



# ASIA PACIFIC UNIVERSITY

## TECHNOLOGY & INNOVATION

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AAPP016-4-2-DEVOPS AND LOW CODE DEVELOPMENT

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**INTAKE** : UCDF2407ICT(SE)

**LECTURER NAME** : AU YIT WAH

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STUDENT NAME	STUDENT ID
VAISHUMITA GANESAN	TP082729
SOFNA A/P PUVINERSAM	TP077015
OOI DE SHEN	TP082688
LEE YEE HENG	TP081443

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# 1.0 Introduction

The problems that are usually experienced by beauty salons using manual appointment booking systems like phone calls, walk-ins and messaging apps are scheduling difficulties, poor communication and inability to monitor the status of an appointment. Such manual processes complicate the effectiveness of such salons to operate their daily activities effectively, particularly during the peak hours.

Usually in a normal salon setting, the customers make appointments and the staff and administration do the confirmation and approvals manually. This method is very reliant on human coordination and is subject to human errors like a booked or a delay in confirmation. There is also poor record keeping, where the appointment information can be distributed in various platforms or document books.

In order to resolve such problems, Beauty Salon Appointment Booking Approval System has been created based on the use of Joget low-code platform. The system offers a centralised digital platform, which enables customers to make requests via the internet to book their appointments, administrators to check and approve their booking efficiently, and staff to handle their bookings effectively. The system also boosts efficiency in operations, transparency and better customer experience as the automation of the appointment workflow records the workflow, thus improving the overall customer experience. According to (Cassandra, 2018), online appointment scheduling systems assist in reducing the workload and enhancing the efficiency of the service.



Figure 1: Beauty Salon Management System Logo

## 2.0 Problem Statements

- **Manual Booking Methods Cause Confusion :** The manual booking network is used by most of the beauty salons in making appointments through use of phone calls, walk-ins, WhatsApp messages and social media. Such practices are not centralised and thus it becomes hard to properly follow the booking resulting in overlapping or lost appointments.
- **Risk of Double Booking and Scheduling Feuds:** In the absence of an organised system, the staff may end up booking a few customers in the same time slot or staff member. The result of this is delays and dissatisfaction and lack of quality service.
- **Lack of Centralised Approval System:** The administrators do not have a single platform on which they can view appointment requests and approve or disapprove them. It complicates the schedules of admins who find it hard to manage schedules and running of the salon efficiently.
- **Delayed or Unclear Confirmation of Appointments to the Customers:** Customers are usually not informed on whether they are approved or not on their appointments. This brings about uncertainty and inconvenience which influences customer trust and satisfaction.
- **Staff Workload and Operational Mistake:** Manual appointment systems augment the workload of the employees and the chances of human errors. This makes the salon management less efficient as it decreases productivity.
- **Poor Visibility and Reporting to the Management:** In the absence of appropriate reporting tools, the salon administrators cannot examine the booking patterns, most demanded services or busiest periods to make sound business decisions.

## 3.0 Objectives

- **To Develop a Centralised Appointment Booking System:** The system aims to provide a single online platform where customers can book beauty salon appointments easily without relying on manual methods such as phone calls or messages
- **To Improve Appointment Approval Efficiency:** The system allows administrators to review, approve or reject appointment requests in an organised and systematic manner.
- **To Automate Appointment Status Notifications:** Customers are automatically informed when their appointment is approved or rejected, reducing uncertainty and manual follow-up.
- **To Increase Customer Satisfaction:** The system will increase customer satisfaction by ensuring there is clear booking confirmation and enhanced communication with the customers. The digital systems also bring with them enhanced customer experience because of quicker and more transparent communication (Ada Global, 2025).
- **To Support Management Decision-Making Through Reports:** The system generates reports and analytics that help administrators monitor booking trends and salon performance
- **To Reduce Manual Workload and Human Errors:** Automation helps minimise scheduling mistakes and improve operational efficiency within the salon

## 4.0 Business Rules

### 1. Users must log in before accessing the system

Customers, staff and administrators are required to log in to ensure secure and controlled access to the system features.

### 2. All appointment requests start with a pending status

When a customer submits an appointment request, it is automatically marked as *Pending* until reviewed by staff or administrators

### 3. A rejection reason must be provided

Administrators are required to give a reason when rejecting an appointment to ensure transparency and clear communication

### 4. Customers are notified of appointment decisions

The system sends notifications to inform customers whether their appointment has been approved or rejected. Workflow automation helps ensure consistent and structured approval processes, cited by (Team Kissflow, 2025).

### 5. Staff cannot be assigned to overlapping appointments

A staff member cannot handle more than one appointment at the same time to avoid scheduling conflicts

### 6. Customers cannot modify appointments after submission

Once an appointment request is submitted, customers are not allowed to edit the details

## **5.0 Assumptions**

### **1. The internet and digital devices are available to the user.**

The system presupposes that all users will be able to use the application with the help of a constant internet connection.

### **2. Employees respond efficiently to requests of appointments.**

It is presumed that the staff will be reviewing and responding to appointments within a reasonable period.

### **3. The salon is under regular business hours.**

The system supposes that the salon will be working 10:00 AM to 8:00 PM on Monday up to Saturday.

### **4. Email messages are received effectively.**

The system presupposes that notification services should be working and messages are received by the users.

### **5. The information on the staff and services is updated.**

The administrators will play the role of ensuring the correct service and staff availability.

