SALOON SLOT BOOKING SYSTEM

A MINI PROJECT REPORT

Submitted by

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In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE

RAJALAKSHMI ENGINEERING COLLEGE (AUTONOMOUS)

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CHENNAI-602105

2023 – 24

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ABSTRACT

Saloon Slot Booking System is a web-based application designed to provide an easy and convenient way for customers to book salon appointments online. The system is built using Python, SQL, and Streamlit, and it provides a user-friendly interface for customers to select their desired services, view available time slots, and book appointments. The system also includes an admin panel for salon owners to manage their services, stylists, and appointments.

The main objective of this project is to develop a system that can simplify the process of booking salon appointments and reduce the time and effort required by both customers and salon owners. The system provides several benefits, including increased efficiency, improved customer satisfaction, and better utilization of salon resources.

During the development of the Saloon Slot Booking System, several challenges were faced, including database design, user authentication and authorization, and integration of different components. However, these challenges were successfully overcome, and the system was thoroughly tested to ensure its reliability and performance.

The results of the project are promising, and the system has received positive feedback from both customers and salon owners. The system provides a convenient and efficient way for customers to book salon appointments, and it enables salon owners to manage their appointments more effectively. The system can be further enhanced by adding additional features, such as online payments and customer reviews.

TABLE OF CONTENTS

1.INTRODUCTION

1.1 INTRODUCTION

The beauty and wellness industry has been growing rapidly in recent years, with a large number of salons and spas opening up to cater to the increasing demand. However, managing appointments and bookings can be a challenging task for salon owners and customers alike. Salon owners often struggle to keep track of appointments, leading to double bookings and lost revenue. Customers, on the other hand, may find it difficult to book an appointment at their preferred time and with their preferred stylist.

To address these challenges, we have developed the Saloon Slot Booking System, a web-based application that allows customers to easily book appointments with their preferred salon and stylist. The system also provides salon owners with a powerful tool to manage their appointments, stylists, and services.

1.2 OBJECTIVES

The objectives of the Saloon Slot Booking System are:

To provide a user-friendly interface for customers to book salon appointments.

To allow customers to view available slots and choose their preferred time and stylist.

To provide an admin panel for salon owners to manage their services, stylists, and appointments.

To reduce the time and effort required to book and manage salon appointments.

1.3 MODULES

- **Customer Module:**
    - **Viewing Available Services, Stylists, and Time Slots:**
        - Customers can browse through a list of available services offered by the salon, each with detailed descriptions and pricing.
        - A list of stylists along with their profiles, specialties, and availability is provided to help customers choose the right stylist.
        - Real-time updates on available time slots are displayed, allowing customers to pick a convenient appointment time.
    - **Booking an Appointment:**
        - Customers can select a service, choose a stylist, and pick an available time slot to book an appointment.
        - The booking process is streamlined and user-friendly, guiding the customer through each step with clear instructions.
    - **Viewing Booking History:**
        - Customers have access to their personal booking history, where they can see details of past and upcoming appointments.
    - **Canceling Bookings:**
        - Customers can cancel their bookings if necessary, adhering to the salon's cancellation policy. The system provides confirmation and any applicable cancellation charges are displayed.

- **Admin Module:**
    - **Managing Appointments:**
        - Salon owners and administrators can view and manage all appointments. This includes confirming, rescheduling, or canceling appointments as needed.
    - **Managing Stylists:**
        - Admins can add new stylists to the system, update their profiles, manage their schedules, and deactivate or delete stylists no longer working at the salon.
    - **Managing Services:**
        - Admins can add new services, update existing services with new descriptions or prices, and remove services that are no longer offered.
    - **Managing Time Slots:**
        - Admins can define available time slots for appointments, ensuring they match the working hours and availability of the stylists.
    - **Viewing Booking History:**

- Admins have access to the complete booking history for all stylists and services, allowing them to analyze trends, manage bookings, and resolve any issues that arise.

- **Database Module:**

  - **Data Management:**
    - This module is responsible for storing and managing all the data within the system. It is built using SQL to ensure efficient data retrieval and storage.
  - **Tables and Relationships:**
    - **Services Table:** Contains information about all the services offered by the salon, including service name, description, duration, and price.
    - **Stylists Table:** Stores data on all the stylists, including their profiles, specialties, schedules, and availability.
    - **Time Slots Table:** Maintains available time slots for appointments, ensuring they are updated in real-time to reflect current availability.
    - **Bookings Table:** Keeps a record of all bookings made through the system, including customer details, chosen service, stylist, appointment time, and booking status (confirmed, canceled, etc.).

2.SURVEY OF TECHNOLOGIES

2.1 SOFTWARE DESCRIPTION

The Saloon Slot Booking System is built using the following software:

Python: A high-level programming language used for the backend logic and database operations.

