

Design and Implementation of Ordering and Payment Information System at Aisya Catering Surabaya

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Abstrak—Aisya Catering merupakan usaha yang berfokus pada jasa tata boga di Surabaya dan sekitarnya. Selama ini, proses pemesanan tercatat dalam pesan-pesan Whatsapp dan formulir Google, kemudian direkap ulang dalam bentuk spreadsheet. Aisya Catering ingin mengembangkan proses pemesanan tersebut dan memberikan kenyamanan bagi calon customer serta pihak Aisya Catering sendiri dengan dibuatnya sistem jika pesanan dari customer dapat langsung masuk ke sistem tersebut dan dapat dilihat statusnya dengan mudah dan rapi. Organisasi menganggap jika hal ini akan lebih terorganisir dan memudahkan proses bisnis yang telah ada. Sehingga, penelitian ini diajukan untuk membangun Sistem Informasi Pemesanan dan Pembayaran Aisya Catering Surabaya, kemudian dapat digunakan oleh Aisya Catering Surabaya guna menunjang proses bisnisnya agar lebih optimal. Sistem ini menangani dua proses utama yakni proses pemesanan dan proses pembayaran. Pembuatan sistem ini terbagi menjadi lima tahap yang berpedoman pada SDLC, yakni tahap pertama identifikasi kebutuhan melalui wawancara guna mendefinisikan permasalahan yang ada, tahap kedua analisis permasalahan dan kebutuhan sistem dengan membuat Document Flow Diagram (DocFlow) dan Fishbone Diagram, tahap ketiga mendesain sistem baru dengan menggunakan Diagram Jenjang dan Data Flow Diagram (DFD), Conceptual Data Model (CDM) yang menghasilkan 8 entitas dan Physical Data Model (PDM) yang menghasilkan 10 tabel, kemudian dilanjutkan dengan membuat desain form input dan output, tahap keempat adalah menyesuaikan desain sistem dengan alur kerja sistem yang tergambar pada flow chart serta mengimplementasikannya ke dalam program berbasis web dengan framework Laravel 8.14, dan tahap terakhir adalah menguji coba sistem tersebut. Berdasarkan hasil implementasi dan uji coba sistem, maka Sistem Informasi Pemesanan dan Pembayaran pada Aisya Catering Surabaya telah sesuai dengan kebutuhan fungsional pada proses pelaksanaan uji.

Kata Kunci: Pemesanan, Pembayaran, Sistem Informasi, Desain, Catering

Abstract—Catering is a business that focuses on catering services in Surabaya and its surroundings. So far, the ordering process has been recorded in Whatsapp messages and google form, then re-recorded in spreadsheet. Aisya Catering wants to develop the ordering process and provide convenience for potential customers and Aisya Catering itself by creating a system where orders from customers can be directly entered into the system and the status can be seen easily and neatly. The organization considers that this will make existing business processes easier and organized. Thus, this final project is proposed to build an Order and Payment Information System for Aisya Catering Surabaya, then it can be used by the organization concerned to support its business processes to be more optimal. This system handles two main processes as the title suggests: the ordering process and the payment process. There are five stages through the development of building Aisya's system based on SDLC. Firstly, knowing the needs by interviewing stakeholders to define the existing problem. Second, analyze the existing system problem and its new requirements with the help of Document Flow Diagram (DocFlow) and Fishbone Diagram. Third, design the new system using Tier Diagram (HIPO Diagram) and Data Flow Diagram (DFD), Conceptual Data Model (CDM) produces 8 entities, Physical Data Model (PDM) generates 10 tables in total, then process with designing input and output forms. Fourth, adjust the system design workflow illustrated in flowcharts, and implement it into a web-based program using Laravel 8.14 framework. And the last stage is testing the system program. Based on the implementation and testing results, the order and payment information system for Aisya Catering Surabaya has been in accordance and met with the predefined functional requirements of the testing process.

Keywords: Ordering, Payment, Information System, Design, Catering.

1. INTRODUCTION

Aisya Catering which is located on Jl. Kebonsari 3 No. 28 Surabaya is a business that focuses on catering services, most of whose customers come from government agencies in Surabaya and has begun to penetrate the general public in recent years. Aisya Catering provides various types of catering services that can be categorized into several packages, namely: Covid-19 Packages, Wedding Packages, Government Packages, Corporate/Factory Catering Packages, Tumpeng Delivery Packages, Snack Box Packages, Rice Box Packages, Aqiqah Packages, Packages Ramadan, Eid Packages, and Special Packages.

In the business process, old customers usually directly contact via Whatsapp or make a direct call to the business owner or his wife. Customers can also come directly to the office to place an order, or place an online order on social media networks, e-markets, and websites that already exist and are managed by the admin.

The use of social media is targeted and is more often used among housewives, the MBIZ e-market is used as a means of ordering among government agencies on the instructions of the Governor, while the existing website is used as a media for promotion and existence to the wider community through search engines[1].

Orders received must also be in accordance with existing resources, manpower, and capabilities/availability, so that in the order it is necessary to recheck both parties between the customer and the catering party. Aisya Catering Surabaya has four admins, then the owner, and his wife who manages many orders, with many ordering sources as already mentioned. Several times there have been ordering errors from existing procedural loopholes, namely, due to being overwhelmed, mis-synchronizing Whatsapp group reports and Google spreadsheets, and miscommunication resulting in incorrect or tucked orders, causing orders to be made suddenly. Also, because the order recording is not neat using Google spreadsheets.

The owner as the resource person wants to develop the ordering process and provide convenience for potential customers and Aisya Catering itself. He hopes that when someone orders, the order is directly entered into the system, and can be seen by the employee who coordinates the ordering process, and the order status can be seen on the MBIZ website easily and neatly. The resource person wants a system to be made that can solve these problems.

Meanwhile, in the payment process, the informants did not have too many obstacles, but with the upcoming system, recording or recording of invoices can be done simultaneously on the system so that checking the data for billing payments can be more effective and well-integrated [2].

Based on the problems described above, the Aisya Catering Surabaya Ordering and Payment Information System as an optimization of the old website can help the organization's business processes run, both in the marketing function, in particular optimizing orders and payments that are directly involved with customers [3].