# 6.0 Design

## 6.1 System Architecture

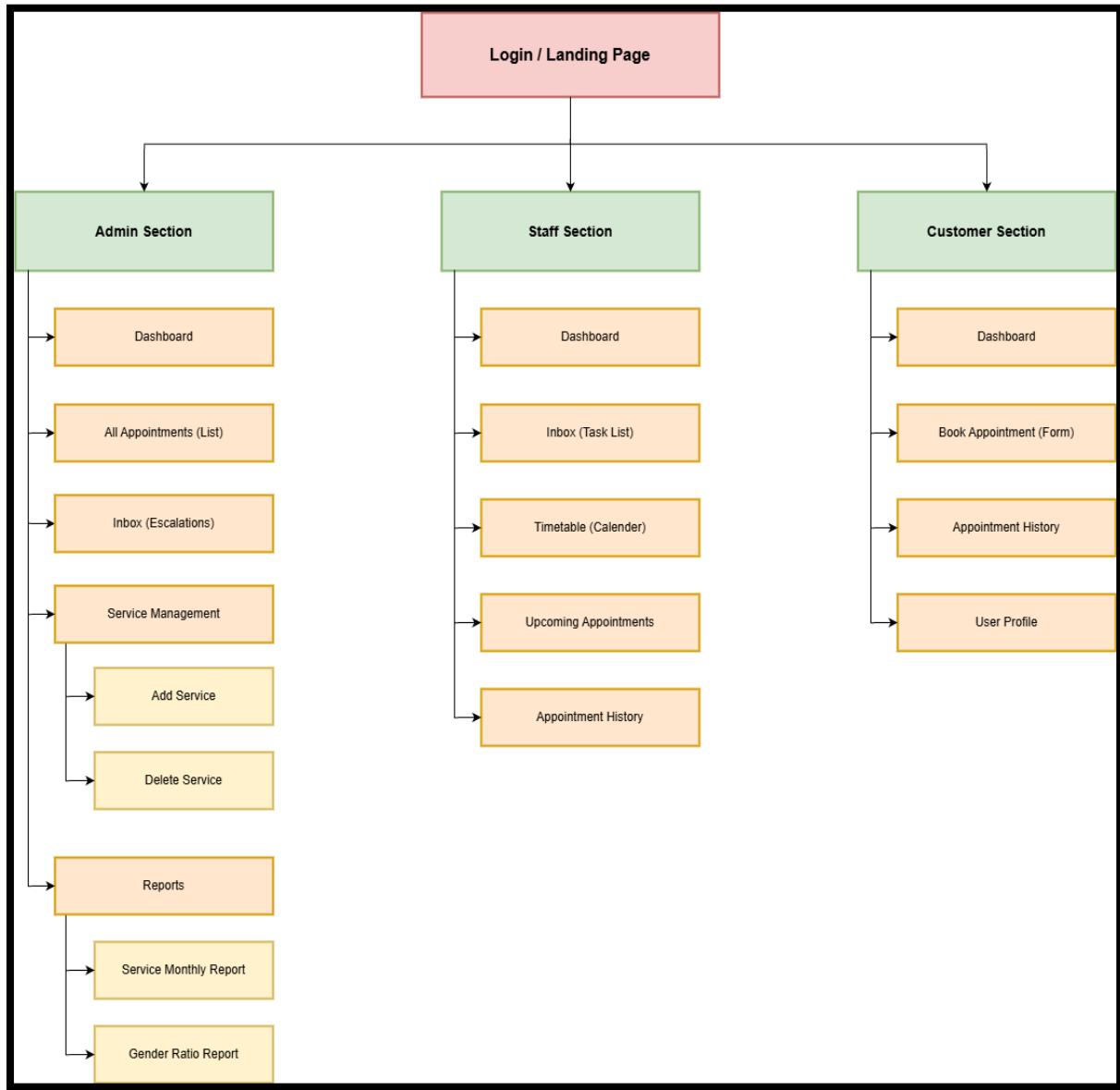


Figure 2: Application Sitemap and Navigation Hierarchy

The overall architecture of the Beauty Salon Appointment Booking and Approval System is created using a Role-based Access Control (RBAC) model to help maintain both security and ease of use for the system. Each role type within the system will have a navigation structure that can be easily understood by the individual based on the specific duties they perform.

- **Customer Interface:** The interface for customers is intended to be easy to navigate and user friendly. A customer has complete access to an appointment request/booking form as well as a viewable list of all appointments made by them, to limit the amount of confusion, and improve ease of use.
- **Staff Interface:** The staff interface is focused on operational efficiency. The primary focus of the staff portal is the inbox, which manages incoming appointment requests and SLA tasks. Also, the staff portal includes the timetable, which allows staff members to manage their daily schedule, and prevent multiple bookings at the same time.
- **Admin Interface:** The admin interface provides the ability to monitor the entire system. Admin users can see all appointment information in addition to system configuration through services management and analytics and reports that assist with strategic planning.

Each separate portal provides a clear distinction in regard to what each user can and cannot do. This limits the number of users who have access to sensitive systems functions, such as deleting services and administrative controls, thus limiting the opportunity for unauthorized users to damage the system and/or alter the data stored in the system.

## 6.2 List of Implemented Features

The application was developed to fully support the operational workflow of a Beauty Salon. It has been organised in terms of User Roles and System Automation to clearly show how much of the system's operational functionality it covers and how deep its technology is.

Key Implemented features include:

Key Features	Description
<b>Secure Login and Role-Based Access Control</b>	Users are required to log in, and the system automatically displays menus and pages based on their role, such as Admin, Staff and Customers
<b>Online Appointment Booking</b>	Customers can submit appointment requests by selecting services, dates and times through an online form
<b>Appointment Approval Workflow</b>	Staff members can approve or reject booking requests. If no action is taken within the defined timeframe, the request is escalated to the admin.
<b>Service Management (CRUD)</b>	Admin can add or delete salon services and these changes are automatically reflected in the booking form
<b>Inbox and Task Management</b>	Staff and admins receive tasks through the Inbox, allowing them to track pending and overdue appointment requests
<b>Reports and Analytics</b>	The system generates visual reports, such as the Monthly Service Report and Gender Ratio Report, to support management decision-making

