

Salon Appointment Management System

ISTN2IP Group Project

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2. Salon Business: Problem Statement

A main aim of a business besides profiting is maintaining a satisfactory experience with all customers of the business however there are numerous issues that could arise which could displease a customer.

Our focus for this project is a Salon Business, "Atelier Salon". We have identified some issues that this type of business often faces and outlined them below.

The daily gush of customer information:

Service businesses often have a large inflow of general customer information and important details relevant to the appointment, which under normal circumstances, would be expected to be dealt with by the employees. Not having implemented an effective system will lead to a jam in the business system, and could potentially cause technical issues during the appointment due to the inflow of various customer details. This could perhaps lead to a loss of important customer information, negating one of the main purposes, which is to ensure customer satisfaction from the beginning of their interaction with the business.

Accessibility to make bookings:

Often, customers need to make their way into the premises of the business to make their bookings for hair or nails. It is often the case that a stylist is booked weeks in advance. In some unfortunate circumstances, a customer may arrive on the business premises to book with their preferred stylist only to find out they are not available on that date.

Inventory management issues:

Service businesses often have customers arrive requesting different services and products that use different stock. If the service business is not able to plan in advance for its customers' demands, it could cause these issues.

No centralised appointment tracking:

Salons often do not track each stylist's appointments across different clients which can cause scheduling issues. Additionally, customers often do not have a means to track previous appointments that often span back years.

Not having centralised financial reports:

Often, Salon Owners have no way of tracking their services provided to customers and how much profit or loss they make on each service. As a result, they might be operating at a loss or overcharging their customers for their services. This is especially true for Salons operating primarily using cash and it is an inefficient business model.

3. Description of Application

This application is built on the main focus of easing the inflow of customer information in a business through an efficient and convenient booking system.

This application allows the customer to make their booking and customise it according to their preference. All the necessary booking details are stored in the main database which is accessible by both the customer and the admin (the business) through the application.

The features of the application will allow the user to book their preferred hairstyles and the time slots according to availability. All the input information will be stored in the database, creating a centralised system.

The application allows a customer to:

Select one of 4 different path entries (a guest mode, an option to create a new account, a login for a current account holder)

They will then be provided the option to customise their profile by choosing a gender and specifying their hair type. An option to select one of the two services (*Hair or Nails*) provided by the salon will then follow.

The application will also require the user to choose their selected hairstyle from the list of hairstyles provided, customised to their gender preference.

Once all these have been selected and specified, the customer will then be able to book their appointment by choosing a hairdresser or nail technician employee profile presented on the interface. Once all of these have been followed, they will then proceed to payment and confirmation and lastly, a receipt of their payment will be available.

The application allows a Salon Owner to:

Select an Admin login for the business and log in using the relevant business credentials.

View the booked appointments daily and be able to download or email to staff the appointments of the day.

Generate financial reports of the business using a

Salon Issues Addressed:

The daily gush of customer information:

This application is remotely accessible, meaning that the customer will not need to travel to the business outlet or contact the business to ensure a booking. There is an evident aim to mitigate overcrowding both in-store and of customer information that an employee would be required to process without this system.

Accessibility to make bookings:

The application processes the customer information and saves it to the database. The appointment and its specifics are made, to the needs and liking of the user (*The date of the preferred appointment, the department of service requested, which in this case would be the nail or hair salon. The user can customise their hairstyle and design as well as pick the desired worker*). The data of the appointment is filled in by the customer independently and then saved to their profile history/information. By doing this, we have now solved the issue of customer information getting mixed or lost as it will be saved to the database accurately without any information being lost. A copy of the appointment information, which is stored in the database, is then sent to the user (customer) upon their request as proof of their appointment.

Appointment errors and complaints:

When a customer is able to book their own appointment, they assume full responsibility for the information and the details being inputted therefore we minimise the employees liability and accountability should there be an error in the appointment which would assist in protecting the business reputation as we should see a lower amount of customer complaints in regards to appointment accuracy.

