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Design Model of Bus Ticketing by Seating at PT. XYZ

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Abstract— Utilization of Information Technology (IT) has now reached the stage of good. Utilization of IT is encouraging companies to use the system used to facilitate the work. Companies use IT as a means of disseminating information to recipients. The recipients of the current information want all access information to be viewed online, so without having to open print media they can receive information. From several case studies there are still many bus tickets booking service providers who have not utilized IT yet, in the absence of media providing online bus ticket booking service will have an impact on the difficulty level of users in booking tickets. In this research see the opportunity of utilization of IT in service provider to user, for example is XYZ bus company which use bus ticket booking system online. Looking at the concept of online ticket booking, the method used is based on the relationship between the user and the system depicted in OOAD (Object Oriented Analysis Design). The ultimate goal of this research is to hope with the existence of online bus ticket reservation is expected to facilitate users in utilizing IT that has been provided by the bus company.
Keywords: IT, reservation ticket, OOAD, ease of order

I. INTRODUCTION

The development of Information Technology is very rapid at this time, triggering developments in other fields, one of them in the field of education. Currently, Information Technology is not only seen as a field of education, but more than that Information Technology began to be developed in order to assist the development of the field of education itself. This is because the development of Information Technology in support of the progress of information exchange is increasingly dominant in today's society. Information Technology is expected not only to support the development of education alone, but more than that Information Technology is expected to provide solutions to existing educational and information problems. Utilization of IT has now entered a very developing stage. With the utilization of IT positively will give birth to the image of a qualified user and can work well in an organization or company and utilization of IT is also used in transportation companies such as PT. Bus XYZ. Transportation has now become a basic thing in human life, it is based on human activities that require to move from one place to another. Humans prefer to use transportation for these needs in order to utilize more efficient time.

The faster the population is directly proportional to the needs of citizens will be transported, It Makes transportation as a business space that is very promising. the proliferation of businessmen to open a business in the field of transportation is what causes competition among the service companies is getting tighter, especially in the field of service to consumers. This utilization is considered important by the company because it can make the whole process of booking a bus ticket with seat selection itself is expected to be easier for the consumers. In order not to overcapacity in a bus departure, or the seat has been in the message the service user does not match the message on the day of his departure. This is quite risky, because it will impact on the quality of transportation services, resulting in decreased quality of service so that consumers feared more shifting to use other transportation services.

II. RELATED WORK

Booking tickets is a means that facilitate consumers in making purchases tickets online. By utilizing the so-called IT media as a website, information seekers can find something that is needed such as ticket purchases at PT. XYZ. The process done in ordering tickets online is to register first [1], then consumers get the identity of the buyer such as username and password. After successful registration then the consumer can choose the seat in accordance with his wishes, and after that consumers will get a message into the phone that states to make payment for the ticket [2]. Utilization of internet and website produce good output for its users, because internet and website are communication network without boundary and space, so give facility and ease in completing work [3, 4, 10]. Ease in using internet media to give positive impact to its users and the factor belief between information giver and recipient information. If there is no trust factor, then all activities in the delivery of information will not be easily accepted. Trust is also an important factor in the ongoing sale and purchase of online transactions because trust is essential and is created by direct interaction with the seller personally, or in general the creation of relationships between consumers and vendors [5, 8]. In utilizing the online ticket booking system also by utilizing the application based on the operating system android and iOS, but in this study ticket bookings can still be opened online using mobile devices. By using mobile devices all activities can be easier for consumers in booking tickets online and also without knowing the time and space limits. As in previous research, mobile commerce has emerged as a vital tool for many firms as smart phones continue to evolve and gain in popularity. It offers customers accessibility, enabling them to purchase products or services at any time and from anywhere [6, 7, 9, 11, 12]. In making the model of online bus ticket reservation using the concept of OOAD (Object Oriented Analysis Design) where the concept of OOAD is to emphasize the interaction made by users against the system [13]. OOAD model can be poured in a model called UML (Unified Modeling Language). Where the UML model to be used in this research is use case diagram.

