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Used Car Sale Application Design in Car Shoowroom Using Extreme Programming

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Abstract: Information technology is an activity of collecting, processing, managing, storing, disseminating and utilizing information. Apart from involving hardware and software, this technology also pays attention to human interests in its utilization. Car Showroom is a company engaged in buying and selling used cars. As a growing company and from its stagnant sales chart data for the last 5 years, Car Showroom took the initiative to make the internet a marketing medium. Judging from the reality, so far it has been difficult to provide information regarding the product. Making it easier to design a system that is created, as well as implementing a used car sales application in a car showroom made using the PHP programming language with the MySql database so that the information held by the showroom can be accessed by users online and in real time. With this application, it can help users find used cars online. Based on the results of the recapitulation of the 7 testing criteria that have been carried out, the results show that the number of answers from respondents has a value of 100% in accordance with testing system functionality using blackbox testing.
Keywords: Blackbox Testing; Car; Database; Information; Showroom;

1. INTRODUCING

Information technology is an activity of collecting, processing, managing, storing, disseminating and utilizing information. Apart from involving hardware and software, this technology also pays attention to human interests in its utilization[1]. The development of science and technology in this modern era is increasing rapidly and has become a very important component for the success of businesses and organizations. Information delivery media is one of the determining factors in the success or failure of that information to the user[2]. The large number of people who are more interested in finding information through the internet and the work of people who do not live in one place has caused the website to become a tool that does not only provide information and as a promotional medium[3], [4]. In addition, the existence of a website is a very strategic place to promote and conduct surveys to find out consumer desires and responses to products offered at any time via the internet, so that companies can understand consumers' wants and needs. one example of a computer can help speed up the work being done, using a computer will be more accurate and consistent in making calculations[5].

Sales activities are complementary activities or supplements to purchases, to enable transactions to occur. So buying and selling activities are one unit for the transfer of rights or transactions to be carried out. Therefore, selling activities like selling activities as well

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as buying activities, consist of a series of activities which include creating demand, finding the buyer, negotiating prices, and payment terms.

Car Showroom is a company engaged in buying and selling used cars. As a growing company and from its stagnant sales chart data for the last 5 years, Car Showroom took the initiative to make the internet a marketing medium. Judging from the reality, so far it has been difficult to provide information regarding the product. Usually information about the product can be via telephone, or come directly to the showroom, but this is considered inefficient. For example, someone wants to buy a car but due to his busy schedule he cannot come directly to the Showroom, so the prospective buyer will be in trouble if he only calls by phone because he cannot see the product in person.

The main function of this website is to expand marketing and increase car sales. Customers can get detailed information about the specifications of the car they want by simply browsing this website[6]. Because one of the advantages of using a website is to reach customers who are in areas far from the physical location of a business/organization. Showrooms can also include detailed information about car specifications about the vehicles that will be sold on their website[7].

The purpose of this study is to make it easy for car showrooms to market used cars, to make it easy for car showrooms to sell used cars.

2. METHOD

The framework of thought is the big picture of the author in conducting research, can be seen in Figure 1 below

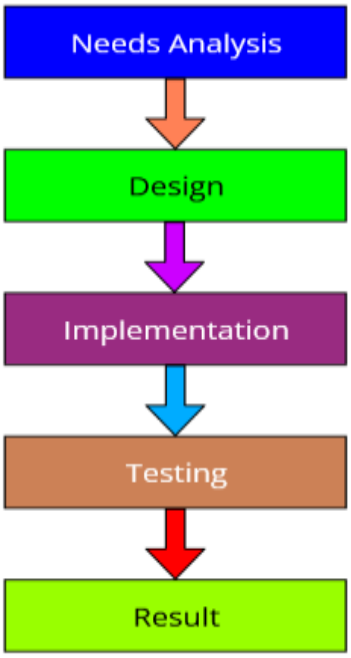

Figure 1. Research Framework

Stages of research are research activities carried out in a planned, orderly and systematic way to achieve certain goals[8], [9]. This research stage is also the development of the research framework, and is further divided into several sub-menu sections[10]. The following is an explanation of the stages of the research, namely

Stage 1: Needs Analysis

The requirements analysis stage creates system requirements from problems that occur using functional requirements analysis and non-functional requirements analysis.

Stage 2 : Design

The system design stage makes a system design using an object-oriented approach, including designing use case diagrams, activity diagrams, and class diagrams.

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Stage 3 : Implementation

The prototype implementation stage creates a web-based program using the PHP programming language and MySql database.

Stage 4: Testing

The testing phase is testing the prototype that has been made using a questionnaire using blackbox testing.