## 6.3 Workflow and Process Design

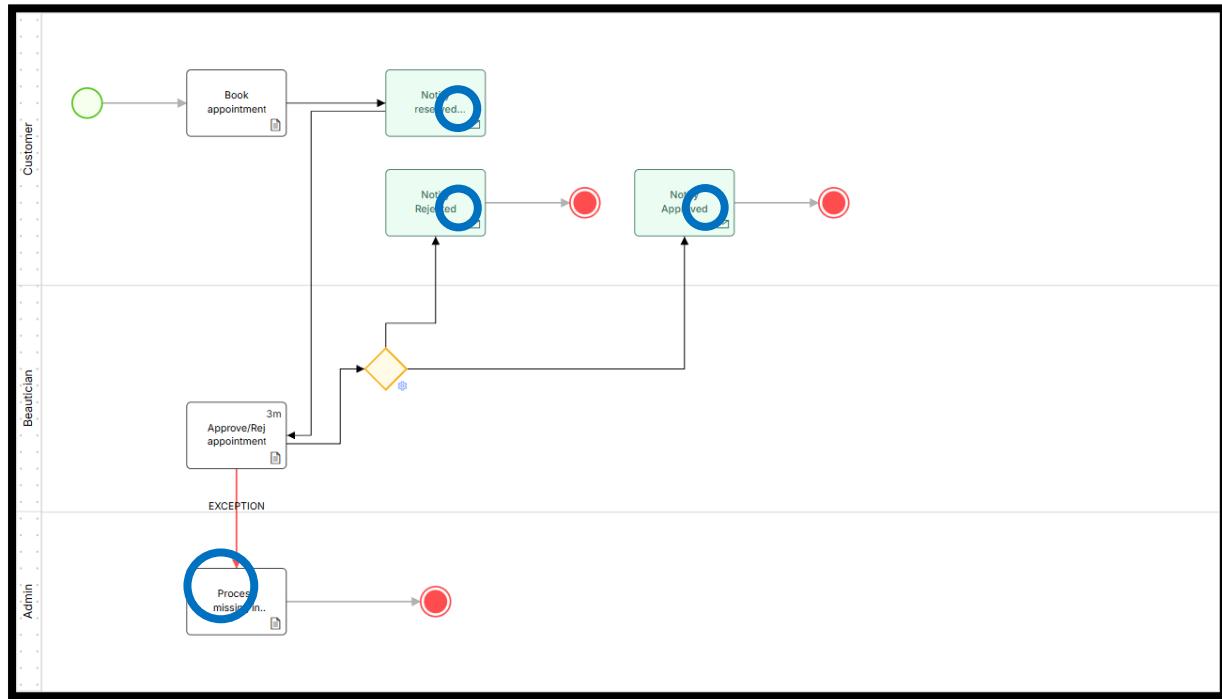


Figure 3: Business Process Workflow and Automation Logic

This diagram shows the complete operational logic of the booking system, which includes the appointment booking system (implemented using swimlanes) that separates the responsibilities between the Customer, Staff, and Admin roles. This design is intended to allow for efficient management of standard bookings with approval and the exceptional circumstances created as a result of delays.

### 1. Standard Workflow (“Happy Path”)

- **Initiation**

The process is initiated by the Customer within their Swimlane when they submit the Appointment Booking Form.

- **Immediate Feedback**

Immediately after the form is submitted, the system will send the "Booking Received" confirmation email to the customer, while at the same time sending the booking request to the Staff swim lane for evaluation.

- **Decision Gateway**

Staff evaluate the customer's booking request and, based on this decision, the system will immediately trigger either a "Booking Approved" or "Booking Rejected"

notification to the customer to inform them of the final status of their booking request as quickly as possible.

## **2. Automated Exception Handling (Innovation Feature)**

- SLA Enforcement**

The 3-min boundary timer event for staff tasks simulates the Service Level Agreement (SLA), as well as ensuring the timely processing of booking requests.

- Escalation Logic**

When staff fail to process the booking request within the allowed time frame, the system triggers an exception flow and redirects the task automatically.

- Admin Intervention**

The booking request will be moved out of the staff's task list into the Admin task list (swimlane) so that no booking request remains unprocessed due to the inactivity of staff, thus keeping the services reliable and providing customer satisfaction.

## 6.4 Form and Data List Design

Joget Form Builder and List Builder will be used for this application in order to manage the data and create a structured format. The design of this application was based on ensuring that the data entered into the forms was accurate and visible to all users.

### 6.4.1 Form Design and Validation Logic

Public Initiation Forms were created for customers, while internal processing forms were developed for employees/administrators.

The screenshot shows a web-based form titled "Appointment Approval Form". The form is divided into two main sections: "Appointment Form" and "Approval".

**Appointment Form:**

- Name: Admin Admin
- Date of birth: MM/DD/YYYY
- Gender: Please select
- Service Type: (dropdown menu)
- Appointment Date Time \*: MM/DD/YYYY HH:MM A
- Contact Number: (text input field)

**Approval:**

- Approval:  Approved  Rejected
- Beautician: Please select (dropdown menu)
- Reason: (text area)

Figure 4: Appointment & Approval Forms

## Key Form Elements and Validation Rules

Form / Field	Input Type	Validation & Logic Applied	Design Rationale
<b>Service Type</b> (Appointment Form)	Select Box (Dropdown)	<b>Mandatory Field</b>	When submitting an appointment request, it uses a dynamic binder to query the "Services Management" database table for the customer's available time slots and only displays those that have not been "ghost booked" (i.e., those services that the customer has reserved but has not confirmed).
<b>Appointment Date Time</b>	Date Picker	<b>Mandatory &amp; Future Dates</b>	Asterisks (*) indicate fields that are mandatory to fill in by the customer. Upon submission of the form, the System will enforce date logic rules; therefore, the customer will not be able to select a previously scheduled appointment.
<b>Approval Decision</b> (Approval Form)	Radio Button	<b>Binary Choice</b>	Radio button ("Approved", "Rejected") options were selected for the status of the employee because they are limited to one response option and will eliminate the possibility of assigning multiple statuses to the same appointment request.
<b>Beautician Assignment</b>	Select Box	<b>Dynamic Lookup</b>	Once the booking is approved, the approver will be given the opportunity to automatically assign a specific employee to the booking.
<b>MIA Reason</b> (Escalation Form)	Text Area	<b>Conditional Visibility</b>	The escalation process is utilised to track when the originally assigned employee failed to fulfil their obligations related to completing the booking. A field in the escalation workflow will provide an audit trail that details why the originally assigned

			employee was unable to complete the booking.
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## 6.4.2 Datalist and View Configuration

To enhance the user experience, different list formats have been developed based on the unique requirements of each operational role. Along with the typical grid view format, Card Views and Actionable lists have also been created to increase usability.