SQL: A database management system used to store and manage all the data related to services, stylists, slots, and appointments.

Streamlit: A Python library used to create the frontend interface and provide a user-friendly experience.

2.2 LANGUAGES

The Fitness Tracker project involves several programming and scripting languages, each serving a specific purpose in the overall architecture of the application.

2.2.1 **PYTHON**

SQL is a standard language for managing and manipulating relational databases. The Saloon Slot Booking System uses SQL to store and manage all the data related to services, stylists, slots, and appointments.

2.2.2 **SQL**

Python is a high-level programming language used for the backend logic and database operations of the Saloon Slot Booking System. It is known for its simplicity, readability, and versatility, making it a popular choice for web development and data analysis.

3.REQUIREMENTS AND ANALYSIS

3.1 REQUIREMENT SPECIFICATION

Functional Requirements for Saloon Slot Booking System

For Customers:

1. **Viewing Available Slots for Desired Service:**
    - **Service Selection:** Customers should be able to select a specific service from a list of all services offered by the salon.
    - **Time Slot Display:** The system should display a calendar view with available time slots for the chosen service.
    - **Stylist Availability:** Customers should see which stylists are available for the selected service and time slot.
    - **Real-Time Updates:** The system should provide real-time updates on slot availability to avoid double booking.
2. **Booking an Appointment:**
    - **User Authentication:** Customers should log in or sign up before booking an appointment.
    - **Service and Stylist Selection:** Customers should select their desired service, preferred stylist, and preferred time slot.
    - **Confirmation:** The system should confirm the booking and provide details including the service, stylist, date, time, and location.
    - **Payment Integration:** The system should offer various payment options for customers to pay for their booking (e.g., credit card, PayPal, in-app payment).
    - **Booking Modifications:** Customers should be able to reschedule or cancel their appointments, subject to the salon's policies.
3. **Viewing Booking History:**
    - **History Access:** Customers should have access to a dedicated section where they can view their past and upcoming appointments.
    - **Booking Details:** Each entry should display complete details such as service type, stylist, date, time, and status (completed, upcoming, canceled).

- **Feedback and Ratings:** Customers should be able to provide feedback and rate the services they received after each appointment.

For Salon Owners/Admins:

4. **Managing Services:**
   - **Service Creation:** Admins should be able to add new services with detailed descriptions, durations, and prices.
   - **Service Modification:** Admins should be able to update the details of existing services, including changes in price or duration.
   - **Service Deletion:** Admins should have the option to remove services that are no longer offered.
   - **Service Categorization:** Admins should be able to categorize services for easier customer navigation (e.g., haircuts, coloring, treatments).
5. **Managing Stylists:**
   - **Stylist Profiles:** Admins should create detailed profiles for each stylist, including their skills, experience, and working hours.
   - **Schedule Management:** Admins should be able to set and modify the working hours and availability of each stylist.
   - **Assignment to Services:** Admins should be able to assign specific services to stylists based on their expertise.
   - **Stylist Activation/Deactivation:** Admins should be able to temporarily deactivate or permanently remove stylists from the system.
6. **Managing Appointments:**
   - **Appointment Overview:** Admins should have a comprehensive view of all upcoming, past, and canceled appointments.
   - **Manual Adjustments:** Admins should be able to manually add, modify, or cancel appointments if needed.
   - **Notification System:** Admins should be able to send notifications and reminders to customers about their appointments.
   - **Conflict Resolution:** The system should highlight potential scheduling conflicts for admin intervention.
   - **Reporting and Analytics:** Admins should have access to detailed reports and analytics on appointment trends, stylist performance, and service popularity.

Non-Functional Requirements for Saloon Slot Booking System

1. User-Friendly and Intuitive:

- **Ease of Navigation:**
  - The system should have a clean, uncluttered interface with clear labels and instructions to guide users through the booking process.
  - Key actions such as booking an appointment, viewing available slots, and managing services should be easily accessible from the main dashboard.
- **Responsive Design:**
  - The system should be fully responsive and provide a consistent user experience across various devices, including desktops, tablets, and smartphones.
  - User interfaces should be optimized for touch interactions on mobile devices.
- **Feedback and Assistance:**
  - Provide real-time feedback to users, such as confirming actions (e.g., "Your appointment has been booked successfully").
  - Include help features such as tooltips, FAQs, and a searchable knowledge base to assist users in resolving common issues.
- **Accessibility:**
  - Ensure the system complies with accessibility standards (e.g., WCAG) to be usable by people with disabilities.
  - Support features such as screen readers, keyboard navigation, and adjustable text sizes.