Stage 5: Results

This stage produces a used car sales application prototype in a car showroom.

3. RESULT AND DISCUSSIONS

The use case diagram of the used car sales application in the car showroom can be seen in the figure 2 below

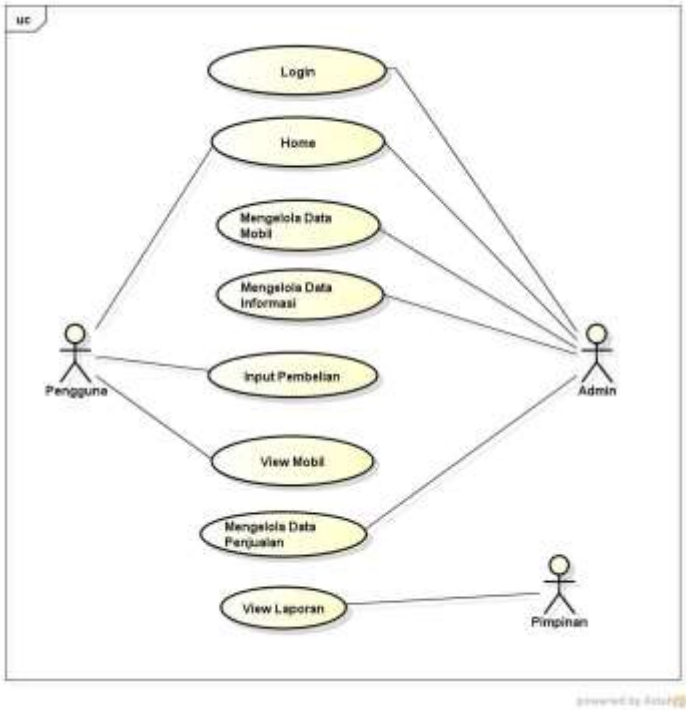

Figure 2. Usecase Diagram

From the picture above there are 3 actors, namely the admin actor doing usecase login, usecase home, usecase managing car data, usecase managing information data, usecase managing sales data. User actor doing usecase home, usecase input sales data. The Lead Actor performs a use case view of sales data.

The display of the implementation of the login page functions to log in to the application, the user must enter a username and password that has been registered in the MySql database. The login page display has a name text input component that functions to enter a registered username, a password text input that functions to enter a registered password, and a login button that functions to validate usernames and passwords stored in the database. If it has been registered, the system will display the dashboard page, but if it is not registered, the system will give a warning to enter the correct name and password.

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Figure 3. Implementation Login

The user's home page to view all car data stored in the database, namely name, price and image.

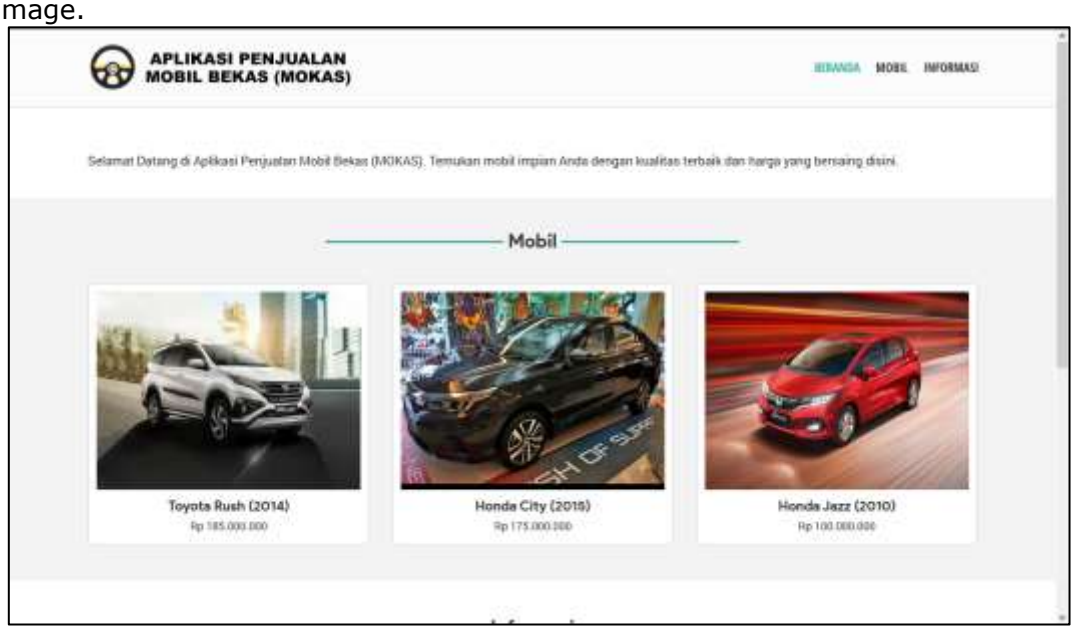

Figure 4. Implementation Dashboard

The car ordering page to see all car data is in the showroom and will place a car order by filling in the full name input data, full address input, and input cellphone number. There is a cancel button to cancel filling in the order data. The process button functions to save the car order data that has been input.