III. METHOD

As already explained, that this research is done using OOAD method with UML model. In UML modeling there are several steps that must be done in accordance with the concept of waterfall model, namely: 1) planning, 2) design, 3) coding, 4) Testing and Implementation, 5) documentation. At the planning stage of this research will be observed how many users involved in the use of the system, from this study there are 3 users, namely: consumers, admin and leadership. In the activities undertaken by consumers, consumers can perform several activities such as: making a reservation ticket and also do confirmation tickets that have been purchased. In the admin activity, the admin can perform several activities such as: adding a seat, viewing the status of payments and viewing sales reports, bus reports and order reports. In the leadership activity, the leader can only see the sales report. Illustrations at this stage can be seen in Fig. 1, at the design stage, will be divided into 3 views for users and each view will have different content. In the coding or programming stage, the bus ticket sales design uses PHP programming language and its data base is MySQL. The next step is the testing phase of the program, where the program will be tested whether it is in accordance with the needs of the users or not and the last stage is the documentation of the research that has been done.

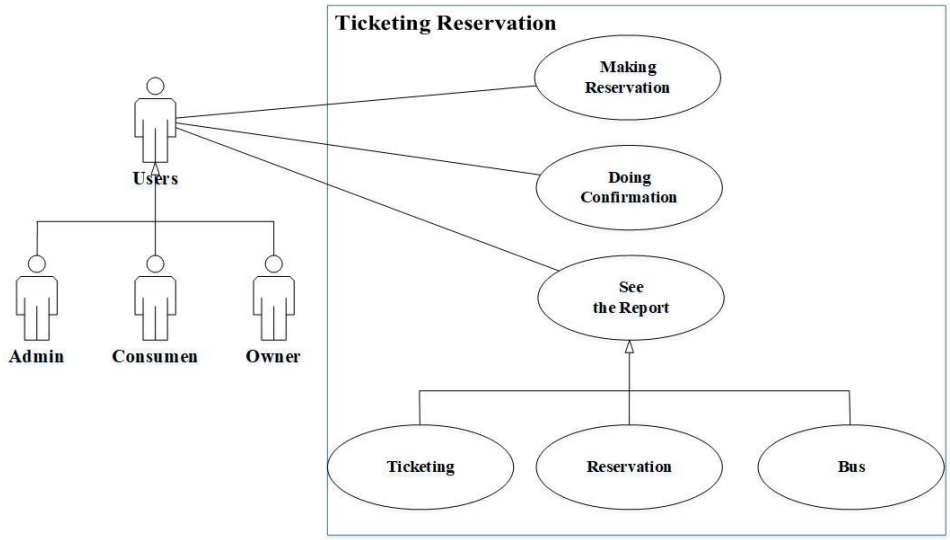

Fig. 1 Use Case Diagram Ticket Reservation System

IV. RESULT

After making the conceptual model, then the next step is to see the results of the analysis made that has been adapted to the needs.