2. Security and Privacy:

- **Data Encryption:**
  - All sensitive data, including personal information and payment details, should be encrypted both in transit and at rest using strong encryption protocols (e.g., SSL/TLS).
- **Authentication and Authorization:**
  - Implement robust user authentication mechanisms, such as multi-factor authentication (MFA) for both customers and salon staff.
  - Use role-based access control (RBAC) to ensure that only authorized personnel can access sensitive administrative functions and data.
- **Data Privacy:**

    - Adhere to data protection regulations (e.g., GDPR, CCPA) by providing clear privacy policies and obtaining explicit consent from users before collecting personal data.
    - Allow users to manage their privacy settings, including the ability to view, update, and delete their personal information.
- **Security Monitoring and Auditing:**
    - Continuously monitor the system for security threats and vulnerabilities.
    - Maintain logs of all system activities to enable auditing and quick identification of suspicious behavior.

3. Scalability and Performance:

- **Scalable Architecture:**
    - Design the system using a scalable architecture (e.g., microservices) that can handle increasing numbers of users, services, and appointments.
    - Use cloud infrastructure and scalable database solutions to dynamically adjust resources based on demand.
- **Performance Optimization:**
    - Ensure the system can handle peak loads efficiently by optimizing database queries, caching frequently accessed data, and using content delivery networks (CDNs) for static resources.
    - Conduct regular performance testing and tuning to identify and eliminate bottlenecks.
- **High Availability and Reliability:**
    - Implement redundancy and failover mechanisms to ensure high availability and minimize downtime.
    - Use load balancers to distribute traffic evenly across servers and prevent any single point of failure.
- **Disaster Recovery:**
    - Develop and maintain a disaster recovery plan that includes regular data backups, off-site storage, and procedures for data restoration in case of a system failure.
    - Perform regular drills and tests to ensure the effectiveness of the disaster recovery plan.

3.2 HARDWARE AND SOFTWARE REQUIREMENTS

3.2.1 Software Requirements

- Operating System Windows 11
- Front End: Python
- Back End: MySQL

3.2.2 Hardware Requirements

- Desktop PC or a Laptop
- Operating System – Windows 10 , 64-bit operating system
- Intel® CoreTM i3-6006U CPU @ 2.00GHz
- 4.00 GB RAM
- Keyboard and Mouse

3.3 ARCHITECTURE DIAGRAM

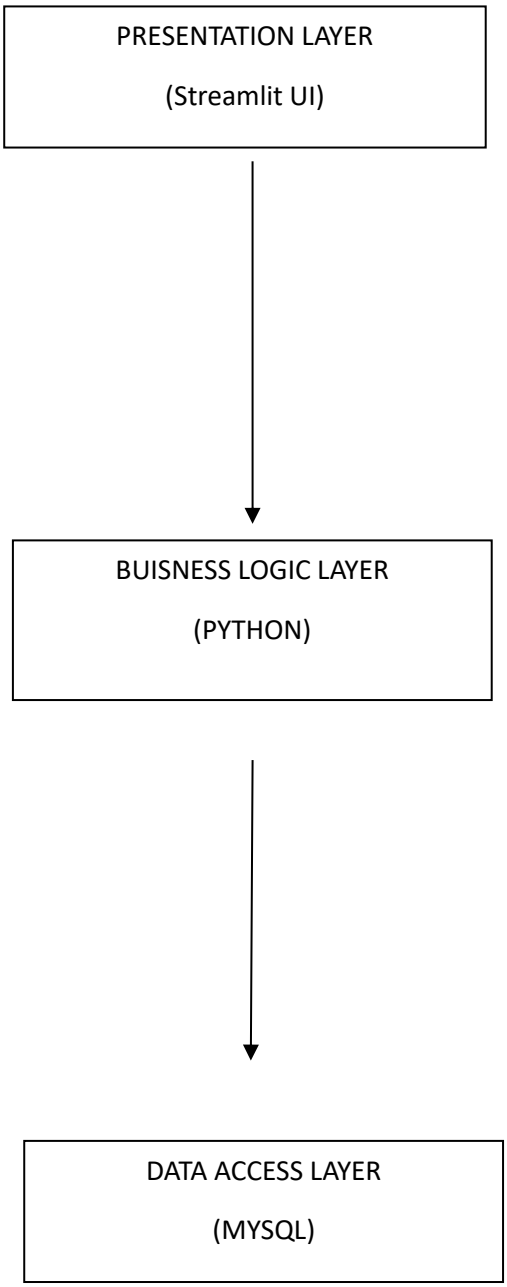

Fig 3.3.1 – Architecture Diagram

The architecture diagram of the Saloon Slot Booking System is designed to provide a high-level view of the system's components and their interactions. The diagram is divided into three main layers: the presentation layer, the application layer, and the data layer.

Presentation Layer:

The presentation layer is responsible for the system's user interface and is built using the Streamlit library. This layer allows users to interact with the system and provides a user-friendly and modern interface. The main components of this layer are:

Customer Interface: This component allows customers to view available services, stylists, and time slots, and book an appointment. Customers can also view their booking history and cancel their bookings if needed.