Based on the background description above, the problem can be formulated as follows: how to design and build an Order and Payment Information System at Aisya Catering Surabaya that meets the client's functional needs? The purpose of this research is to design and build an Order and Payment Information System at Aisya Catering Surabaya following the results of the problem analysis that has been carried out in order to meet the client's expected needs and document it in the Final Project report. The benefits that can be obtained from the existence of an Order and Payment Information System at Aisya Catering Surabaya are the ordering and payment business processes can overcome the existing problems, make it easier for prospective customers to place orders and payments without the need to come to the office, and make it easier for the admin to check customer orders and payments [4].

The scope limitations in the Ordering and Payment Information System at Aisya Catering Surabaya are as follows: First is order process, in this process, the orders served by the transaction are the following packages: Covid-19 Packages, Government Packages, Tumpeng Delivery Packages, Snack Box Packages, Rice Box Packages, Aqiqah Packages, Ramadan Packages, Eid Packages, and Special Packages; Further explanation can be found in the system analysis chapter, sub-section of packages [5]. Orders are made half-manual, half-system, all orders that come must wait for admin confirmation in advance whether they can be accepted or not, and are not automatically canceled if they pass a certain period of time [6]. The admin will make sure by contacting the customer via Whatsapp before the order is processed further through the system. Admin confirmation is most effective during business hours, no later than tomorrow morning if the order was made yesterday outside of working hours. Second is payment process, in this process, payments can be made several times, with or without a down payment, as well as cash or transfer. Payments are made half-manual half-system, proof of payment will be entered into the system then wait for admin verification [7]. The system will store customer payment information for the order. Third is authentication process, the authentication process in question consists of logging in, registration, forgetting password, and resetting password [8]. Fourth is data master management process, in the data master management process in question is user management, product categories, products, product galleries, blogs, then personal profile management.

2. RESEARCH METHODS

2.1 System Requirements Identification and Analysis

The requirements identification is carried out to obtain data and information related to the current ordering and payment system in order to identify existing problems. The techniques used in the identification of needs in this study are as follows [9]:

1. Interviews: Conducting interviews with business owners and related employees.
2. File study: Studying documents related to ordering and payment systems that have been used so far.
3. Observation: Conduct direct observations to find out the procedures for ordering and paying organizational activities.

The data that has been collected is then analyzed and then formulates solutions to solve existing problems. In this stage, the document flow is described in DocFlow, while the problems found are described with a fishbone diagram. Analysis of functional requirements will be formulated based on the fishbone diagram [10].

2.2 System Design

At the system design stage, the new system will be described in the form of diagrams, namely: level diagrams, Data Flow Diagrams (DFD), Conceptual Data Models (CDM), Physical Data Models (PDM), and input output designs [11]. These diagrams and designs are used as a reference in system development [12].

2.3 System Implementation

At the system implementation stage, the results of the design are implemented by coding the program using a framework [13], namely Laravel 8.14, and web programming languages such as PHP, HTML, CSS, and JQUERY [14]. While the DBMS used is MySQL. This implementation will be explained graphically using a flow chart.

The result of the system development stage is an application that can be run [15].

2.4 System Testing

At the system testing stage, testing is carried out using the black box testing method which will test the system's functionality. The result of this stage is in the form of a test case [16].

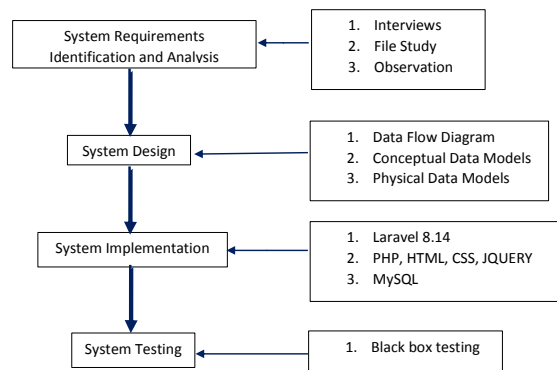


Figure 1. Methodology Chart

3. RESULTS AND DISCUSSIONS

In this section, the results of each stage of the research and discussions will be explained:

3.1 System Requirements Identification and Analysis Results

a. Ordering Process

The ordering process is a process where the admin receives orders from customers via social media Whatsapp, Facebook, and Instagram, then via the website, telephone, or offline, namely coming to the office.

Online orders will be directed and served via Whatsapp effectively during working hours/operational hours. The admin will greet by sending a WA Order Format to be filled in by the customer, also ensuring that the customer follows the instructions given. Furthermore, the WA Order Format data that has been filled in will be forwarded to Aisya's order group which contains all office employees. Another admin from the ordering team will recap the WA Order Format data that has been filled in from the WA booking group and the data on the Google Form (booking form spreadsheet) into a new spreadsheet containing daily order data ("harian" spreadsheet).

While for offline orders, services and consultations are during working hours. Most customers who come offline require further consultation, for example, a consultation for bring your own souvenirs that is included in the catering package.

On D-1, the admin will confirm to the customer the order made, whether it is appropriate or not, effectively during business hours, and the confirmation is the latest on the next day. Making orders, replacements, cancellations can be made no later than the day before, namely at 16.00 before shopping for catering materials. The recap of the order will be printed, and the material needs recorded, closing at 16.00. If the materials have been purchased but there is a sudden change, it will be resolved amicably.

b. Payment Process

The payment process is a process where all forms of customer payments via transfer will be compared with account mutations, verified whether a number of bills have actually been paid, and the

payment history is recorded on a daily spreadsheet, and cash payments will be recorded directly on a spreadsheet “harian”. This task is carried out by the payment team from the Finance Department. The admin team will bridge the payment from the customer to the payment team, then forward the remaining billing information to the customer, usually on D-1.

The bill will be notified to the customer at the beginning of the order. Usually, the customer will agree on a payment method, for example it will be paid on the date after the funds are disbursed, paid through the bank, or other such agreements. This will also be confirmed to the customer on D-1 if the customer has not made a payment.

Customers who pay will be given a red copy of the payment note if it has not been paid off as proof of temporary payment, and white copies if it has been paid off, usually included at the time of delivery. Data proof of payment will be provided if requested.