Approval						Appointment Date Time	From	To
Name	Service Type	Appointment Date Time	Approval	Reason	Beautician			
Admin Admin	manicure	2026-01-24 11:00 AM	approved	Reason	Nora			
Admin Admin	manicure	2026-01-24 11:00 AM	approved	Reason	Nora			
Admin Admin	manicure	2026-01-24 11:00 AM	approved	Reason	Nora			
Admin Admin	manicure	2026-01-24 11:00 AM	approved	Reason	Nora			
Admin Admin	manicure	2026-01-24 11:00 AM	approved	Reason	Nora			

Figure 5: All Appointment List

Appointment Date Time				From	To
Name	Service Type	Appointment Date Time	Beautician		
Name	Service Type	Appointment Date Time	Beautician		
Name	Service Type	Appointment Date Time	Beautician		
Name	Service Type	Appointment Date Time	Beautician		

Figure 6: Assigned Appointment List (Card View)

Service	Cost (RM)	Created By Name	
hair dye	200	Admin Admin	<button>Delete</button>
hair dye	200	Admin Admin	<button>Delete</button>
hair dye	200	Admin Admin	<button>Delete</button>
hair dye	200	Admin Admin	<button>Delete</button>
hair dye	200	Admin Admin	<button>Delete</button>

*Figure 7: Services Management List*

### **1. Operational Grid (All Appointment List)**

This view has been designed for use by the administrator. The Operational Grid view allows an admin to see all aspects of their salon operation in one place. Admins can filter multiple columns at once using combined filters; i.e., they can search both by status of approval and date/time range at the same time. This feature is particularly useful for auditing and reporting functions.

### **2. Card View (Upcoming Appointments)**

Instead of a standard table, staff users will utilize a card-based layout. This design decision was made to enhance readability on tablets and mobile devices; staff can quickly review a number of items of interest, including client name, type of service, and scheduled appointment time.

### **3. Direct Action Management (Service List)**

In the Service List for managing services, CRUD functionality has been integrated directly into the list view. The inclusion of an inline Delete

## 6.5 User Interface (UI) Design and Implementation

This section presents the user interface design throughout all the modules of the system. The interface is user-centred and mobile-first, which means that it is easy to navigate and consistent across user roles.

### 6.5.1 Admin Portal UI

The Admin Portal provides a clear visual way for managers to see how their systems are running and use that information to make decisions. Clarity and organisation are key in its design.

#### Admin Dashboard

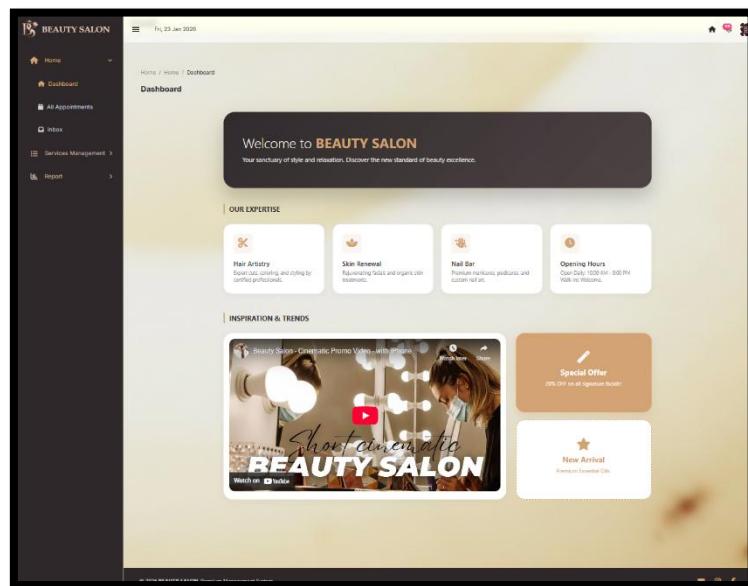


Figure 8: Admin Dashboard

This page is used as the default entry point of administrators and is a combination of navigation as well as operative highlights to provide a structured and informative entry point.

## Admin Escalation Inbox (MIA)

The screenshot shows a table titled "Inbox" with columns: Activity Name, Process Name, Date Created, Service Level Monitor, and Due Date. The data includes various appointment processes with their creation dates and due dates.

Activity Name	Process Name	Date Created	Service Level Monitor	Due Date
Precise missing in action	Appointment Process	23-01-2020 04:39 AM	-	-
Precise missing in action	Appointment Process	23-01-2020 04:37 AM	-	-
Precise missing in action	Appointment Process	23-01-2020 04:30 AM	-	-
Precise missing in action	Appointment Process	23-01-2020 04:24 AM	-	-
Book appointment	Appointment Process	22-01-2020 04:43 PM	-	-
Book appointment	Appointment Process	22-01-2020 04:43 PM	-	-
Book appointment	Appointment Process	22-01-2020 04:43 PM	-	-
Book appointment	Appointment Process	22-01-2020 04:43 PM	-	-
Book appointment	Appointment Process	22-01-2020 04:43 PM	-	-
Book appointment	Appointment Process	22-01-2020 04:55 AM	-	-
Book appointment	Appointment Process	22-01-2020 04:55 AM	-	-

Figure 9: Admin Inbox

The page shows requests at booking that had taken more time than the stipulated SLA. Ideally, this inbox should be clean since the entries portray operational delays that need urgent attention by the administration.

## All Appointment List

The screenshot shows a table titled "All Appointments" with columns: Name, Service Type, Appointment Date Time, Approved, Reason, and Reschedule. The data includes various booking records with their details and approval status.