Inventory management issues:

An additional problem we see being solved would be the stores' inventory check. Since the application allows the user to meticulously specify their requirements of the appointment, the business will be able to cross-check the availability of these items in advance of the scheduled appointment. We would see a decline in customer dissatisfaction due to "out of stock" circumstances. This is improving not only the overall customer experience but also ensuring that our inventory is always on point with the schedule of the business.

No centralised appointment tracking:

Thanks to this application, the Salon Owner has at a glance all the appointments each of the stylists has, what inventory is required and the customer details related to the appointment. The application allows customers to book with a stylist a specific date and does not allow double bookings. This solves the scheduling issues.

Not having centralised financial reports:

In addition to having appointment data, the Salon Owner (through the admin dashboard) has access to generated financial reports related to those appointments. These can be used to make key business decisions, drive new service launches and offer discounts on popular services.

4. Customer Instructions

1. Front page - Welcome form

Read the welcome text. Press the “Sign Up” button to proceed to creating a customer account. Press the “Log In” button to proceed to Login using saved details. Press the “Guest Mode” button to proceed as a guest customer

2. Creating an account - Sign Up form

Use the signup form to create your account. Enter your details on the form and click the “Sign Up” button to navigate to the Gender and hairtype form. Alternatively, you can press the “Log In” button to be navigated back to the Login form.

We recommend creating an account on the signup form and exploring the application using your own email address. This will allow you to receive one of the many emails the application is able to send to a logged-in customer. You will then be able to login a number of times with the same details even if you shut down the application.

An email that has been used to create an account cannot create another account and must use login instead.

You will need:

1. Your name
2. Surname
3. Email address
4. Phone number
5. Password

3. Subsequent Logins - Login form

Use the login form with your email address and password to log in using your saved details. Fill in your details and press the “Log In” button to be navigated to the Customer dashboard form. Alternatively, you can press the “Sign Up” button to be navigated back to the Sign Up form.

You will need:

1. Email address (that you used when signing up)
2. Password (that you used when signing up)

Alternatively, you can use a dummy user's login details that we created for testing purposes:

1. Email = notexistantemail@example.com
2. Password = erA(n.54_v64

A customer cannot login using an email that is not in the database. A customer cannot login if the password is incorrect.

4. Once-off Customer - Guest form

Alternatively, you can use the application as a guest. Fill in your details on the guest form and press the “Continue as guest” button when done.

When using this mode, the application will not remember your details and you will need to set up your gender and hair type each time you use the application. Additionally, you will not be able to view past bookings as they will not be associated with a logged-in user.

You will need:

1. Name
2. Surname
3. Email
4. Phone number

5. Setting user details - Gender and Hair type form

After signing up or using guest mode, you need to choose your gender and hair type. Use the radio buttons at the top of the page to select your gender. Use the radio buttons closely resembling your hair category to show the images for that hair category. Then choose the image most closely related to your hairtype (You need to click on the image). Click “Yes” on the dialog to confirm the chosen hairtype or “No” to go back and choose again.

Clicking “Yes” navigates you to the Customer dashboard, saves the gender you chose and hairtype to your profile.

6. Choosing a salon service - Customer dashboard form

After signing up or using guest mode, customers are brought to the Customer dashboard. Here they can click the “Nails” or “Hair” radio buttons and the “Make Booking” button to proceed to either a nail or hair appointment booking. They can also click the “View Appointments” button to view their booking history.

A guest customer is unable to click the “View Appointments” button.

7. A customer’s scheduled bookings - View bookings form

Upon entering this form, a customer’s bookings are filled in the Data Grid View. It shows their past and future scheduled bookings with all the appointment information.

Click the “Download” button to download your bookings to your machine as a PDF. Click the “Email to Saved Email” button to email your bookings to your registered email. Fill in the secondary email and click the “Email To Secondary Email” to email the bookings to another email. Click the “Back To Dashboard” button to go back to the customer dashboard.

