Building a PlayStation Rental (PS) Information System Web-based

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Abstract. This research aims to develop a system that can help owners and tenants to transact on the web-based PlayStation rental without having to meet in person. The method used data collection method of primary and secondary, and object-oriented the system approach, which supports in web-based information system designs. Through this research can build software tailored to the needs of users, considered the budget, ease of use, and punctually. With the PlayStation rental website can ease and streamline the performance of employees in the activity section of the PlayStation rental data collection process, allowing consumers to rent online, and can reduce fraud between consumers and the courier who will send the PlayStation to the tenant.

1. Introduction

Van der Heide et al explain that various rental systems have warehouses to support the preparation of their rental products for low rental costs and quick delivery [1]. While Jarvinen and Karjaluoto explain that companies can leverage Web analytics to demonstrate digital marketing activities that benefit their business [2]. Aditya's opinion supports that in solving marketing problems and analyzing competition between companies can use information systems [3]. Also, Ali and Beg define the web as a dynamic, diverse collection of documents that, in its development, combine human intelligence, filtering information, searching instructs data and providing answers to the needs of users in various fields [4].

Patrutiu-Baltes argues that digital marketing plays a role in corporate strategy because companies can benefit significantly at a low cost [5]. As well Konsisiki et all describe the website is a social networking site that can record a variety of information regarding each action performed by members or users and can generate relevant data which each of its members can be interconnected [6]. It is supported by Tiago et al describe the current company should think of new marketing strategies in the digital field due to consumer behavior that currently prefers to use the internet [7].

However, according to Baltes a company that wants to implement a digital marketing strategy must be able to choose the right way of marketing, paying attention to promotions, quality of marketing content, and targets. [8] As well as in making the strategy should be attentive to the customer because the customer is a cornerstone of the company's growth, survival, and success of a business [9-10].

Then, having regard to the positive impact of the use of the web in advance of a business, it is necessary to build a system to assist owners and renter in play channel rental business for web-based transactions without having to face-to-face. Used primary and secondary data collection methods and
approaches Object-oriented systems, can support in the design of web-based information systems. So it can build software tailored to the needs of users, taking into account the budget, timely, and ease of use. It is because previous research that still has not discussed web-based information system such as what can apply to the business of rental play station.

2. Method
In data collection methods, we used primary data sources and secondary data sources as a reference in research conducted. Primary data sources were obtained from direct observation and interview, while secondary data sources were documentation related to the process of making information system rental of PS related to research. As well as the system approach method that was object-oriented system approach, This approach method worked to know how to use tools and regulations to complete one or more stages of information system development. The tools used in this object-oriented method of Use Case is with, Use Case Scenario, Activity Diagram.

3. Results and Discussion

3.1. System Development
To design a system that is necessary tools Use case diagrams to describe the system from the user's perspective, it is useful to help understand the needs. After creating a use case scenario and Activity diagrams, then use the method that modeled using prototype modeling. Prototype method is a method of software development that is designed to accept the changes to enhance the existing prototype and eventually the software can meet the needs of users and is ready for use. (Note Figure 1).

![Figure 1. Development of prototype system](image)

3.2. System Design
Web-based PlayStation rental information system is an information system used to process rentals and to prevent fraud between courier and tenant. Payment can be done through the system that has been made. Then compile the use case scenario, which is a drawing of the use case diagram that made both the use case description and the explanation of each use case function. As well as compiling an Activity diagram that describes the various flow of activities within the system being designed, how each flow begins, the decisions that may occur, and how they end. In the Use Case Diagram proposed
there are two actors namely Consumer and Admin. Consumers can access the web and make rentals and returns PS and Admin served in serving the rental, return and report. Use Case starting from Do log in to process web access using the id of each actor, do rental by doing the process of filling form and verification of rental. Then make a return by filling out the return form and verifying the return, and making the report by doing the PS data collection (Note the figure 2).

**Figure 2.** Use Case Diagram

### 3.3. Use Case Scenarios

The proposed use case scenario is to log in first and create the form use case number, name, function, actor, and actor action as well as system reaction (Note Table 1).

| No. Use Case | Name      | Function                        | Actor                     | Actor Action            | Reaction System |
|--------------|-----------|---------------------------------|---------------------------|-------------------------|-----------------|
| 001          | Login     | Access the web with login       | Consumers and Admin       |                         |                 |

1. Consumers fill out the login form
2. The system validates data
3. System displays login data
4. Consumer login
5. The system displays the main menu

After performing the use case scenario login, then create the use case scenario to the proposed lease, by making use case number form, name, function, actor and actor action (Note Table 2).
Table 2. Use Case Scenarios Perform Proposed Rentals

| No. Use Case | 002 |
|-------------|-----|
| Name        | Do rental |
| Function    | Doing rental by filling out the form online |
| Actor       | Consumers and Admin |
| Reaction System | |

1. Consumers fill out the rental form
2. System checking rental data
3. System displays rental data
1. Consumer Verify rental data
2. System stores rental data

Then create a use case scenario in the proposed return of the same format when creating the rental form (Note Table 3).

Table 3. Use Case Scenarios Make a Proposed Return

| No. Use Case | 003 |
|-------------|-----|
| Name        | Return |
| Function    | Doing a return by filling out the form online |
| Actor       | Consumers and Admin |
| Reaction System | |

1. Consumers fill out the return form
2. System check data returns
3. System displays data returns
4. The consumer verifies the return data
5. System stores data returns.

The final step is to create a use case scenario proposed in a report: with the same format when creating the rental form (Note Table 4).

Table 4. Use Case Scenarios Create a Proposed Report

| No. Use Case | 004 |
|-------------|-----|
| Name        | Make a report |
| Function    | Record the rental and returns that were made into reports |
| Actor       | Admin |
| Reaction System | |

1. Admin collects data from rentals and returns
2. The system validates rental and return data
3. The system displays the rental and return data in the form of report
4. Admin print report
3.4. Activity Diagram

After creating the Use Case diagram next is to create the proposed activity diagram, starting from the Activity diagram use case to log in the intended (Note Figure 3).

![Activity Diagram]

**Figure 3. Activity Diagram**

The activity diagram use case is a scheme or diagram of the proposed rental. It starts from the consumer filling out the rental form, the system performs the rental data checking, then the system displays the rental data, and the consumer performs rental data verification until finally, the system keeps the rental data (Note figure 4).
Figure 4. Activity Diagram of the proposed rental

Likewise with Activity diagram use cases when the proposed return starts from the consumer fills the return form, the system performs the data checking, which is then displayed, then the consumer verifies the data, and the system stores the return data (Note figure 5).

Figure 5. Activity Diagram of the proposed retrieval
After the system performs the rental of the return data, the Activity diagram use case makes the proposed report starting from the collection of rental data and returns until the admin to print the results of reports from rental and return (Note figure 6).

**Figure 6.** Activity Diagram Use Case

4. Conclusion
With the website rental of the PS, it can streamline and effectiveness of employee performance in the Console PS data collection process. It also facilitates the consumer in doing the rent, and it avoids the happening of similarity schedule in rental Console PS among consumer. It aids the consumer in doing console PS restoration more effective, and it can reduce fraud between the consumer with the courier which will send console PS to the tenant because all data will store in the system.

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