Name	Service Type	Appointment Date Time	Approved	Reason	Reschedule
Admin Admin	manicure	2020-01-24 10:00 AM	Approved	-	
Admin Admin	facial	2020-01-04 10:00 AM	Approved	-	
Admin Admin	massage	2020-01-12 02:00 AM	Approved	-	
Admin Admin	facial	2020-01-05 10:00 AM	Approved	Alice	
Claire Kent	massage	2020-01-24 10:00 AM	Pending	-	
Admin Admin	facial	2020-01-24 10:00 AM	Approved	-	
Claire Kent	hair wash	2020-01-29 07:00 AM	Approved	Cat Gram	
Alice	hair dye	2020-01-30 07:00 PM	Approved	-	
Admin Admin	facial	2020-01-18 07:00 PM	Approved	-	
Alice	manicure	2020-01-12 10:27 PM	Approved	-	

Figure 10: Admin Appointment List

This page will give a full description of all booking records with the use of both combined filters to ease the auditing of both approvals and rejection.

## Services Management (CRUD)

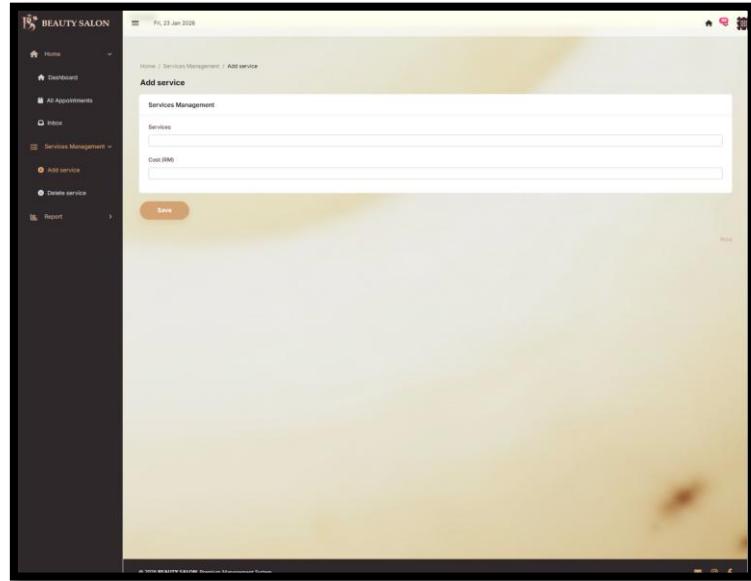


Figure 11: Admin Add Service

A screenshot of the "Delete service" page. The left sidebar is identical to Figure 11. The main content area displays a table of services with columns: Service, Cost (RM), and Created By Name. Each row has a "Delete" button. The table shows eight rows of data: hair dye (cost 200), haircut (cost 80), hair wash (cost 60), message (cost 50), manicure (cost 80), hair spa (cost 100), hair blow (cost 20), and keratin treatment (cost 250).

Service	Cost (RM)	Created By Name	Action
hair dye	200	Admin Admin	<button>Delete</button>
haircut	80	Admin Admin	<button>Delete</button>
hair wash	60	Admin Admin	<button>Delete</button>
message	50	Admin Admin	<button>Delete</button>
manicure	80	Admin Admin	<button>Delete</button>
hair spa	100	Admin Admin	<button>Delete</button>
hair blow	20	Admin Admin	<button>Delete</button>
keratin treatment	250	Admin Admin	<button>Delete</button>

Figure 12: Admin Delete Services

The page is also in control of salon services. Cost fields can also be numerically validated to guarantee the accuracy of the data, and delete operations are directly implemented in rows of the list to enhance their efficiency.

## Analytics and Reports

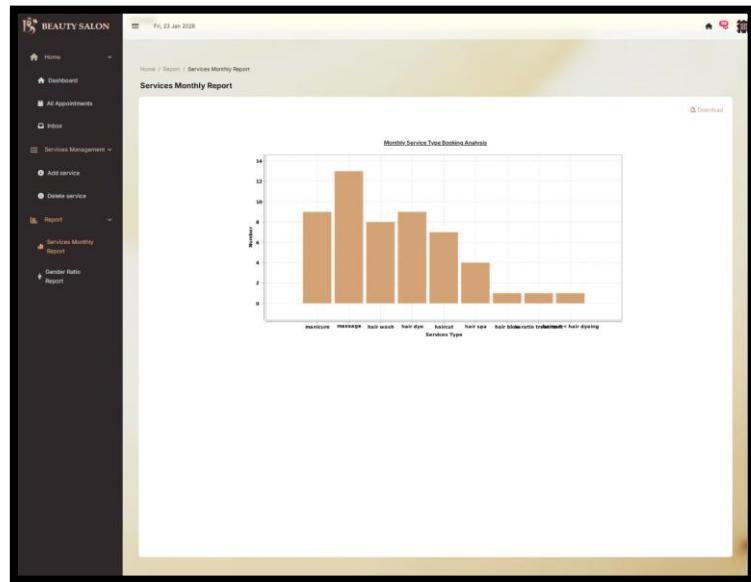


Figure 13: Services Monthly Report

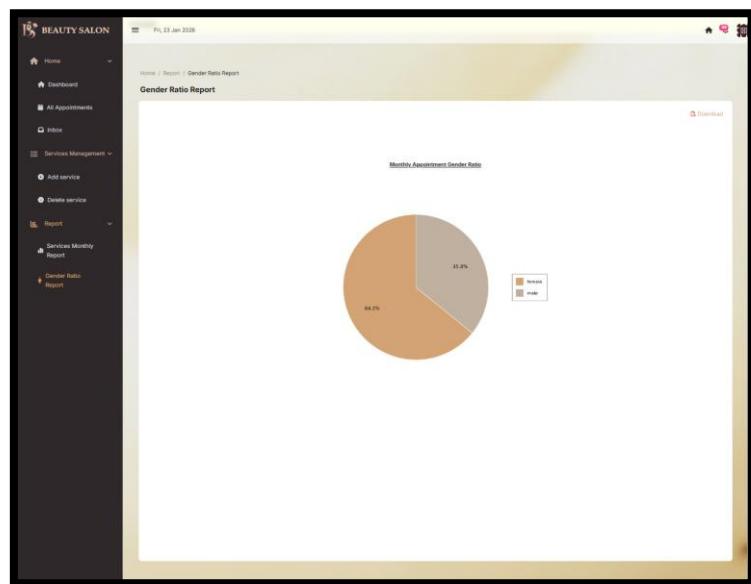


Figure 14: Gender Ratio Report

The page presents visual reports, which are comprised of bar charts on the popularity of services and pie charts on the customer demographic analysis to make informed business decisions.

