

RESERVATION SYSTEM DESIGN IN BONK CAFE ANDROID BASED

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ABSTRACT

Bonk Cafe is a Cafe newly established in December 2017 in the city of Sidoarjo. Bonk Cafe has a cozy concept to provide a variety of snack-type food, traditional food and drinks made from coffee and tea. Due to the new still operational, the service order is still done manually by the waiter on a sheet of paper order. Services currently felt less efficient, because the waiter spent more time \pm 5-10 minutes to wait for customers to choose the menu and place an order. The waiter who worked also responsible for receiving the booking desk by phone and write in a book booking. It can also cause the error log customer orders and increase the wait time becomes longer. With applications and Place Order booking system integrated with a Payment Gateway Midtrans, expected to minimize the errors noted in the order and also a long waiting time. In this proposed system, the customer can make booking a table and preorder menu available. Customers are required to make payment in advance by means of bank transfer through the payment gateway provided by Midtrans. By doing preorder, customers can immediately enjoy booking on arrival at the location, thus shortening the waiting the arrival of the order. Customers are required to make payment in advance by means of bank transfer through the payment gateway provided by Midtrans. By doing preorder, customers can immediately enjoy booking on arrival at the location, thus shortening the waiting the arrival of the order. Customers are required to make payment in advance by means of bank transfer through the payment gateway provided by Midtrans. By doing preorder, customers can immediately enjoy booking on arrival at the location, thus shortening the waiting the arrival of the order.

Keywords :Payment gateway, Booking, Cafe.

1. PRELIMINARY

In the culinary business, a very fundamental thing is the service to the customer [1], Business Cafe which is growing rapidly in large cities today, causing a very sharp competition in fulfilling various needs. Because of the actions marketers is to strive to create distinctiveness and advantages of the various factors that can attract consumers to buy its products, one

factor service facilities[2], Service facility can be a measure of the success of the business Cafe, the service friendly, compliance order placed and payment is easy to make customers feel comfortable it will continue subscribing to come to the Cafe.

But not a few businessmen Cafe who forget the factor of business success. In the case study carried out in bonk Cafe which is located in Sidoarjo, East Java, there are the same problems associated with its business success factors, namely customer satisfaction. Due to the new still operational, the customer orders the service is still done manually by the waiter on a sheet of paper order. Services currently felt less efficient, because the waiter spent more time \pm 5-10 minutes to wait for customers to choose the menu and place an order. Cafe crowded conditions at the time, customers have to wait for the waiter to be able to do order to reach more than 15 minutes, causing discomfort for the customer. The waiter who worked also responsible for receiving the booking desk by phone. Booking data recorded by the waiter on the booking book, then table booked marked booking that is not occupied by other customers. It can also add time waitress to write and set the table so that the waiting time becomes longer. Due to reservations and payment are still manually recorded and counted by the employee who is so great possibility of writing and calculation errors. This certainly would not be so bad for the Cafe if the customer comes not so crowded, but it would be very pronounced impact if the conditions Cafe is always crowded. Due to reservations and payment are still manually recorded and counted by the employee who is so great possibility of writing and calculation errors. This certainly would not be so bad for the Cafe if the customer comes not so crowded, but it would be very pronounced impact if the conditions Cafe is always crowded. Due to reservations and payment are still manually recorded and counted by the employee who is so great possibility of writing and calculation errors. This certainly would not be so bad for the Cafe if the customer comes not so crowded, but it would be very pronounced impact if the conditions Cafe is always crowded.

With advances in technology, businesses Cafecan certainly take advantage of and minimize the impact will occur. Businessman Cafe can take advantage of smartphone customers to make

reservations, booking menu, and payments directly from the application so as to facilitate and shorten the waiting time of customers. Businessman Cafe also be able to cooperate with Midtrans as a third-party payment gateway in the business transactions with customers. Businessman Cafe also be able to control the flow of transactions and volume of income on Midtrans website in real time without having to wait for an employee makes a daily bookkeeping.