Emailing bookings requires an internet connection, and a corresponding message will show if a connection is not available.

8. Booking a Nail appointment - Book for nails form

On this page, a customer chooses the style of nails they want to do and any accessories they want. Hover on the pictures to see the name of the style and the prices. Choose a nail style by clicking on any of the nail pictures, and click the “Choose” button to confirm your selection.

Hover over the accessory check boxes to see the price of accessories. Choose an accessory or do not choose any, and click the “Select” button to confirm.

Finally, click the “Next” button to navigate to the next page.

9. Booking a Hairstyle appointment - Book for hair form

On this page, a customer chooses the style of hairstyle they want and any accessories. Depending on the customer’s gender, either the male or female section will be enabled.

Hover over the pictures to see the name of the hairstyle and the price. Choose a hairstyle by clicking on any of the hairstyle pictures, and click the “Choose” button to confirm your selection.

Hover over the accessory check boxes to see the price of accessories. Choose an accessory or do not choose any, and click the “Select” button to confirm.

Finally, click the “Next” button to navigate to the next page.

10. Choosing a Nail appointment time and stylist - Nail appointment time form

On this page, a customer chooses their nail appointment date, time and stylist.

Using the Date time pickers under your preferred stylist, select a date for your appointment. Choose one of the available time slots by clicking on the radio button with that time. If a time is not available, choose another date and try again. Press the “Next” button once chosen. Clicking “Next” updates your appointment details and navigates the customer to the payment form.

A date in the past can not be selected and the Date time pickers start with the day’s date by default. Once a time has passed on the day, it is no longer bookable. An already booked time on a specific day for a specific stylist cannot be booked again. Only one radio button is selectable on the entire form to prevent a customer from selecting multiple appointment times at once.

11. Choosing a Hair appointment time and stylist - Hair appointment time form

Similar to the Nail appointment time form. On this page, a customer chooses their hair appointment date, time and stylist.

Using the Date time pickers under your preferred stylist, select a date for your appointment. Choose one of the available time slots by clicking on the radio button with that time. If a time is not available, choose another date and try again. Press the “Next” button once chosen. Clicking “Next” updates your appointment details and navigates the customer to the payment form.

A date in the past can not be selected and the Date time pickers start with the day's date by default. Once a time has passed on the day, it is no longer bookable. An already booked time on a specific day for a specific stylist cannot be booked again. Only one radio button is selectable on the entire form to prevent a customer from selecting multiple appointment times at once.

12. Making a payment to confirm appointment - Payment form

On this page, a customer sees their detailed cost for the appointment, can make a payment and save the invoice.

Look at the Cost Listbox to see the detailed cost breakdown, and look at the Total cost textbox to see the total cost. Click on the debit/credit radio button to select a payment method. Enter the credit card details and press the “Pay” button to finalise the payment.

Click the “Download Invoice” button to download the invoice to your computer. Click the “Email invoice” button to email the invoice to your registered email. Fill in the email and press the “Email to secondary Email” button to email the invoice to a secondary email. Finally, click the “Next” button to proceed to the Thank you form.

The total cost text box is made read-only. The text fields for payment only get enabled once a customer has chosen a payment method (debit/credit). The “Pay” button is disabled until all card details are filled.

The “Next”, “Download Invoice”, “Email Invoice” and “Email To Secondary Email” buttons are enabled once the customer has completed a payment. The email feature works when there is an internet connection and a message will show if there is no connection.

Dummy data may be used to make a payment (it is a proof of concept, and no payment gateway has been set)

To make a payment, you will need “dummy data” for the following:

1. Account holder (e.g. Tsepo Dlamini)
2. Credit card number (e.g. 1234-5678-9876-5432)
3. CVV number (e.g. 333)
4. Card expiry date (e.g. 12/30)

13. A word of thanks - Thank you form

This page is available once a payment has been made, and it shows a word of thanks from the Salon.