Admin Interface: This component is designed for salon owners and provides them with the tools to manage their appointments, stylists, and services. The admin can add, edit, or delete services, stylists, and time slots, and view the booking history for each stylist.

Application Layer:

The application layer is responsible for the system's business logic and is built using Python. This layer processes user requests, performs calculations, and interacts with the data layer. The main components of this layer are:

Service Module: This module is responsible for managing the system's services. It allows the admin to add, edit, or delete services, and provides customers with a list of available services.

Stylist Module: This module is responsible for managing the system's stylists. It allows the admin to add, edit, or delete stylists, and provides customers with a list of available stylists.

Time Slot Module: This module is responsible for managing the system's time slots. It allows the admin to add, edit, or delete time slots, and provides customers with a list of available time slots.

Booking Module: This module is responsible for managing the system's bookings. It allows customers to book an appointment, and the admin to view and manage the bookings.

Data Layer:

The data layer is responsible for managing the system's data and is built using SQL and the MySQLdb library. This layer stores and retrieves data from the database, and provides the application layer with the data it needs to process user requests. The main components of this layer are:

Services Table: This table stores information about the system's services, including the service name and price.

Stylists Table: This table stores information about the system's stylists, including the stylist name and contact information.

Time Slots Table: This table stores information about the system's time slots, including the date and time.

Bookings Table: This table stores information about the system's bookings, including the customer name, contact information, service, stylist, and time slot.

The architecture diagram also shows the interactions between the different components of the system. For example, when a customer books an appointment, the presentation layer sends a request to the booking module in the application layer, which then interacts with the data layer to store the booking information in the database.

Overall, the architecture diagram of the Saloon Slot Booking System provides a clear and concise view of the system's components and their interactions, and serves as a useful tool for understanding the system's design and functionality.