Midtrans application of the application had already spread to several other business sectors, such as in research Erick Febriyanto, Untung Rahardja, Niko Alnabawi applying Midtrans as Payment Verification System on Website iPanda[3], There is also research on Android-Based Rental Futsal Field[4]And research on Tourist Bus Booking Using Android-Based Payment Gateway [5],

This research was conducted with the intention of providing Booking System and Internal Order with Payment Gateway Integration in Bonk Cafe. With the aim of research to provide the following benefits:

1. Customers can make booking a table and preorder menu with through the application so as to minimize the waiting list at the Cafe.
2. Customers can shorten or do not need to wait for the order is completed, because it is already preorder.
3. The waiter no longer need to record the order details and booking a table in the notebook.

2. CONTENT OF RESEARCH

The following is an explanation of the contents of the development application penelitian in Bonk Cafe.

2.1 Research methodology

The research methodology is a process used to solve a logical problem, which requires data to support the implementation of a study. This research uses a descriptive method. Descriptive method is a method of research that aims to get a clear picture of the things that are needed and sought to describe and interpret the object in accordance with the facts in a systematic, factual and accurate[6],

A. Method of collecting data

This study requires data and information as a basis for carrying out research activities. The process of collecting data in this study conducted in the following manner.

a. Field observation

Activity visit to Bonk Cafe to observe food service reservations and bookings.

b. Interview

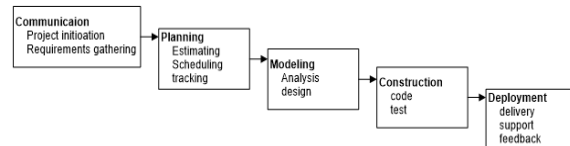
Step collecting data by conducting a question and answer discussion to the owner Bonk Cafe to know the constraints and needs of system development.

c. Study Data

Data collection techniques by collecting data through literature, journals, papers and readings that have anything to do with the research title[7],

B. Software Development Methods

System development method is to use the approach to system development life cycle (Systems Development Life Cycle / SDLC) models waterfall. Phases of the waterfall model as shown is as follows,



Source image: Software Engineering (Approach Practitioner) (2013) [8],

Picture 1, Stages of Software Development.

a. Communication

The search process and the determination of the principal Permasalahanyang occur.

b. Planning

The process of planning the establishment of problem-solving and the steps undertaken by the principal issues raised in Bonk Cafe.

c. modeling

Process modeling is doing the manufacturing system modeling using system modeling diagrams such as Unified Modeling Diagram (UML), Entity Relationship Diagram (ERD), the design of the table structure and design of the system interfaace user.

d. construction

Construction is the process of making the programming code system using the programming language PHP Framework for admin and java android users for applications used by customers. After the coding is completed there will be testing of the system has been made. Testing the system using a standard method of testing Blackbox.

e. deployment

The process of implementation of the system to users of the system to be gathered feedback from users of the system.

2.2 Theoretical basis

The cornerstone of the theory is an explanation of the various concepts and theories relating to the application pembangunan in Bonk Cafe.

2.2.1 System

In general, the system can be defined as a set of objects that interact and relationships between objects can be viewed as a single entity that is designed to achieve one goal[9], The system has the characteristics or specific traits, which have components (components), the limit (boundary), the environment outside the system (environments), interface (interface), the input (input), output

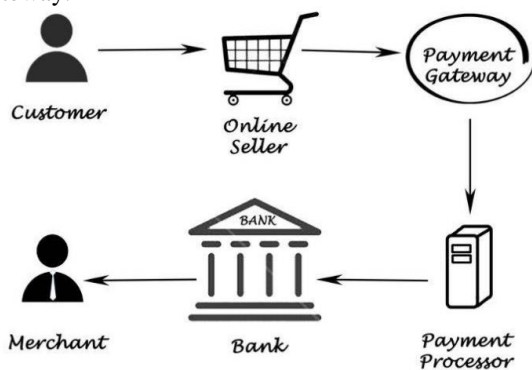
(output), processing (process), and goals (objectives) or destination (goal).