Click the “Back To Dashboard” button to navigate to the Customer dashboard. Click on the “Exit” button to exit the application.

5. Admin Instructions

1. Front page - Welcome form

Select the “Administration” button to proceed to the admin login.

2. Login as a Salon Administrator - Admin login form

Select the “Administration” button to proceed to the admin login.

Use these details to login as an Admin:

1. Email = Email used in appsettings.json
2. Password = a3<\$'5/<LI3u

3. View the day's appointments - Admin dashboard form

Upon entering the page, an admin can view all the appointments for the current day. This page is important to the Salon owner and employees to prepare ahead day by day. It shows the appointments, the service required by the customer, any materials required and the stylist responsible for the appointment.

The appointments appear on a Data grid view. Use the “Download Appointments” to download the day's appointments to the computer as a PDF. Click the “Email Appointments” to email the appointments to the registered admin email (which is the Email used in appsettings.json in this case). Alternatively, fill in the email and click the “Email To Employee” button to email to another email address.

Alternatively, click the “Go To Generate Reports Form” to navigate to the Generate Reports form.

If there are no appointments, the top label will be updated. Additionally, the “Download Appointments”, “Email Appointments” and “Email To Employee” buttons will be disabled. The email functionality requires an internet connection.

4. Generate the Salon's financial reports - Generate reports form

This page allows an admin to generate a summarised profit report. This is useful to find the Salon's financial performance information, which is useful to the Salon owner.

Use the 2 Date time pickers to select a start date and end date for the reports. Click the “Generate Report” button to generate a report. Use the “Download Report” to download the financial report to the computer as a PDF. Click the “Email Report” to email the appointments to the registered admin email (which is the Email used in appsettings.json in this case). Alternatively, fill in the email and click the “Email Report To Secondary Email” button to email the report to another email address.

Click the “Back To Dashboard” button to go back to the Admin dashboard

If there were no appointments in the selected date range, no appointments will be generated. If no reports were generated, the download & email buttons will continue to be disabled.

6. Application Architecture and Structure

1. File structure

Files to note in the application (not an exhaustive list)

```
SalonAppointmentSystem/*****# Windows Forms (.cs, .Designer.cs files)

— lib/*****# Contains all DLLs files used in the program
— Resources/*****# Contains resources like images we have added to the project
— bin/
  — Debug/
  — Release/
  — x64/
    — Release/
    — Debug/*****# Project output
  — SalonDatabase.sqlite*****# SQLite database file
  — appsettings.json*****# Environment variables file
  — SalonAppointmentSystem.exe*****# Executable file

— Admin.cs
— AdminDashboardForm.cs
— AdminLogInForm.cs
— App.config*****# App configuration
— Appointment.cs
— appsettings.json
— BookForHair.cs
— BookForNails.cs
— Client.cs
— ClientDashboardForm.cs
— DatabaseManager.cs*****# Handles all database interactions (Customers, Admins, Appointments, Payments)
— EmailHelper.cs*****# All email interactions and exception handling
— FormManager.cs*****# Creates form objects
— GenderAndHairtypeForm.cs
— GenerateReportsForm.cs
— GuestLogInForm.cs
— HairAppointmentTime.cs
— LogInForm.cs
— NailAppointmentTime.cs
— PaymentForm.cs
— PDFHelper.cs*****# For generating appointment summaries/reports using PDFsharp
— Program.cs*****# Main program entry point
— SalonAppointmentSystem.csproj*****# Other app configurations
— SignUpForm.cs
— SmtConfig.cs*****# SMTP configuration for emailing customers and admins
— ThankYouForm.cs
— ValidateClass.cs*****# Contains validation code for email, password and phone number
— ViewBookingsForm.cs
— WelcomeForm.cs
```

2. Form structure

Flow chart showing form flow