Data proof of customer payment via transfer will be forwarded by the admin to the WA group for order payments, accompanied by a description of the customer's name and order date. The purpose of adding captions is to make it easier to record into “harian” spreadsheet.

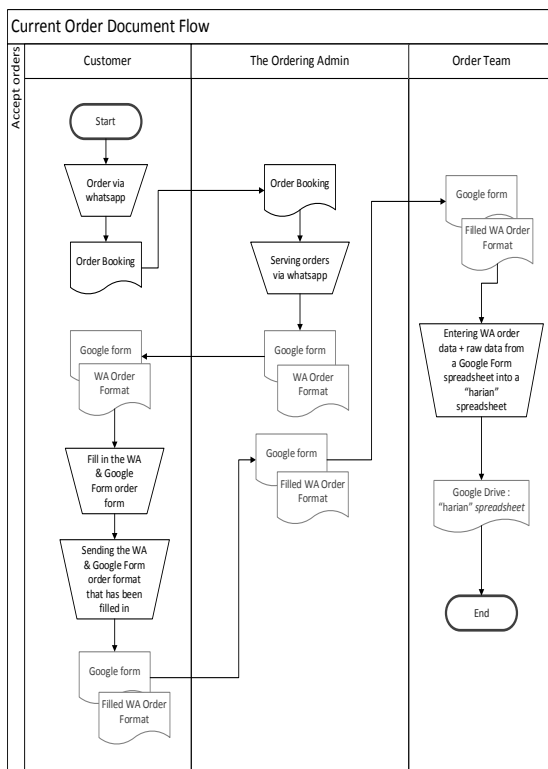


Figure 2. DocFlow Accepting Order

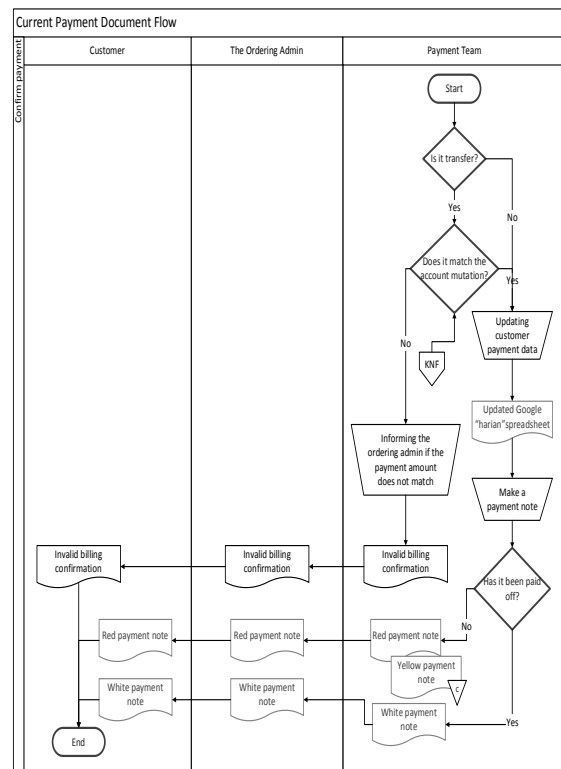


Figure 3. DocFlow Payment Confirmation

The diagram above is a workflow depicted in DocFlow and focuses on moving documents. It can be seen in Figure 2 and Figure 3 that the same document, namely the “harian” spreadsheet document, is the center for customer ordering and payment information.

c. Requirements Analysis

Based on the information collected, the problems found are described by a fishbone diagram which can be seen in Figure 4 with the following description:

1. Ordering process

In the ordering process, most of the communication is via Whatsapp. Customers who place orders via other social media will still be directed to use Whatsapp.

When placing an order for the first time, the customer will be asked to fill in the Google Form and the WA Order Format. Not infrequently, because the flow is ineffective, namely from WA, entering the Google Form, then returning to WA and filling in the WA order format, some customers do not adjust to the existing format so that sometimes burdens the admin, in the sense that some of these customers skip filling Google Forms. Meanwhile, according to the admin himself, the Google Form (Order Date Booking Form) is used to anticipate so that orders are not missed.

In addition, customer order data is prone to being out of sync or slippage because the data is not centralized, i.e., the data is spread out on the personal line of admin-customer, admin-order group, wedding admin-group, Google form result spreadsheet, then daily spreadsheet, in another sense processing the data.

2. Payment process

In the payment process, the organization stated that there were no problems, but the authors found that customer payment data was prone to errors due to wrong implementation in the organization's use of Google Drive spreadsheets. The spreadsheet used for billing payments and recording payment history is the same spreadsheet used for recording orders which is "harian" spreadsheet. This means that in a single worksheet, an admin with edit rights can change the column that someone from the payments team is responsible for editing, even if the history is recorded. Vice versa.

3. People

In practice, from the HR side, the admin manually recaps the customer order items, namely data from the WA group to the daily Google spreadsheet. In a sense, this process is still too long and can be optimized. In addition, because the data is forwarded through Whatsapp and the process of inputting and calculating payment data on the spreadsheet is still manual inputting prices and the total bill paid there is a human error gap that can also be optimized.

4. Promotion

Despite having two websites, both are still static. So, as stated in the background, order items are not automatically entered into the system, and besides that product search is less than optimal. Then, from the two sites, in terms of function, there is not much difference, in terms of design, it is still fairly monotonous.

The above problems when combined will result in a conclusion that is the need for Aisya Catering Surabaya's Ordering and Payment Information System.