## 6.5.2 Staff Portal UI

The Staff Portal is only concerned with task management and time visibility.

### Staff Inbox and Approval Form

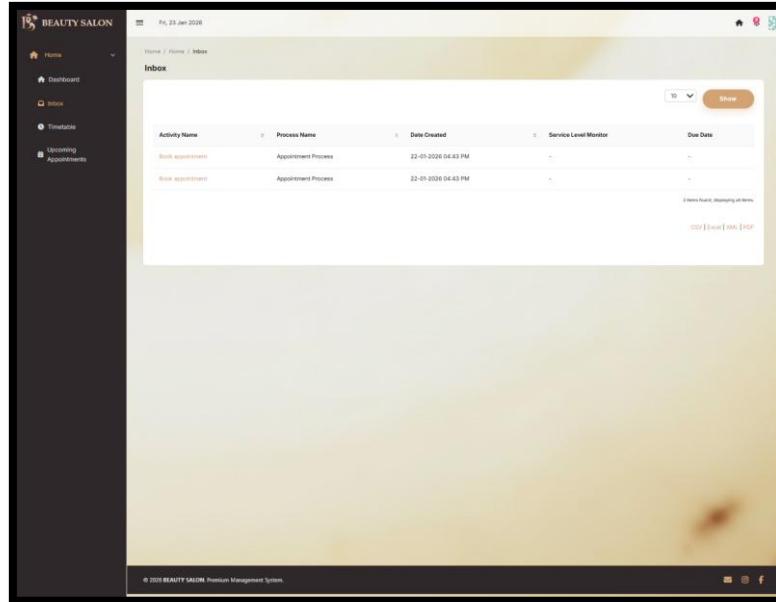


Figure 15: Staff Inbox

Staff members use this page as their working environment. The approval form has radio buttons to impose definite decision making and dropdowns to place the staff in the right position.

## Digital Timetable (Calendar View)

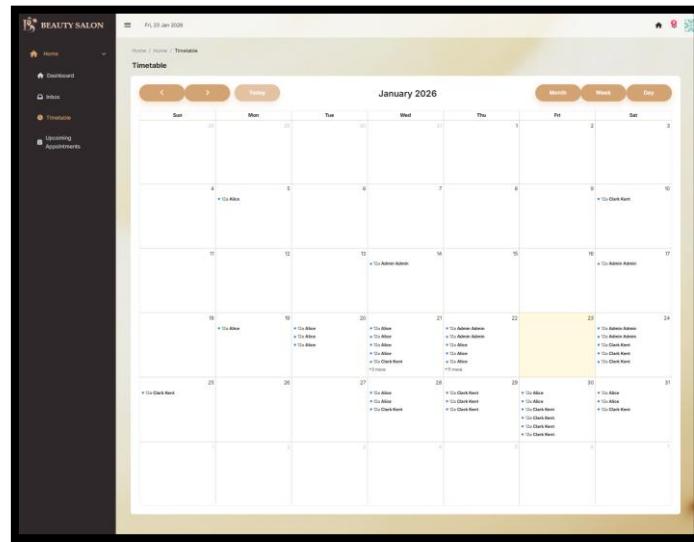


Figure 16: Staff Timetable

The page will give a visual display of bookings, thus enabling the staff to see occupied time slots with ease and prevent any form of scheduling conflict.

## Upcoming Appointments (Card View)

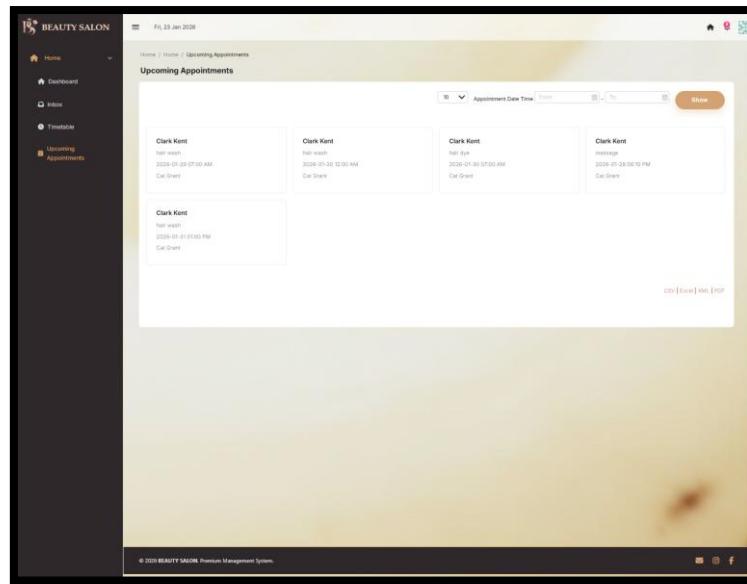


Figure 17: Staff Upcoming Appointments

The layout of this page is in the form of a card to optimise the readability of the devices in the salon, mainly those of mobile and tablet devices.

### 6.5.3 Customer Portal UI

The customer portal is built in such a way that the level of interaction is very small to make the booking process as smooth as possible.

#### Customer Booking Wizard

The screenshot shows a web-based booking interface for a beauty salon. On the left is a dark sidebar with navigation links: Home, Dashboard, Book Appointment (which is highlighted in blue), Appointment History, and User Profile. The main content area has a light beige background. At the top, it says 'FRI, 29 Jan 2020' and shows a breadcrumb path: Home / Book Appointment / Book appointment. Below this is a section titled 'Appointment Process - Book appointment'. It contains an 'Appointment Form' with fields: Name (Clark Kent), Date of birth (MM/DD/YYYY), Gender (Please select), Service Type (dropdown menu), and Appointment Date Time (MM/DD/YYYY HH:MM A). There is also a Contact Number field and a large orange 'Complete' button at the bottom. The bottom of the page features a footer with the text '© 2020 BEAUTY SALON, Premium Management System.' and social media icons for YouTube, Instagram, and Facebook.