2.2.2 Cafe

Cafe is a kind of self-services restaurant where the form of presentation using the system counter, so that the circulation in the counter should be clearly visible and easily accessible. Cafe generally has a counter and a broad service area and large. Design on the counter area is generally very large role to present the concept of the food served, where the addition of food display can make it more interesting. At the Cafe visitors can freely choose and order food and pay directly at the counter. At the Cafe, the menu selection and the price should be clearly mentioned, which is generally placed at the entrance and counter area. Kind of menu options offered by the café is generally limited and can be changed every day [10],

2.2.3 Payment Gateway

Payment gateway is one way to process electronic transactions. Payment gateway provides the tools - tools to process payments between customers, businesses and banks. Payment gateway is an important part of a transaction between customers, business and institutions - banking institutions which are both used. Some of the main features of the Payment gateway includes payment and personal data encryption, communication between the associated financial institutions, business and the customer, payment authorization. Some tools have a payment gateway features that can help customers find out the cost of shipping and handling, as well as sales tax. There is also the detection of fraud and features - other features that can be used with the payment gateway.



Source image: Mechanisms Payment Gateway via shutterstock.com

Picture 2, Mechanisms Payment Gateway.

Explanation of the picture above:

1. Customers shop online look and decide to buy a product based on the information submitted on the source of the payment gateway connection.
2. Payment gateway will forward the information to the customer's bank payment processor.
3. The payment processor will forward the transaction information to card issuing associations used, such as Mastercard or Visa.

4. The next stage, the associated bank will receive this request and send a reply to the processor with a special code and confirm whether the transaction succeeds or fails.
5. The payment processor will send the message to the payment gateway will then be forwarded to the seller's website or application as well as the cardholder until the transaction is declared successful.

2.2.4 Midtrans

PT Midtrans (Veritrans Indonesia) is an innovative online payment company located at Midplaza Building, Sudirman, Jakarta. PT Midtrans aims to provide the best solutions for eCommerce Indonesia to help facilitate online payments both for the merchant and user of eCommerce. Midtrans an e-Payment services in Indonesia is officially launched in 2012. Before renamed Midtrans, e-Payment service is named Veritrans Indonesia. Midtrans now been working with several banks in Indonesia such as BCA, BNI, Bank Mandiri, Bank besides also some digital technology industry. Integration of online payment gateway system is easily integrated with the full support of the technical support team Veritrans, making the merchant can immediately accept online transactions on its website.

2.3 Analysis and Design System

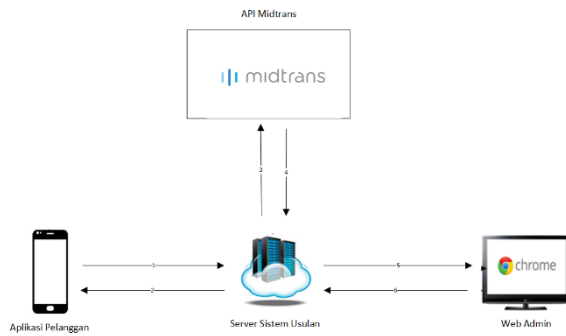
Analysis and design of the system is a stage check the problem then do the preparation of problem solving and working on creating the system specifications that will be applied to the development of applications in Bonk Cafe.

2.3.1 Problem analysis

Services in Bonk Cafe still using conventional paper sheet booking records. The waitress who served the wait and record customer orders. The waiting time is generally 10-15 minutes waiter. It felt less effective and efficient, because another customer service to be disrupted. In addition to record customer orders that came directly to the point, the waiter also noted customer demand for booking a table via telephone. Table booking data recorded on the record book booking. Manually recording at risk for error log date and time of booking which can be detrimental to customers. Currently bonk Cafe does not serve the order menu via telephone because of a risk of fraudulent orders.

2.3.2 Analysis of Proposed System

The design of the system proposed in this study has the following architectural design.



Picture 3, Proposed Architecture Design.

Description of architectural design drawings above is partially below.