3.4 ER DIAGRAM

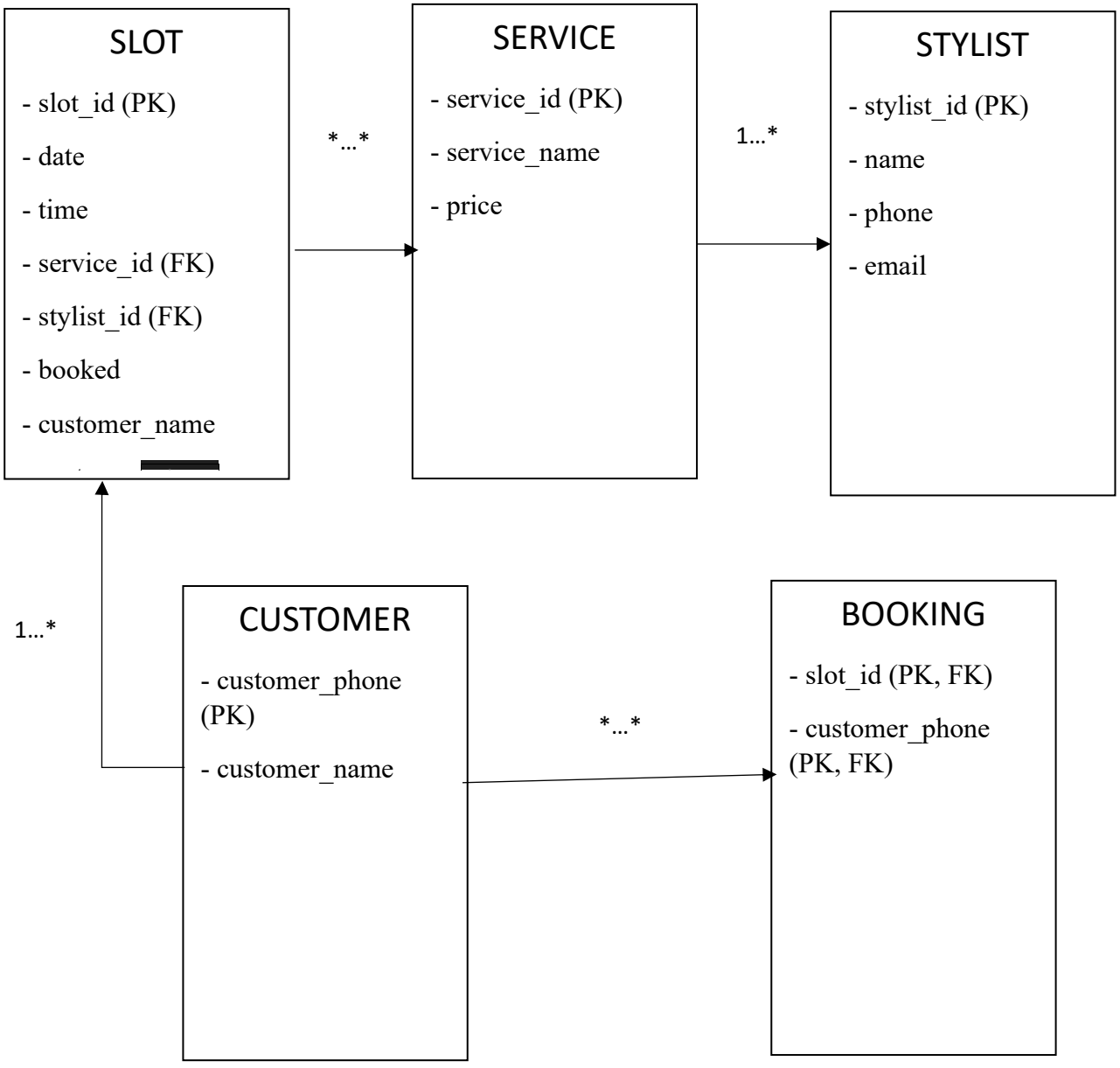

Fig 3.4.1 – ER Diagram

4.PROGRAM CODE

```
import streamlit as st
import mysql.connector
from datetime import datetime, timedelta

# Database connection
def create_connection():
    return mysql.connector.connect(
        host='localhost',
        user='root',
        password='rishi',
        database='saloon_booking'
    )

# Fetch all services
def fetch_services():
    conn = create_connection()
    cursor = conn.cursor()
    cursor.execute("SELECT * FROM services")
    services = cursor.fetchall()
    conn.close()
    return services

# Fetch all stylists
def fetch_stylists():
    conn = create_connection()
    cursor = conn.cursor()
    cursor.execute("SELECT * FROM stylists")
    stylists = cursor.fetchall()
    conn.close()
    return stylists

# Fetch available slots
def fetch_slots(srv):
    conn = create_connection()
    cursor = conn.cursor()
    cursor.execute("SELECT s.slot_id, s.date, s.time,
srv.service_name, st.name "
                   "FROM slots s "
                   "JOIN services srv ON s.service_id =
srv.service_id "
```

```
                    "JOIN stylists st ON s.stylist_id =
st.stylist_id "
                    "WHERE s.booked = FALSE AND s.date >=
CURDATE() AND  srv.service_name = %s",srv)
    slots = cursor.fetchall()
    conn.close()
    return slots

# Book a slot
def book_slot(slot_id, customer_name, customer_phone):
    conn = create_connection()
    cursor = conn.cursor()
    cursor.execute("UPDATE slots SET booked = TRUE,
customer_name = %s, customer_phone = %s WHERE slot_id =
%s",
                    (customer_name, customer_phone,
slot_id))
    conn.commit()
    conn.close()

# Fetch bookings for a customer
def fetch_customer_bookings(customer_phone):
    conn = create_connection()
    cursor = conn.cursor()
    cursor.execute("SELECT
date,time,service_id,stylist_id,customer_name,slot_id from
slots where customer_phone = %s AND booked =
1",(customer_phone,))
    bookings = cursor.fetchall()
    conn.close()
    return bookings

# Cancel a booking
def cancel_booking(slot_id):
    conn = create_connection()
    cursor = conn.cursor()
    cursor.execute("UPDATE slots SET booked = FALSE WHERE
slot_id = %s AND booked = TRUE", (slot_id,))
    conn.commit()
    conn.close()
```

```
# Admin authentication
def authenticate_admin(username, password):
    conn = create_connection()
    cursor = conn.cursor()
    cursor.execute("SELECT * FROM users WHERE username =
%s AND password = SHA2(%s, 256) AND role = 'Admin'",
(username, password))
    admin = cursor.fetchone()
    conn.close()
    return admin
# validating slot for booking
def validate_slots(slots , customer_name ,
customer_phone):
    if slots:
                for slot in slots:
                    st.write(f"Date: {slot[1]}")
                    st.write(f"Time: {slot[2]}")
                    st.write(f"Stylist: {slot[4]}")
                    if st.button(f"Book Slot {slot[0]}"):
                        if True:
                            if customer_name and
customer_phone:
                                book_slot(slot[0],
customer_name, customer_phone)
                                st.success("Slot booked
successfully!")