Figure 18: Customer Book Appointment

The reservation system is progressive, and it places the personal information, service and appointment date logically. Validation rules are used to avoid invalid bookings, e.g. past dates and service option is dynamically checked with the service list that is managed by the administrator.

## My Booking History

The screenshot shows a web-based appointment history interface for a customer named Clark Kent. The left sidebar includes links for Home, Dashboard, Book Appointment, Appointment History (which is selected and highlighted in blue), and User Profile. The main content area is titled 'Appointment History' and displays a table of appointments. The table columns are: Name, Service Type, Appointment Date Time, Approval, Reason, and Beautician. There are 10 rows of data, with the last row showing a 'pleaseSelect' status. A navigation bar at the top allows filtering by 'Approval' (with options 'All', 'Approved', and 'Rejected') and 'Appointment Date Time' (with 'From' and 'To' fields). At the bottom right of the table, there are download options for 'CSV', 'Excel', 'XML', and 'PDF'. The footer of the page reads '© 2020 BEAUTY SALON Premium Management System'.

Name	Service Type	Appointment Date Time	Approval	Reason	Beautician
Clark Kent	hair wash	2020-01-22 12:00 AM	Rejected	123	pleaseSelect
Clark Kent	hair wash	2020-01-22 03:00 PM	Approved		Cat Grant
Clark Kent	hair spa	2020-01-21 12:00 AM			
Clark Kent	hair wash	2020-01-30 12:00 AM	Approved		Cat Grant
Clark Kent	hair spa	2020-01-22 12:00 AM			
Clark Kent	hair wash	2020-01-22 12:00 AM			
Clark Kent	hair spa	2020-01-29 12:00 PM			
Clark Kent	hair dye	2020-01-30 11:00 AM	Rejected	Testing	pleaseSelect
Clark Kent	haircut	2020-01-21 04:00 PM	Approved		Cat Grant
Clark Kent	hair dye	2020-01-21 12:00 AM			pleaseSelect

Figure 19: Customer Appointment History

The page below presents a filtered list of the appointments of the logged-in customer. Status indicators are clear, which gives the assurance of transparency, as customers always know their booking progress.

## **7.0 Reflections**

### **Vaishumita Ganesan (TP082729)**

Working on the Beauty Salon Appointment Booking and Approval System and got practical experience in working with the Joget low-code platform, particularly with the App Composer that allowed arranging the whole application. Some of the key elements I worked with included Form Builder, List Builder, UI Builder, Process Builder, and Report Builder, among others, and I had to develop and elaborate on features such as the All Appointments section and Service Management features. The All Appointments option enables personnel and administrators to access, filter, and monitor the statuses of the appointments, pending, approved, and rejected in an organised list. The Service Management module allows the admins to add and remove services in the salon and keep service information always updated, automatically reflected in the appointment booking form. Working on these elements allowed me to realise the way Joget interrelates forms, workflows, and lists with the help of automation. Overall, this experience enhanced my knowledge of low-code development, workflow management, and the process of automating business processes with the help of Joget.

### **Sofna A/P Puvinersam (TP077015)**

The creation of the Beauty Salon Appointment Booking and Approval System provided me with practice in working with the Joget low-code platform, on which I received such an opportunity to design and automate business workflows. Through the project, I was able to understand how to utilise major features like Form Builder, Process Builder, List Builder and UI Builder in designing an operational workflow automation system. I also learned how to install other applications like Report Builder, which made me know how to expand the features of Joget beyond the default features. The project enhanced my knowledge of role-based access control, the process of automated approval and the need to have a clear system design. On the whole, this project contributed to my technical skill development, ability to solve problems and confidence in low-code development tools.

## **Ooi De Shen (TP082688)**

The greatest technical setback that I faced in the development period of my application was to implement email notification system in my application. The direct use of Google's free public SMTP server led to network authentication errors, which are typical of cloud-based applications. Though the internal workflow of the application was working as per the design, it could not send emails. Thus, I must have distinguished between the integration logic and any other logic errors to experiment who the failure belonged to the application or the environment. To achieve this, I employed a testing strategy called isolation testing, which redirects the SMTP endpoint of the application to Mailtrap.io. This is a professionally managed email testing sandbox. Once the dynamic HTML confirmation email was successfully generated and captured within Mailtrap, I knew the application's integration feature was both functional and properly configured. By doing so, I was able to confirm through this testing process that the initial issue was purely environmental and did not relate to an application defect, thus confirming the system is ready for deployment at any time the environment is corrected.

## **Lee Yee Heng (TP081443)**

At the outset, I realise that Joget does not have the Report Builder by default. I searched online and downloaded the plugin from Google. I then explored how to use it to generate reports such as gender ratios and monthly appointment summaries. By going through this process, I gained insight into how to extend the functionality of Joget through external plugins. In addition, I was able to learn about the SLA options in the system of Joget for monitoring and controlling my processes in order to become better. In that regard, applying deadline limits and exception names that include 'MIA' helped me in monitoring the overdue activities and implementing exceptions. Besides that, I gained knowledge about using hash variables in Joget to dynamically fill out fields in a form. For example, I applied #currentUser.fullName# to auto-populate the username field when filling out an appointment form. This improved the user experience.

## **8.0 Conclusion**

The system has shown some good points in the development process. The use of hash variables made data automation airtight since there was minimal manual entry, while the Report Builder allowed for the creation of intelligent data visualisation for effective analysis. The Process Builder gave us the benefit of designing and automating business processes graphically, and the addition of deadlines and SLA capabilities made for effective task management. The modular nature of the platform made for simple combinations of the form, list, and report modules.

For the implemented features, customers can submit an appointment request and will immediately receive a notification showing that the request is pending approval. Salon staff can approve or reject the appointment, and customers will receive an email informing them of the decision. If the salon staff do not respond within the given deadline, the system will automatically mark the case as MIA and will be sent to the admin's inbox for further action. From the admin side, new services such as facials or haircuts can be added, and these services will automatically appear for customers to choose during booking.