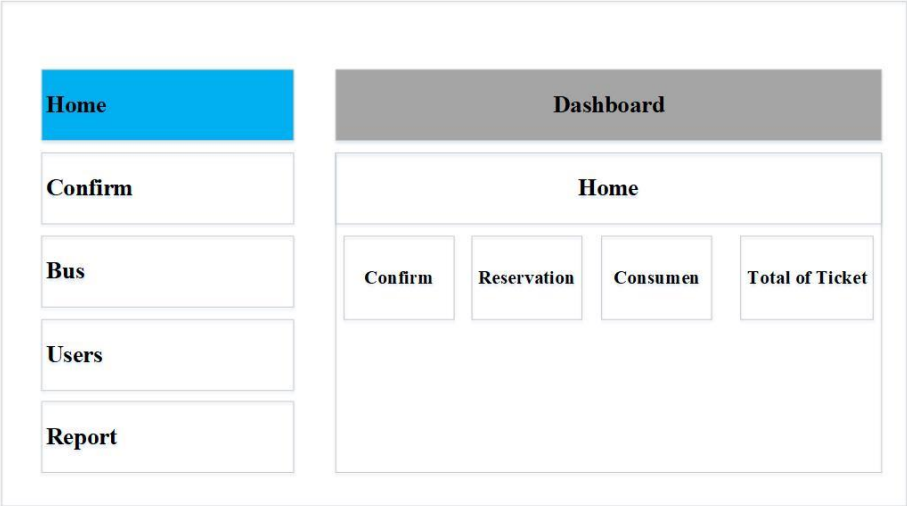

Fig 2. Home Admin

In the above view it can be seen that the admin can do some activities such as see who the consumer who has made the purchase ticket confirmation, admin can also see dn add the number of seats on the bus, manage the user list and also admin can view reports, such as purchases report, reservation and report the amount of seats on the bus.

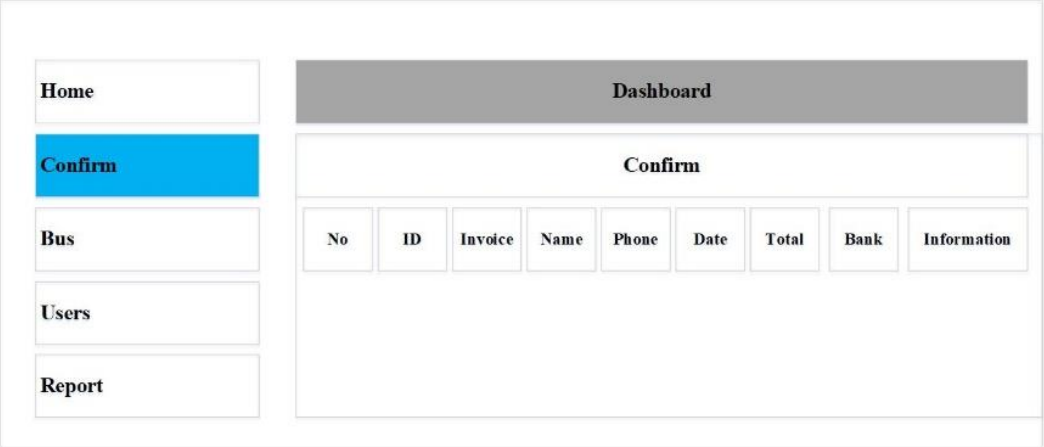

Fig. 3 Confirmation of Ticketing

In the above view, it can be seen that the admin can see who the consumer who has made the payment process after making a ticket purchase online. If within 3 hours the consumer does not make the payment process, then the order already done will be deleted automatically in the system. This method is done in order to avoid the accumulation of data orders that are not in accordance with the payment, if this way is not done then the bus company will suffer losses, many reservations but the amount of the payment process does not match the amount that make reservations.

