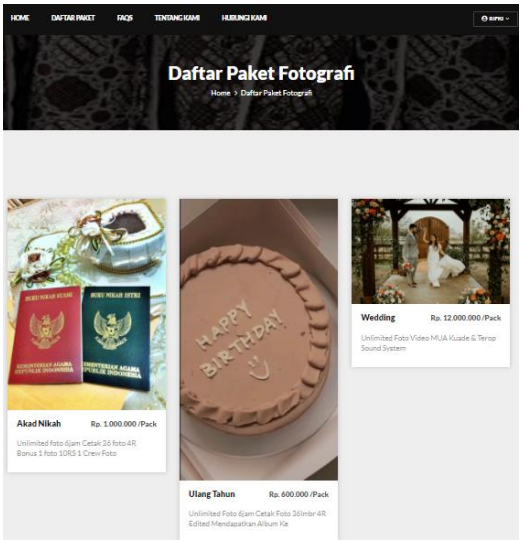

Figure 6 Package List Page

In figure 6 are various offers from the company, while there are events for marriage ceremonies, birthdays, weddings. The company will provide additional events, of course, to satisfy the tenants

3) Back-End Admin Page

Next will explain the menu in the admin which can manage some data with the CRUD process.

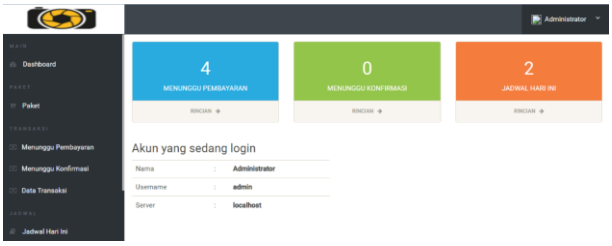

Figure 7 Package Data Page

3.3 Testing Stage

In the next stage, namely the testing stage with the blackbox method. black box testing is a test that focuses on the system output generated by an input response[16][2]. The things that are usually tested by the black box are:

- Incorrect or non-existent function.
- Interface errors.
- Errors in data structure and database access.
- Performance errors (performance errors).

a. Admin System Testing

1) Testing The Package Menu

Purpose: add, edit, delete data.

Initial condition: Admin dashboard

Table 2

blackbox admin test stages "Package menu"

No	Data Input	Test procedure	*Expected result*	*Result*	Status
1	Package Name, Description, Price, Photo	1. Press the “add” button on the package menu 2. Input data 3. press save button	Adding new data to the package	Successfully added data	Valid
2	Package Name, Description, Price, Photo	1. Choose a data from the package menu 2. Press the “Change” button on one of the data packages 3. Then edit the data 4. Press save button	Change the data on the package	Successfully changed package data	Valid
3	-	1. Pilih salah satu data dari menu paket 2. Tekan tombol “Hapus” pada salah satu data paket	Deleting selected package data	Successfully delete selected package data	Valid

2) Testing Transaction Data

Purpose : Change transaction data and perform data validation

Initial conditions : Admin dashboard, Tenant makes transactions

Table 3

blackbox admin test stage "Transaction menu"

No	Data Input	Test procedure	*Expected result*	*Result*	Status
1	Status : “Waiting for confirmation, Waiting for payment, already paid” Service: "Employee Name"	1. Tenants rent packages and upload proof of payment 2. the admin will check the proof of payment and change the status to confirmed 3. admin selects employees	Changing transaction status and selecting employees to hire	Successfully changed and managed to notify the employee to be hired via employee email	Valid

3) Testing The Schedule Menu

Purpose: Checking Process and Employee Work Records

Initial conditions: Admin dashboard, Tenant makes transactions

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Table 4
blackbox admin test stages "Schedule menu"

No	Data Input	Test procedure	*Expected result*	*Result*	Status
1	-	1. Press the "schedule" menu 2. Click the "check" button	View employee work	Successfully see employee work	Valid

4. CONCLUSION

4.1 Conclusion

A fast, precise and accurate information system is very important in the development and growth of the company in presenting the system. Based on the results of research and discussion conducted by the author about "design of information systems for web-based photographer rental services with php native case study of pt. dwipa photowork" is expected to help and improve company performance in obtaining information. The conclusions from the writing of this final project include:

a. The design of the information system that has been made has very good quality in processing online service rentals
b. With a good scheduling system, it will reduce the occurrence of piled up schedules or work schedules that are usually too sudden by tenants. Also as a new job opportunity for employees who have the potential according to the services offered by the company
c. With this website, it is easier, faster, and more accurate so that it can be said that it is very useful for companies in terms of business promotion and also recording business in the form of reports.

4.2 Suggestion

By implementing a computerized system does not mean all problems will be solved. In avoiding the emergence of a new problem, a guide or good cooperation between admin and employees is needed as well as work order. In connection with the above matter, the authors provide suggestions on "designing an information system for web-based photographer rental services with php native case study of pt. dwipa photowork" include:

a. In maximizing the computerized system at PT. Dwipa Photowork requires support from all parties involved in digesting information, especially human energy sources to improve the quality of work.
b. Perform maintenance on the system used to prevent damage.
c. Creating a responsive design for the website so that it can make users comfortable when using it
d. Adding features that can be connected to the calendar application on every Android user

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