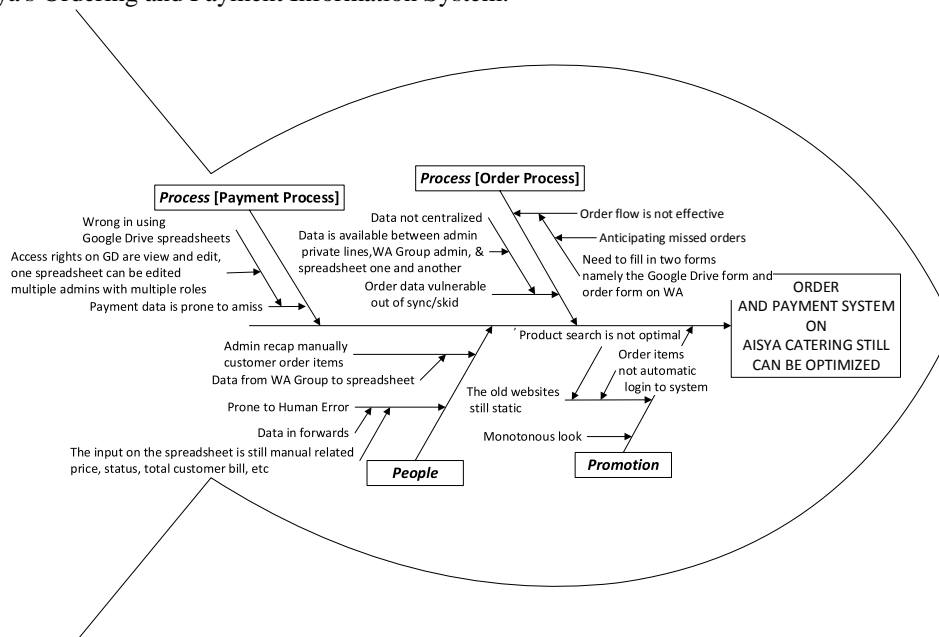


Figure 4. Fishbone Diagram of Aisya Catering Information System

d. Functional Requirements

From some of the problems described above, the solutions offered for the Aisya Catering Surabaya Order and Payment Information System are as follows:

1. The need of access rights

Availability of access rights so that data can be more accountable by parties who have the authority.

2. The need of data centralization

With the new system, data will be collected in one database, which of course ensures data integration. This will prevent data that is prone to asynchronous or slippage from one actor to another.

3. The need of order flow optimization

Customers only need to log into the system, have an account, choose the product they want to order, and fill out the customer order data form before checkout. This customer order data will retrieve customer data—name, address, phone number—that have been stored.

4. The need of human error of the current system can be suppressed
 In the new system, there are no forward-forwards or input errors in calculating the total customer invoices, ordering inputs, and so on.
5. The need of order recapitulation can be more optimal
 Admin can check order data directly on the system, can also do D-1 recording, and payment data.
6. The need of dynamic website
 Order data is automatically entered into the system. Admins will be faster in recording, searching for data, and when entering data. Customers can also order directly on the system and find out their order information and can search for products.
7. The need of fresh website design
 In the new system the design is made as close as possible to the old website, with some adjustments. It is hoped that with the existing design, the information becomes clearer, and site visitors are interested in placing an order.

3.2 System Design Results

The results of the system design are in the form of level diagrams, Data Flow Diagrams (DFD), Conceptual Data Models (CDM), Physical Data Models (PDM), and input output designs.

The ladder diagram describes the entire process in the system in stages. The level diagram on the Aisya Catering Surabaya Order and Payment Information System can be seen in Figure 5.

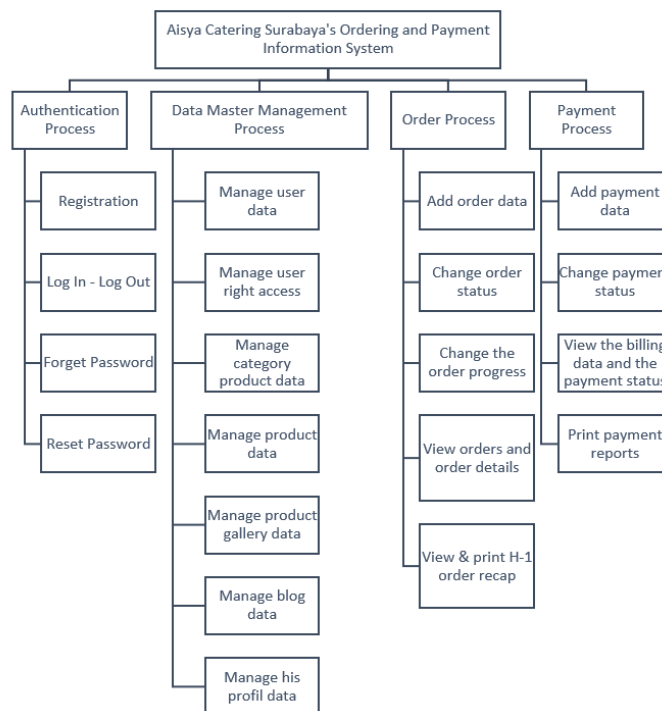


Figure 5. HIPO Diagram of Aisya Catering Information System

The following is a new work process designed for the Ordering and Payment Information System at Aisya Catering Surabaya:

a. Authentication Process

In this process, all users, both admin and customer, are designed to have their own accounts, there are basic information, namely username, email, and password. Customers who want to make independent orders through the website are required to have an account. Therefore, in the implementation there will be a list menu, log in, and forget password and reset password.

Meanwhile, the admin has an account to determine access rights in the system which leads to the implementation of their respective tasks. The assignment and revocation of access rights or user roles is determined by the super admin.

b. Data Master Management Process

In this process, the admin can manage according to their respective access rights. Super Admin can perform user management, and management is carried out by Order Admin, Payment Admin, and Blog Admin. The Order Admin can manage product data and its details, as well as order data from the beginning to the end of the order. Payment Admin can manage customer payment data. While the Blog Admin can manage blog content.

c. Order Process

In this process, the customer enters the web page then selects the product offered to be added to the shopping cart, then fills out the order form and checkout (make an order). Before the product is added to the shopping cart, the customer must first log in.

After the order is made, the customer can view the order record from his account page to monitor the status of the order in question, namely whether it has been confirmed or not by the admin.

The admin will confirm each order, whether it is accepted or rejected, by adjusting the catering resources at the customer's request as well as contacting the customer's Whatsapp whether it is true that the customer made the order. After that the admin can change the status of the customer's order to be accepted. The most effective admin confirmation is during business hours, and no later than tomorrow morning if the order is made a day outside of working hours. Once received, the status of the order can be set as to whether the progress has not been processed, in progress, in delivery, or completed.