1. Application transaction customers to send data to the server system such as booking details and customer orders.
2. Customers get a response to the application function that is sent in the form of payment details that must be paid by the customer.
3. After the customer makes a payment, the system performs a send transaction data on API Midtrans form of payment methods that are paid by the customer.
4. API Midtrans get a response to the function which submitted the application system, and immediately validate the payment, and then sends a notification of payment have been successful.
5. Payment Data successfully saved and sent directly to the web admin again as proof of payment and booking customers successful.
6. The system sends payment data managed on customer applications so customers know that the payment was successful and soon came to the Cafe.

2.3.3 Business Process Analysis Submitted

Business process analysis to discuss the grooves on the process of the application. This Berkut flowchart of the flow occurring.



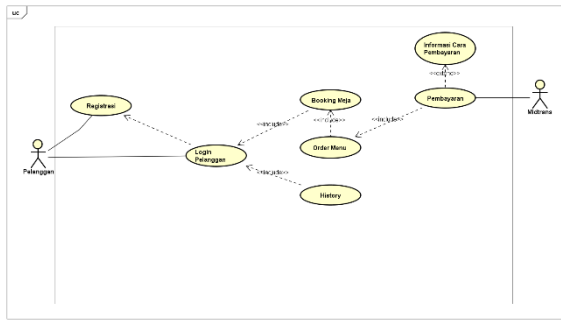
Picture 4, Business Process Proposed Flowchart.

Here's an explanation of Proposed Business Process Flowchart.

1. Customers will have to fill form data reservation booking beforehand in the form of the number of people, date, and time of booking. Furthermore, the system is directed customers to choose menus that exist in the Cafe.
2. The system will process the result of input from customers and will feature a total payment to be paid by the customer. The system also displays a payment option to customers.
3. Customers make payments according to the selected payment method.
4. In this case the system will validate Midtrans related to payments made by customers. If there are any validation, the system will give a message to the customer to do a reissue with a specific reason. If the validation is correct, the system will display a message that the transaction is successful and subscribers can set off to Cafe on schedule booking.

2.3.4 Use Case Diagram

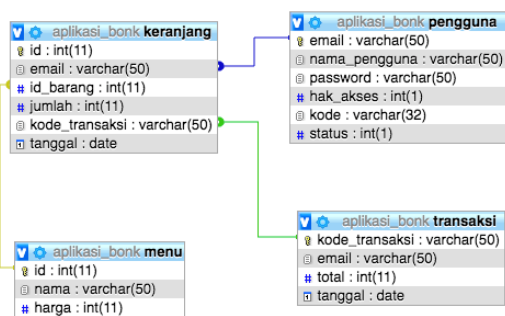
Use CaseDiagram is a model diagram UML (Unified Modeling Language), which serves to illustrate the functional agreement that is expected of a system. Here is a use case diagram of the deal of functionality that will be created on the system.



Picture 5, Use Case Diagram.

2.3.5 Relation scheme

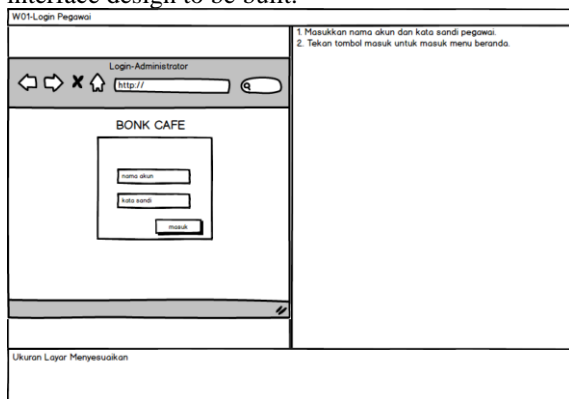
Relationship scheme is a relationship between the tables used in the database to be used. Here is a picture of the relation scheme is used.



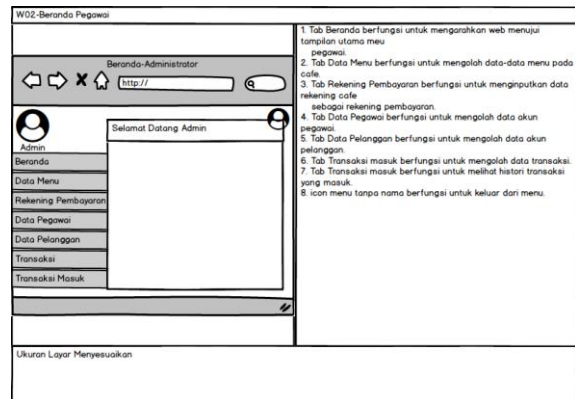
Picture 6, Relation Scheme.