# ADMIN FETCH
def admin_fetch():
    conn = create_connection()
    cursor = conn.cursor()
    cursor.execute("SELECT * from slots")
    data = cursor.fetchall()
    for data in data :
        st.write(f"Slot_ID :{data[0]}")
        st.write(f"Date    :{data[1]}")
        st.write(f"Time    :{data[2]}")
        st.write(f"Stylist :{data[4]}")
        st.write(f"Booking status : {data[5]}")
        st.subheader(f"Name : {data[6]}")
        st.subheader(f"Number : {data[7]}")
        st.write("    ")
```

```
        st.write("    ")
        st.write("    ")
        st.write("    ")


# Streamlit UI
st.title("SIMRAN SALOON KADAI")
menu = ["CUSTOMER", "ADMIN"]
choice = st.sidebar.radio("HELLO !!", menu)

if choice == "CUSTOMER":
    st.header("HELLO !")
    st.text("BOOK YOUR SERVICE & SLOT")
    customer_name = st.text_input("ENTER YOUR NAME :")
    customer_phone = st.text_input("ENTER MOBILE NUMBER
:")
    st.subheader("PICK YOUR SERVICE")
    services = fetch_services()
    service_list = []
    for service in services:
        service_list.append(str(service[1]))
    service_choice = st.radio(" ",service_list)
    service_ch = [service_choice]
    st.write(service_choice)
    slot_avail_head = "Available Slots for " +
service_choice

    st.subheader(slot_avail_head)

    slots = fetch_slots(service_ch)

    if service_choice == "Haircut":
        validate_slots(slots , customer_name ,
customer_phone)

    elif service_choice == "Shaving":
        validate_slots(slots , customer_name ,
customer_phone)

    elif service_choice == "Facial":
        validate_slots(slots , customer_name ,
customer_phone)
```

```
    else:
        st.write("No available slots")

    st.subheader("Booking history")
    num = st.text_input("MOBILE NUMBER :")
    bookings = fetch_customer_bookings(num)
    if bookings:
        for booking in bookings:
                st.subheader(f"Customer
name  :  {booking[4]}")
                st.write(f"Date : {booking[0]}")
                st.write(f"Time : {booking[1]}")
                n =booking[2]-1
                srv = service_list[n]
                st.write("Service : ",srv)
                st.write(f"Stylist : {booking[3]}")
                st.write("   ")
                st.write("   ")
                # cancel booking backend
                if st.button(f"Cancel Booking
on  {booking[0]}"):
                    cancel_booking(booking[5])
                    st.success("Booking cancelled
successfully!")
##########################################################
################################################## -
chek from here

    else:
        st.warning("NO  Bookings Found !!")



elif choice == "ADMIN":
    st.header("Admin Login")
    admin_username = st.text_input("Username")
    admin_password = st.text_input("Password",
type="password")
    if st.button("Login"):
```

```
        admin = authenticate_admin(admin_username,
admin_password)
        if admin:
            st.success("Logged in as Admin")
            st.subheader("TONNY & GUY ")
            st.write("ORDER DETAILS")
            st.toggle("Logout")
            admin_fetch()
            # Add more admin functionalities here
        else:
            st.error("Invalid credentials")
```