When the order has been received and the customer needs to make changes to the order data, then changes to the order data by the customer in the system can only be done if the order progress is still in an unprocessed status. Or the customer can contact the admin via Whatsapp. Changes in ordering data by customers are only customer data that can be contacted, namely the name and telephone number of the customer, information, and order address, as well as the date and time of the order. While the change in ordering from the admin side, the changes in question are changes in the quantity of products ordered and changes in ordering data as on the customer side. A change to an order product means the addition of a new order.

Cancellation of orders by customers in the system can only be done before the order is received by the admin. If it has been received, but the customer cancels 'not so' then the cancellation in question is a re-scheduling by the admin, previously there was confirmation via Whatsapp. For a complete cancellation of the order, this is not explicitly/explicitly allowed, but the system provides an option to return the order status to rejected and the process is completed amicably in accordance with the policies that apply at Aisya Catering. After that the D-1 recap of the order will be printed by the admin at 4 pm for a guide to purchasing the materials needed tomorrow.

d. Payment Process

In this process, the customer can view the billing data and the payment status of each order on their account page. This bill can be paid independently by the customer by transferring to the account listed then adding proof of payment, or paying directly at the office, or with COD, which will be verified by the admin concerned. A white note is received by the customer after payment.

Payment can be made once or several times, the payment method or agreement is confirmed with the admin via Whatsapp on D-1. Payment status can be set whether verified, pending verification, or deferred. The status will be suspended by the admin if the customer's proof of payment does not match the account mutation. So on the customer side, the customer needs to edit the deferred payment by entering the correct payment proof and information. Reports on payment

for customer orders can be printed within a certain period in the selected format, namely: Copy, Excel, CSV, and PDF.

Input design is a design that is used to receive input data that will be stored in the database and will later be used in the transaction process as well as reported output. In the same sense, the output design is the presentation of the input stored in the database. The tools used to do the design are Adobe XD and the plugins, namely: Quick Mockup and Icon 4 Design. Examples of input output designs can be seen in Figure 6.

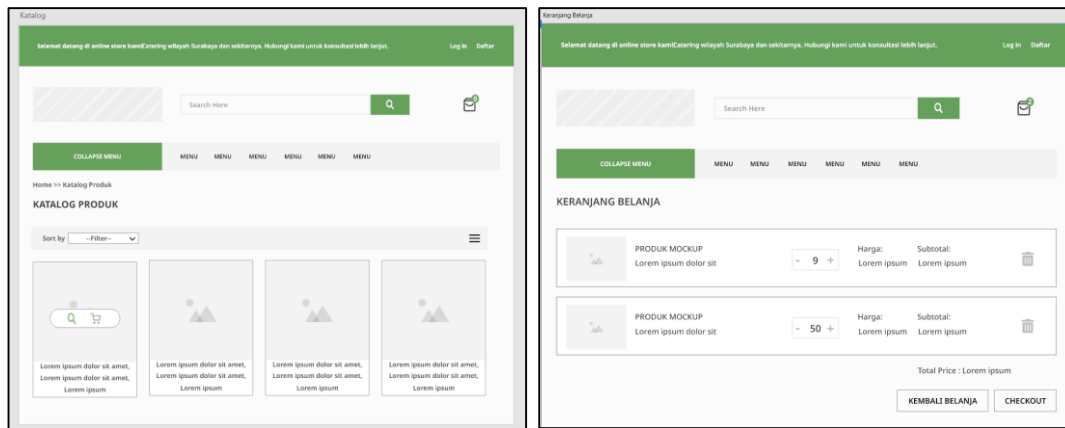


Figure 6. Input Output Design

DFD is a modeling of data flow from actors or entities related to processes running on the system. In a sense, Data Flow Diagram (DFD) is a tool that describes the flow of data until a system is complete, and work or processes are carried out in the system. The term in Indonesian is a data flow diagram. DFD Level 0 Aisya Catering Surabaya Ordering and Payment Information System can be seen in Figure 7.

At DFD Level 0, it can be seen that the system is designed to have four main processes, namely the authentication process, the master data management process, the ordering process, and the payment process. There are also ten data stores for data storage, namely: data store blogs, users, roles, product categories, products, product galleries, orders, payments, role users, and transaction details. Furthermore, there are also five entities or five actors in the system with their respective access rights, namely: customer entity, super admin, ordering admin, payment admin, and blog admin.

The first process, namely the Authentication Process, has 3 data stores (users, roles, and user roles), the five existing entities, as well as input and output data for the registration, login, forgotten password, and password reset processes.

The second process, namely the Master Data Management Process, has 6 data stores (blogs, users, product categories, products, product galleries, and user roles), the five existing entities, as well as input and output data according to their respective roles. Super admin can manage user data, user access rights, personal data, product categories, products, product galleries, and blog data. The booking admin can do all the management done by the super admin, but other than user management, and user access rights. Blog admins can manage blogs and their personal data. Payment admins can manage their personal data. Meanwhile, customers can manage their personal data, and get information related to the products offered.

The third process, namely the Order Process, has three data stores (products, transaction details, and orders), and three entities involved (customers, super admins, ordering admins). Customers can enter order data and order cancellation data and can get output data in the form of information & order confirmation status and order progress. Super admin can manage order data, enter confirmation of order status and order progress, and can get output data in the form of an D-1 recap. While the ordering admin input output data is the same as the super admin.

The fourth process, namely the Payment Process, has one data store, namely the payment data store, connected to four entities (customer, super admin, ordering admin, and payment admin). Customers can enter proof of payment, and receive information on paid status & invoices, and payment verification status.

Super admin can receive customer payment status & billing information, customer payment proof data, and payment reports, and can also enter customer payment data, payment verification status, and input payment reports. The ordering admin can receive status information and customer invoices. While the payment admin input output data is the same as the super admin.