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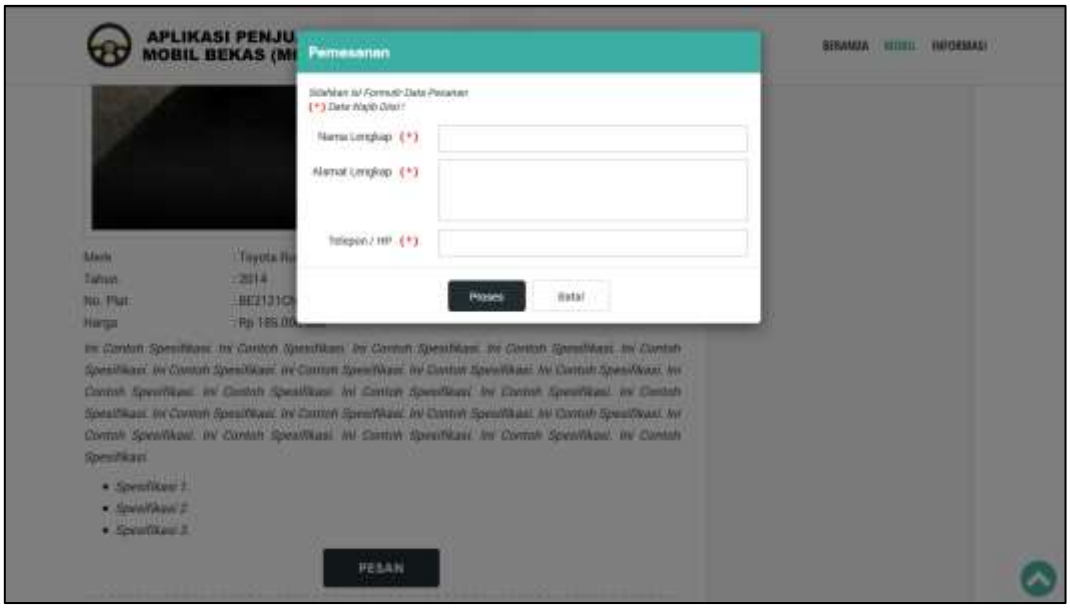

Figure 5. Implementation Order

The development of a used car sales application at a car showroom is made using the PHP programming language with a MySql database so that the information held by the showroom can be accessed by users online and in real time. The digital age offers many benefits even to those who wish to sell their used car. Taking the conventional way of visiting a traditional dealership means going from place to place looking for the best deals on cars. The disadvantages don't end there. Leaving the car with whoever the seller is means that the car will only be visible to buyers who visit that particular dealership. And when the car owner finally finds a buyer and sells the vehicle, the seller still has to pay agency fees, which can be quite a lot. With this application, it can help users find used cars online.

The results of black box testing to determine the suitability of functions in the development of used car sales applications in car showrooms. The following are the results of black box testing found in the development of used car sales applications in car showrooms.

Table 1. Results of Black Box Testing Recapitulation

Test Criteria	Number of Answers	
	Yes	No
Login Page	2	0
Information Data Page	4	0
Car Data Page	4	0
Sales Data Page	4	0
User Home Data Page	4	0
Order Data Page	4	0
Report Print Page	2	0
Total Answers	**24**	**0**

Based on the results of the recapitulation of the 7 testing criteria that have been carried out, the results show that the number of answers from respondents has a value of 100% in accordance with testing system functionality using blackbox testing.

4. CONCLUSION

Based on the results of the description that has been described in the previous chapters, it can be concluded that the development of a used car sales application in a car showroom is designed using an object-oriented approach, namely using use case diagrams, activity

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diagrams, and class diagrams. Making it easier to design a system that is created, as well as implementing a used car sales application in a car showroom made using the PHP programming language with the MySql database so that the information held by the showroom can be accessed by users online and in real time. With this application, it can help users find used cars online. Based on the results of the recapitulation of the 7 testing criteria that have been carried out, the results show that the number of answers from respondents has a value of 100% in accordance with testing system functionality using blackbox testing.

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