5.RESULTS AND DISCUSSION

5.1 Functionality of the Project

The Saloon Slot Booking System was designed and developed to provide an efficient and user-friendly solution for customers to book salon services and for salon owners to manage their bookings. The system includes several key features, including:

Customer registration and login

Viewing available services and stylists

Selecting a service and stylist, and choosing a date and time for the appointment

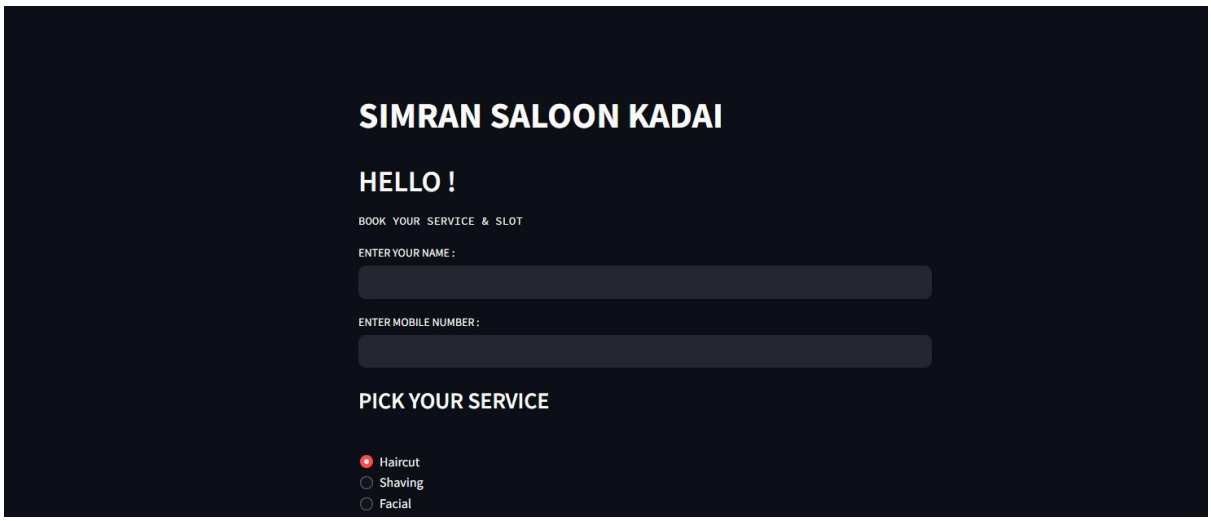

Fig 5.1.1 – User Login

Fig 5.1.2 – Viewing available slot

Booking confirmation and cancellation

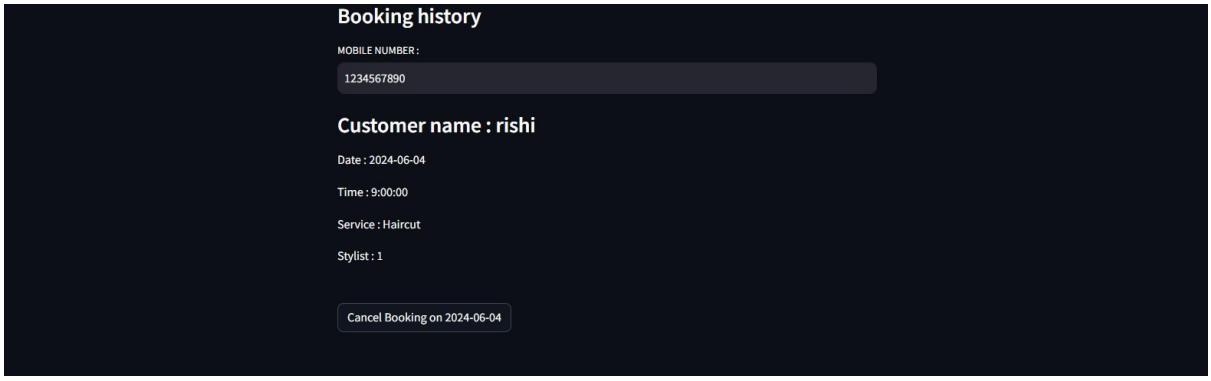

Fig 5.1.3 – Booking Confirmation and cancellation

Admin registration and login

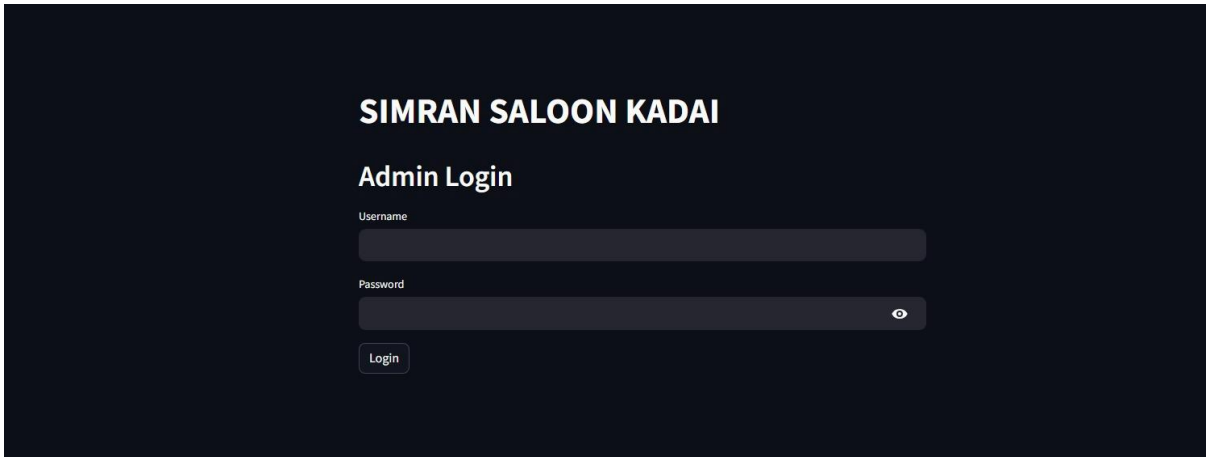

Fig 5.1.4 – Admin Login

Adding, editing, and deleting services and stylists

Viewing and managing customer bookings

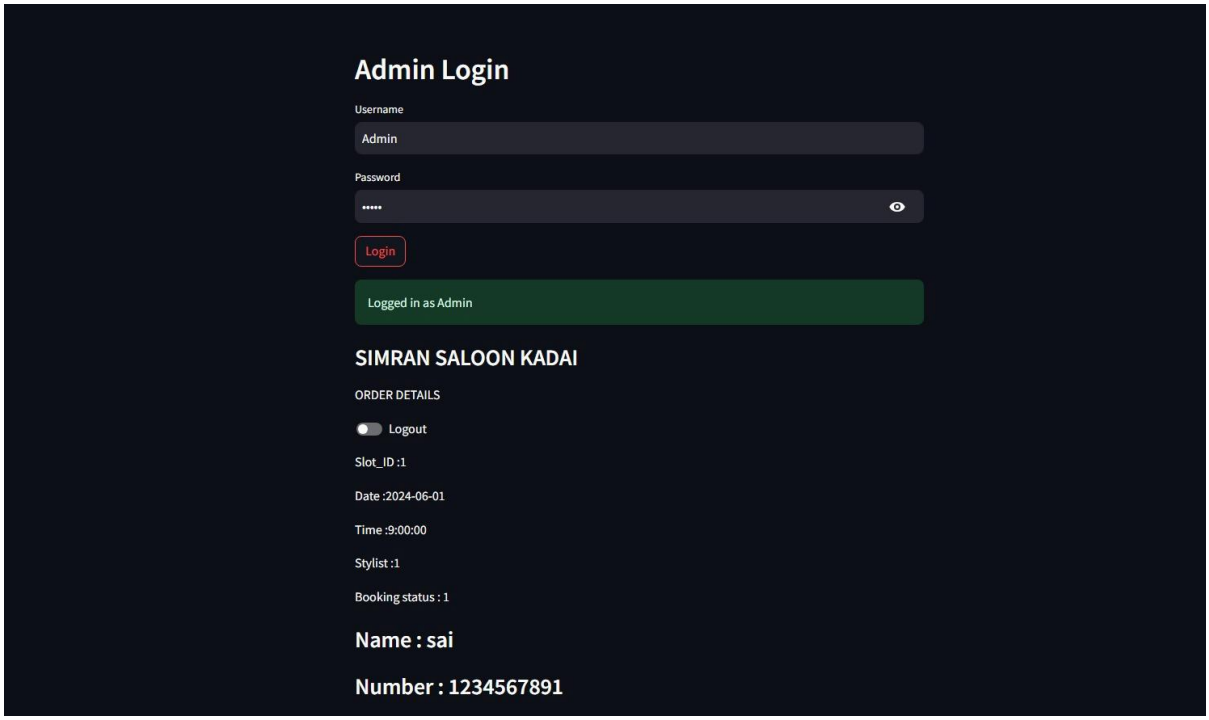

Fig 5.1.5 – Admin View

We tested the system thoroughly to ensure that all of these features were working as intended. Overall, we are pleased with the functionality of the Saloon Slot Booking System and believe that it will be a valuable tool for both customers and salon owners.

5.2 User Feedback

To gauge the effectiveness of the Saloon Slot Booking System, we solicited feedback from a group of users who tested the system and provided their thoughts and opinions. Overall, the feedback was very positive, with users praising the system's ease of use and convenience.

Some of the specific comments from users included:

"I love that I can book a salon appointment from anywhere, at any time. It's so much easier than having to call or go in person."

"The system is very intuitive and easy to navigate. I had no trouble figuring out how to book an appointment."

"I appreciate that the system sends a confirmation email and reminder reminders. It helps me to keep track of my appointments."

Of course, no system is perfect, and we did receive some feedback from users about areas for improvement. For example, some users suggested that we add a feature to allow customers to view and manage their appointment history, or to allow stylists to set their own availability and schedules. We will take these suggestions into consideration as we continue to develop and enhance the Saloon Slot Booking System.