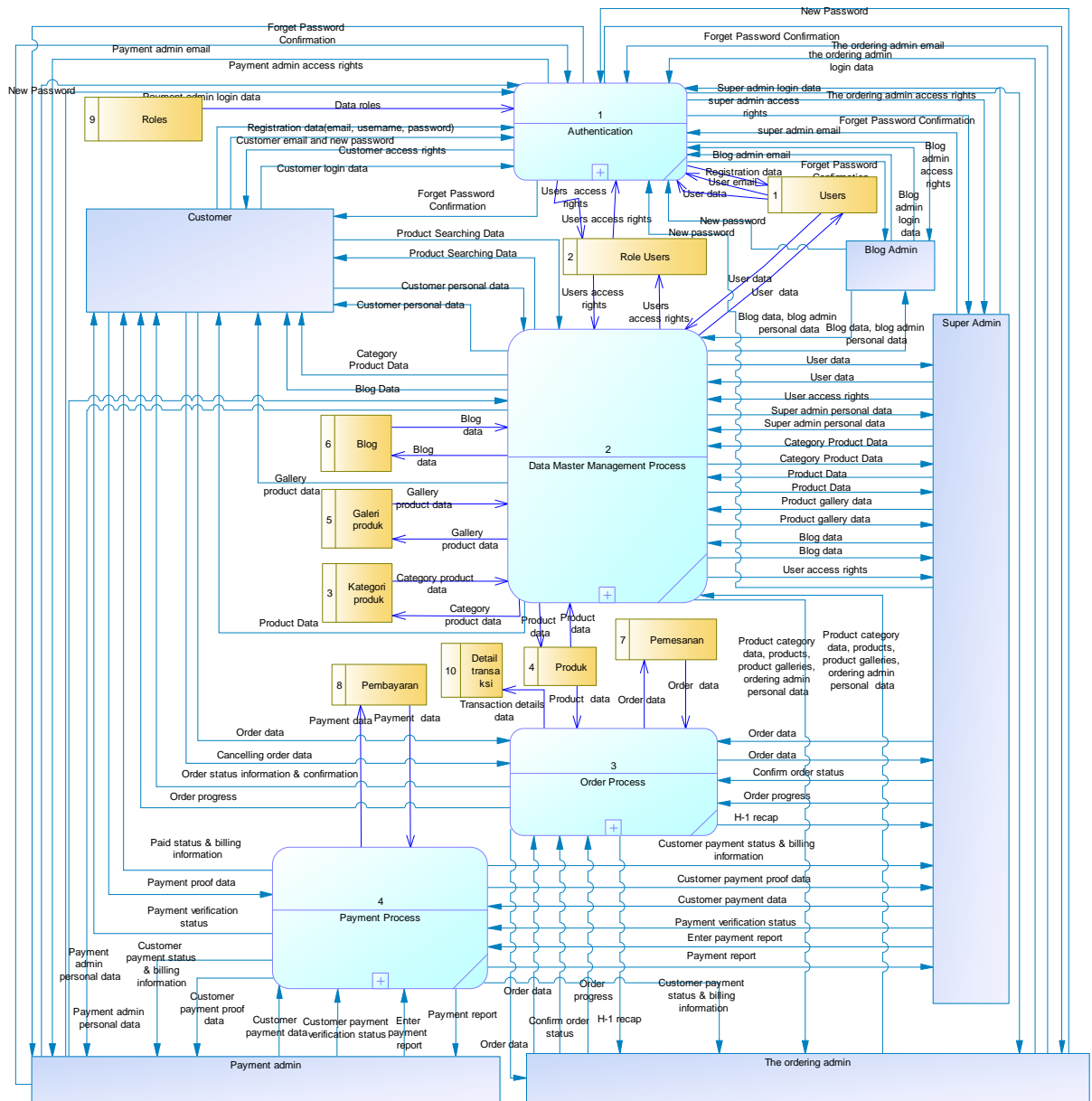


Figure 7. DFD Level 0 of Aisya Catering Information System

Furthermore, the Conceptual Data Model (CDM) is also presented as a logical database model for the identification of entities, attributes, and relationships between entities. There are eight entities, namely: blogs entity, users, roles, product categories, products, product galleries, ordering, and payments. Physical Data Model (PDM) is a physical implementation model on the database that considers the details of the physical implementation and storage structure of the database. A table is a collection of data records that contain information. The CDM logic modeling produces two changes to entities, namely the role users table and the transaction details table in the PDM modeling, along with eight other tables as a result of CDM generated. PDM Aisya Catering Surabaya Ordering and Payment Information System can be seen in Figure 8.

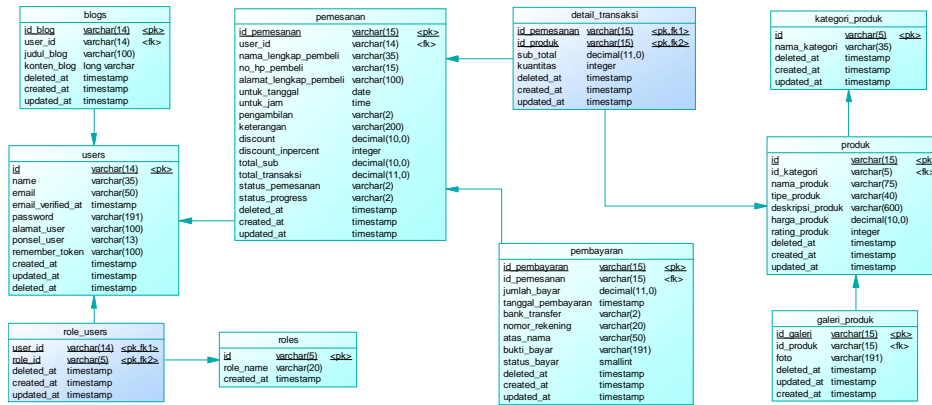


Figure 8. PDM of Aisya Catering Information System

3.3 System Implementation Results

The system implementation is using Laravel 8.14 framework and will be explained graphically using a flow chart. Implementation using Laravel was chosen because it supports the MVC (Model, View, Controller) concept, which is structured and relatively easy to learn, has Eloquent ORM support, has built-in authentication package that is more secure than SQL injection, has a large community support, and has a variety of tools and libraries to facilitate robust application development.

Because this system is designed to have five actors, there are five views of the homepage with a management menu as described at the design stage. The implementation results for these management menus can be seen on the dashboard sidebar of each actor.