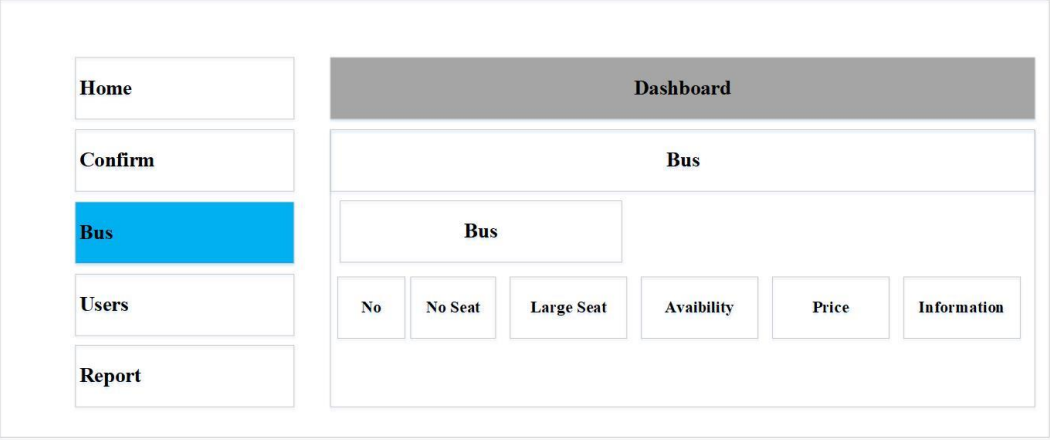

Fig. 4 Manage Seat of Bus

Admin can also manage the seating of a bus, here the admin can specify seating no, the area of the seat and also the availability of seating and the price of each seat, because the seats are in the front row will have a more price high compared to the seat in the middle or the back.

Fig. 5 Report of Ticketing

Admin and owner can view reports from ticket sales as well as reports from ticket bookings and reports from the availability of the number of seats on the bus.

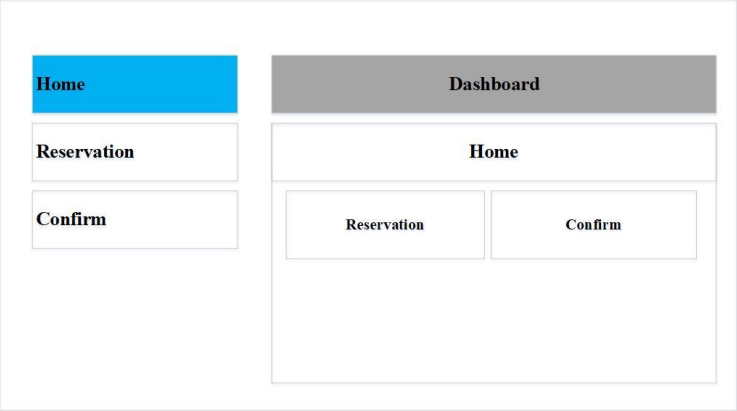

Fig 6. Home of Consumer

On the consumer page, consumers can only do two activities only, which is to make reservations and also make payment confirmation. Activities on ticket booking can be seen in Figure 7 and the activity on the booking confirmation can be seen in Figure 8.