2.3.6 Designing Web Interface

The design of the web interface made to design the look of the application before it is built, designed to illustrate the application of which will be built. Here is a picture that describes the application interface design to be built.



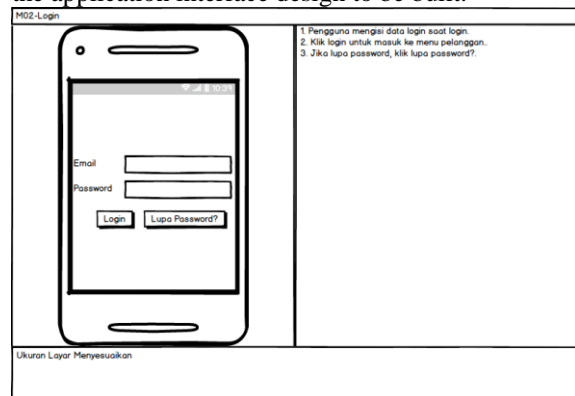
Picture 7, Designing Web Interfaces Login.



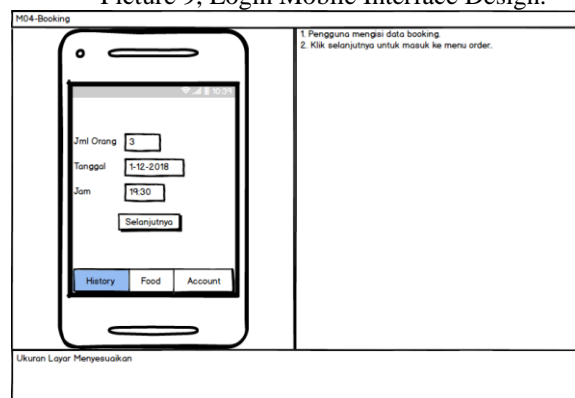
Picture 8, Designing Web Interfaces Home.

2.3.7 Mobile Interface Design

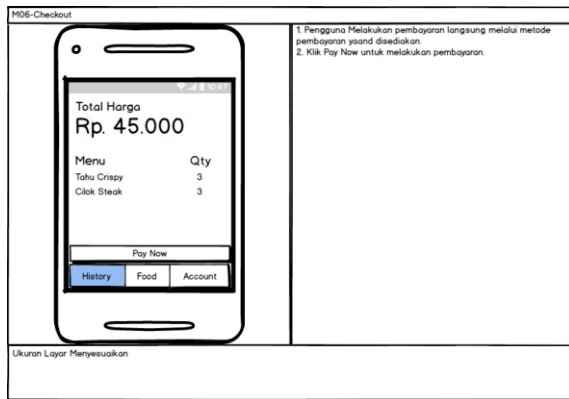
The design of the interface on the mobile undertaken to design the look of the application before it is built, designed to illustrate the application of which will be built. Here is a picture that describes the application interface design to be built.



Picture 9, Login Mobile Interface Design.



Picture 10, Booking Mobile Interface Design.



Picture 11, Interface Design of Mobile Checkout.

3. COVER

Cover is an explanation of the conclusions which contains the results obtained after doing an analysis and design phases of the application development in Bonk Cafe. And there are some suggestions for further research better.

The conclusions and recommendations obtained from the results of this study are:

3.1 Conclusion

Based on the results the design is made, then the system design bonk reservation at the cafe is in conformity with that expected for further implementation of the design has been made.

3.2 Suggestion

As for suggestions that can be given of the construction of the system that has been created for further development of the system, namely:

1. There are recommendations favorites menu, favorites menu can be seen from how often the menu was in order by the customer.
2. Can be developed in addition to the android platform so that more customers can use this application.

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