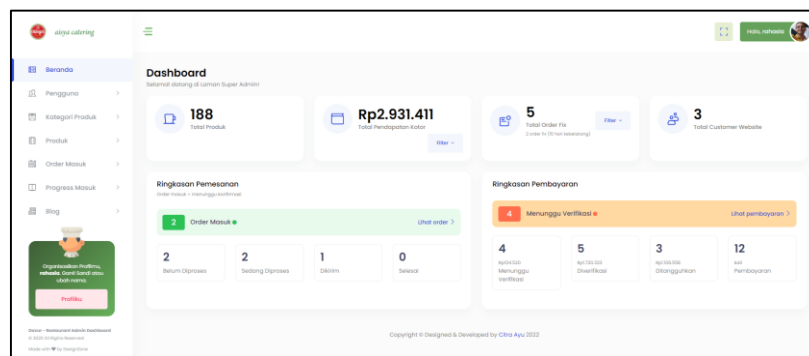


Figure 9. The Super Admin Dashboard

Even though the same page can be accessed by many actors, every action on the view/page has its own access rights according to the system design. For example, the list of payment orders in Figure 18 can be accessed by super admins, ordering admins, and payment admins. But the ordering admin cannot execute the action of changing the status of the proof of payment verification which is not his right. The access rights are constructed in the controller and middleware. The implementation of important functionality in the system can also be seen, among others, in the following display:

The add order page which can be accessed by super admins and ordering admins. Admin fills in customer order data in the form of name, phone number, pick-up method, for date, time, product, product quantity, as well as optional attributes, namely address, description, and discount. If the customer chooses the pick-up method himself, then the address is not required and is rolled up. Discounts are divided into two, namely in percent and in rupiah, and you can only choose one. The selected discount column will be active if the discount option has been selected. The system will immediately calculate the amount paid for the order. If you want to add a product, the admin can press the add row button, and if you want to delete a product, the admin can click on the product row to be selected and click delete row.

Figure 10. Add Order Payment Page – Admin

The add order payment page which can be seen in Figure 10 can only be accessed by super admins and payment admins. Used to add customer payment history to an order. Because it comes from the order ID payment, the order ID has been entered automatically into the form. Then the remaining bill paid will be entered automatically in the amount paid column. Will auto-roll for certain columns if pay cash is selected.

The order request page modal, can only be accessed by super admins and ordering admins. Displays detailed product information that the customer wants to order, along with other ordering information that can be used as a reference in accepting or rejecting incoming order requests. If the order status is waiting for admin confirmation, then the action button is accepted, and rejected. The order status will affect the action button of the three available action buttons: waiting for confirmation (confirm), accepted (accept), and rejected (reject). In addition to the action button, at the very bottom right corner there is a close button to close the modal.

The order table page for orders that can only be accessed by super admins, ordering admins, and payment admins (limited). Loads a list of received incoming orders, with attributes: order ID, order for date, order name, progress status, payment status, and actions that include downloading the invoice, viewing the payment details page for the order, and viewing the details of the order. If the order is still in progress and has not been processed, there will be additional action, namely: edit order. Because it is designed using datatables, certain columns besides the action column can be sorted in ascending and descending order, the admin can also search for orders received in the search column and manipulate tables using pagination. In addition, above the table there are additional filter buttons based on the progress status of orders received, to make it easier for admins to find which orders have not been processed, are being processed, are in delivery, or have been completed; as well as filters based on order payment status, which will make it easier for admins to identify customer payments on the order whether it has been fully paid or not fully paid, as well as verification information on each payment, namely whether it has not been verified or has been verified. For example, if a customer pays twice, the verification status of the two payments will be shown, as well as a description of whether with the two payments the customer has paid the bill in full. Further information about the paid status will be available on the order payment details page. There is also a search field for orders received based on the date of the day of the order. Super admin and ordering admin get full access to use this page, while the payment admin can only perform three actions, namely: viewing the table, performing a table search and pagination, and pressing the customer payment detail link on the order, while using other buttons on the order. this page, payment admin access will be denied.

The order payment table page that can only be accessed by super admins, orders admins (limited), and payment admins. Loading a list of customer payments for a specific order, with attributes: payment ID, payment status, payment method, proof of payment, amount paid, date paid, account number, on behalf of, date created, date updated, and actions that include dropdown button to change payment verification status, view the full proof of payment, and soft delete the payment. If the payment is still in an unverified status, then in the payment details, the nominal is still billed. If the payment is in accordance with the nominal billed, then the payment status is full on the order page received, but not necessarily paid off on this page. Paid status can only be obtained if the nominal payment has fulfilled the bill, and these payments have been verified by the admin. Because it is designed using datatables, certain columns besides the action column can be sorted ascending and descending, admins can also search for payments in the search column and manipulate tables using pagination. Then there is a combined

navigation on the action card which has link buttons with the add payment function on the order and see the payment trash can. The add payment button will not appear if the order status is fully paid. The super admin and payment admin get full access to use this page, while the booking admin can only perform two actions, namely: viewing the page, and performing a search and pagination of the table, while for using other buttons on this page, the booking admin access will be denied.

Next is the display of the implementation of important functionality on the customer panel. Some of the views are self-explanatory to describe the functionality. Product grid, customers can directly add products to their shopping cart or view product details.

A checkout page that contains a list of products you want to order and customer ordering information. Displays a list of customer orders along with a summary of information, sorted from above is the most recent order made by the customer. On each order record, there is a button containing a link to the order details page. Customer order details. The order details page contains customer data, product data ordered, as well as other order information such as order status and so on, then there is also payment information and payment history on the order. On this page, customers can edit orders, add payments, edit payments, and cancel orders by pressing the button to the relevant link.

There are flow charts that illustrate how the system works, two of which are as follows: The flow chart for adding a shopping cart illustrates the system flow in the process of adding a shopping cart. The flow chart for adding a shopping cart can be seen in Figure 11. From the flow chart, it can be seen that to add to the shopping cart, the data needed is product data obtained in the product table, with the condition that the customer must log in first before adding to the cart. shopping. If you are not logged in, you will be directed to the login page.