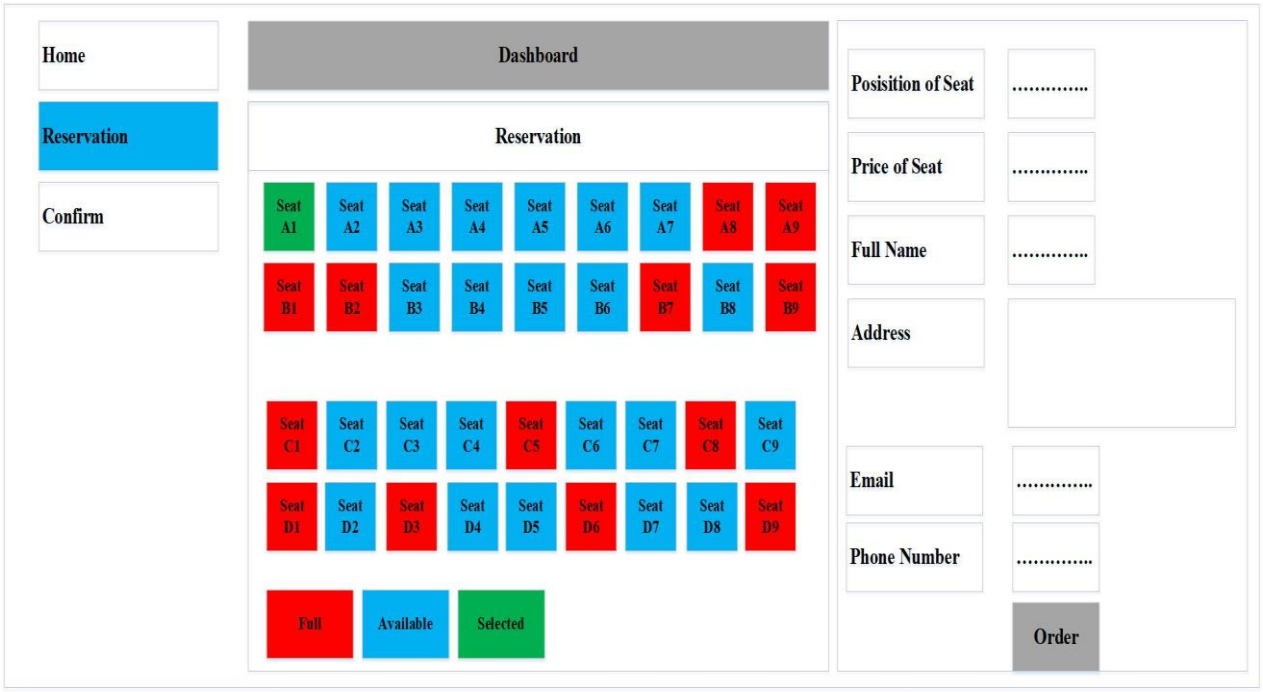

Fig 7. Page of Ticketing Reservation

In the above figure it can be explained that there are 3 statements on the seat status, if the red seat means the seat is already full or already filled by other passengers, if the picture of the blue seat means the seat is still empty or has not been purchased by other passengers and if the color of the green chair is the seat chosen by the passenger. After the seat is selected then passengers can fill biodata such as, full name, address, email and no tel. For seating positions and ticket prices do not need to be filled because automatically the seating position and the price will appear in accordance with the chosen seat.

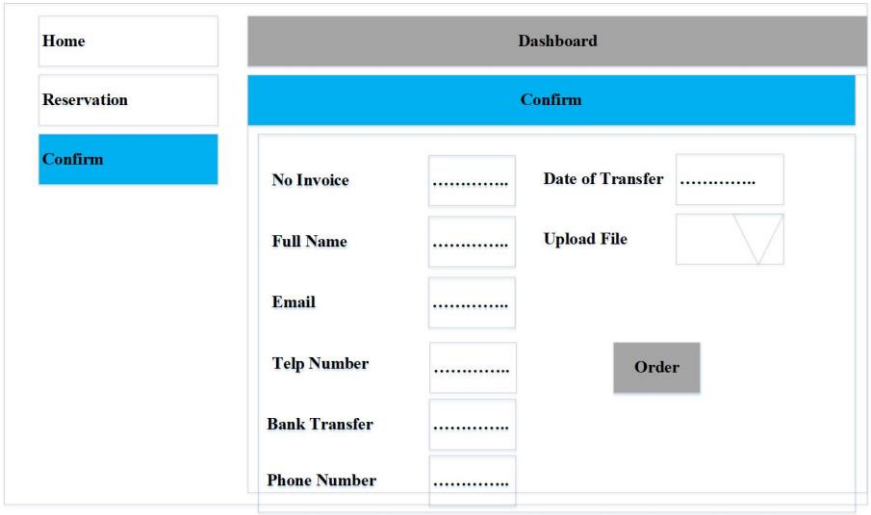

Fig. 8 Confirmation of Ticket

After ordering and making payment, consumer can enter no invoice, and automatically biodata from consumer will appear, after appearing then consumer asked to upload proof of transfer already done then press order button and order finished.

V. CONCLUSION

Based on the description that has been explained, that the ticket booking system is based online, with the aim of facilitating consumers in the process of purchasing bus tickets. The system can also easily view reports, both ticket sales reports, the number of seats on the bus and the reservation report. For the future booking bus tickets based on this seat will be based on mobile applications such as android and also iOS, because now many consumers are already using mobile based android and also iOS.

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