However, there are still areas that can be improved to make the system more user-friendly and efficient. In addition, real-time alerts for missed deadlines would help improve system responsiveness. The system would also be better if it could automatically send appointment reminder emails to customers one day before their scheduled appointment.

## 9.0 Meeting Logs

Meetings Detail	Discussion and Results
<b>Date:</b> 5 <sup>th</sup> December 2025 <b>Time:</b> 3.00 pm – 4.00 pm <b>Venue:</b> D-07-08	<p><b>Meeting 1: Project Proposal &amp; Problem Identification</b></p> <p><b>Discussion:</b> The team discussed the problems faced by beauty salons that still use manual appointment booking methods such as phone calls, walk-ins and messaging applications. The project title and overall system scope were also discussed and finalised.</p> <p><b>Result:</b> The team agreed to develop the Beauty Salon Appointment Booking and Approval System using Joget as the chosen low-code platform.</p>
<b>Date:</b> 12 <sup>th</sup> December 2025 <b>Time:</b> 8.00 pm – 9.00 pm <b>Venue:</b> Teams	<p><b>Meeting 2: User Roles &amp; System Features</b></p> <p><b>Discussion:</b> The main user roles were identified, including Customer, Salon Staff and Admin. The team also discussed the core system features such as appointment booking, approval workflows, service management and notification handling.</p> <p><b>Result:</b> The system roles and key functionalities were finalised for development</p>
<b>Date:</b> 16 <sup>th</sup> December 2025 <b>Time:</b> 8.00 pm – 9.30 pm <b>Venue:</b> Teams	<p><b>Meeting 3: Workflow &amp; Form Design</b></p> <p><b>Discussion:</b> The team discussed the appointment workflow, including how appointment requests move from pending to approved or rejected through automated processes. The structure of the appointment booking and approval forms was also reviewed.</p> <p><b>Result:</b> The workflow logic and form design were confirmed using Joget Process Builder and Form Builder.</p>

<p><b>Date:</b> 23<sup>rd</sup> December 2025  <b>Time:</b> 8.00 pm – 9.30 pm  <b>Venue:</b> Teams</p>	<p><b>Meeting 4: System Development Progress Review</b></p> <p><b>Discussion:</b> Progress on system features such as the All Appointment list, Service Management module and automated notifications was reviewed. Minor issues related to workflow routing were identified.</p> <p><b>Result:</b> The workflow logic and list display were improved to ensure accurate appointment tracking.</p>
<p><b>Date:</b> 6<sup>th</sup> January 2025  <b>Time:</b> 6.00 pm – 8.30 pm  <b>Venue:</b> Teams</p>	<p><b>Meeting 5: Testing &amp; Documentation Planning</b></p> <p><b>Discussion:</b> System testing was carried out to verify that appointment approvals, notifications and service updates were functioning correctly. The structure of the documentation and task allocation among team members were also discussed.</p> <p><b>Result:</b> System functionality was confirmed, and documentation responsibilities were assigned to each team member.</p>
<p><b>Date:</b> 12<sup>th</sup> January 2025  <b>Time:</b> 7.00 pm – 8.30 pm  <b>Venue:</b> Teams</p>	<p><b>Meeting 6: Documentation Review &amp; Improvements</b></p> <p><b>Discussion:</b> The drafted documentation and screenshots were reviewed. Improvements were discussed, particularly for workflow explanations, design sections and reflection content.</p> <p><b>Result:</b> The documentation was updated and refined in preparation for final submission.</p>
<p><b>Date:</b> 20<sup>th</sup> January 2025  <b>Time:</b> 8.00 pm – 9.30 pm  <b>Venue:</b> Teams</p>	<p><b>Meeting 7: Final Review &amp; Submission Confirmation</b></p> <p><b>Discussion:</b> A final review of system features, meeting logs, workload matrix and references was conducted. The team confirmed that the project was ready for submission.</p>

	<p><b>Result:</b> The final documentation and system were approved for submission.</p>
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## 10.0 Referencing

Ada Global. (2025). *Digitalisation Customer Experience: Benefits and Best Practices | ADA*. <https://www.adaglobal.com/resources/insights/digitalisation-customer-experience>

Cassandra. (2018). *Using Automated Emails And Reminders - Setmore*.  
<https://www.setmore.com/blog/automated-emails-and-reminders-in-setmore/>

Team Kissflow. (2025, December 3). *What is Workflow Automation? A Complete Guide in 2026*. <https://kissflow.com/workflow/workflow-automation/>

## 11.0 Workload Matrix

Name (TP Number)	Workloads	Percentage	Signature
<b>Vaishumita Ganesan (TP082729)</b>	1.0 Introduction 5.0 Assumption 6.3 Workflow and Process Design 7.0 Reflections 9.0 Meeting Logs	25%	<i>Vaishu</i>
<b>Sofna A/P Puvinersam (TP077015)</b>	2.0 Problem Statement 6.2 List of Implemented Features 6.4 Form and Data List Design 7.0 Reflections 9.0 Meeting Logs	25%	<i>Sofna</i>
<b>Ooi De Shen (TP082688)</b>	3.0 Objectives 6.1 System Architecture 6.5 User Interface (UI) Design and Implementation 7.0 Reflections 9.0 Meeting Logs	25%	<i>Deshen</i>
<b>Lee Yee Heng (TP081443)</b>	4.0 Business Rules 6.5 User Interface (UI) Design and Implementation 7.0 Reflections 8.0 Conclusion 9.0 Meeting Logs	25%	<i>Yueheng</i>
		100%	

## 12.0 Appendix: System Access and Credentials

**Joget Cloud Link:** <https://yhlee.on.joget.cloud>

To support the evaluation of the system, several test accounts have been created to represent different user roles:

User Role	Username	Password	Description
<b>System Admin</b>	admin	admin	Full access to system design, backend, and user management.
<b>Salon Staff</b>	cat	12345	Access to operational features (e.g., managing appointments/orders).
<b>Customer</b>	clark	12345	Restricted access for front-end usage (e.g., booking services).