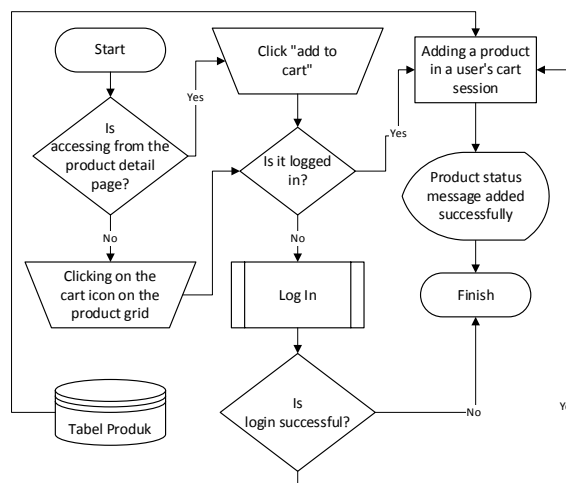


Figure 11. Adding to Shopping Cart Workflow

During the system implementation, ease of development coming by the initial and additional needs can be handled properly credits to the support of the Laravel ecosystem, which can perform the requirements jobs beyond well.

A technical suggestion in further web development is to keep using Laravel because of its capabilities remark, with some improvements that need further attention, such as a security enhancement, applied cookies for SEO which could determine a sales decision, and the needs for ecosystem updates following the plugin support. Some things that can be noted and were not anticipated in advances such as clashes between the appearance of CSS in templates and plugins resulted in some functions not running optimally and even not appearing on web browsers other than chrome. Then the thing of concern is the use of moment.js in this project which there is no further support due to the deprecated version. In addition, something different that can be done next is the use of automated testing in the implementation of the project framework which can cut down the testing process in seconds.

Aside from technical matters, for business features, the case of catering orders also adds to the foresight of authors in auto-scheduled cancellations within a certain timeframe, a more advanced analytical dashboard for sales admin might be considered in the next future linear with the expanses, which could be a note for other developments.

Although there are some obstacles and shortcomings, the project goal is still attained as evidenced by the testing results in the next development phase.

3.4 System Testing Results

System testing is carried out using the black box testing method, to ensure that the important functionality of the system works well and is stable. In the black box testing below, there are two result criteria, namely pass and failed. Pass success criteria is when the expected output or results match the test results. While the failure criteria is when the expected output or results did not match the test results. Tests are carried out per site page, these tests can vary and are tailored to each page, including information, link content, and functionality on that page. Black box testing is carried out by the programmer in the testing phase.

All the tests carried out have met the design and success criteria so that it is said to be pass.

Table 1. Testing Percentage

No	Test Name	Test Completion	Success (%)
1	Admin Panel Testing	43 Test Scenario	100%
2	Customer Panel Testing	15 Test Scenario	100%

One of the most important functionalities in the system is the order checkout process. The results of the order checkout test can be seen in Table 2.

Table 2. Order Checkout Page Test Results

No	Test	Description	Input	Output	P/F
1	Checkout page information	Ensure that product information on the shopping checkout page matches product data from customers	-	The records displayed are in accordance with the user's cart session data	PASS
		Ensure that user information namely name, address, and telephone number on the shopping checkout page matches the user data in the database.	-	The displayed records correspond to the database	PASS
2	Link functionality	Ensure that the link buttons are working properly	Clicking on the link button i.e.: link back to cart	All the link buttons successfully lead to the correct page or function correctly	PASS
3	Order data form	Ensure that the add order form is filled out correctly	Valid format	The form is processed by the system	PASS
			Invalid format	System displays correct format information	PASS
			All mandatory fields filled in	The form is processed by the system	PASS
			There's a mandatory fields that's not filled in	The system displays the required column information	PASS
			Selecting the "take it yourself" field	The system scrolls the delivery address	PASS

No	Test	Description	Input	Output	P/F
			in the pick-up column	field to hide it	
4	Add order functionality	Ensures that the order data that matches the validation on the controller is successfully stored in the database.	Enter the correct order	The system displays the status if the order data has been added success-fully	PASS
		Data validasi: 'cariuser' => ['required', 'max:35'], 'nomor_telp' => ['required', 'max:13'], 'optionkirim' => ['required'], 'untuk_jam'=>['required'], 'untuk_tanggal' => ['required'], 'alamat_lengkap' => ['max:100'], 'keterangan' => ['max:200'],	Enter the wrong order that doesn't match the validation	The system displays an error status if the addend fails because the input does not match certain validations	PASS

4. CONCLUSION

From the results of the discussion of the Aisya Catering Surabaya Order and Payment Information System, it can be concluded that:

1. The Aisya Catering Surabaya’s Order and Payment Information System can fulfill its initial purpose, namely: automating incoming orders, so that orders from clients can be recorded directly by the system, to improve the efficiency of business processes that have been carried out so far. In addition, this system also answers problems based on the fishbone diagram that has been described previously, namely in terms of process, people, and promotion.
2. Aisya Catering Surabaya’s Order and Payment Information System can be useful in facilitating the ordering and payment process by being done anywhere without having to come to the office. In addition, it can make it easier for the admin to check customer orders and payments.
3. The making of this system is divided into five stages guided by the SDLC, namely the first stage of identification of needs through interviews to define existing problems, the second stage of problem analysis and system requirements by making Document Flow Diagrams (DocFlow) and Fishbone Diagrams, the third stage of system design The new model uses a Tier Diagram and Data Flow Diagram (DFD), Conceptual Data Model (CDM) which produces 8 entities and Physical Data Model (PDM) which produces 10 tables, then proceeds to design input and output forms, the fourth stage is to adjust the design. a system with a system workflow depicted on a flow chart and implementing it into a web-based program with the Laravel 8.14 framework, and the last stage is testing the system.
4. The Order and Payment Information System at Aisya Catering Surabaya is now limited to a previously defined scope of problem boundaries. In the future, the author suggests that this system be developed further so that it can cover the entire business process at Aisya Catering Surabaya. In addition, improvements to features that already exist within the scope of the current problem can be made to optimize Aisya Catering Surabaya's business processes.

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