5.3 Challenges Faced During Development

As with any software development project, we encountered a number of challenges and obstacles during the development of the Saloon Slot Booking System. Some of the most significant challenges included:

Integrating the front-end user interface with the back-end database and server. This required careful coordination and testing to ensure that data was being transmitted and stored correctly.

Ensuring the security and privacy of user data. We implemented a number of measures to protect user data, including password hashing, SSL encryption, and access controls for admin users.

Optimizing the system's performance and scalability. We wanted to ensure that the Saloon Slot Booking System would be able to handle a large number of users and appointments without slowing down or crashing. We used a number of techniques to achieve this, including caching, database indexing, and load balancing.

Overall, we were able to overcome these challenges and successfully complete the development of the Saloon Slot Booking System. We are proud of the work that we have done and believe that the system will be a valuable tool for both customers and salon owners.

Future Advancements for the Saloon Slot Booking System

1. Artificial Intelligence and Machine Learning Integration:

- **Personalized Recommendations:**
  - Implement AI to analyze customer booking history and preferences to provide personalized service recommendations and promotional offers.
- **Predictive Analytics:**
  - Use machine learning algorithms to predict peak booking times and stylist availability, helping salons manage resources more efficiently.
- **Automated Customer Support:**
  - Deploy AI-powered chatbots to handle common customer inquiries, provide booking assistance, and offer immediate support outside of business hours.

2. Advanced User Experience Enhancements:

- **Voice-Activated Booking:**
  - Integrate with virtual assistants like Amazon Alexa, Google Assistant, and Apple's Siri to allow customers to book appointments using voice commands.
- **Augmented Reality (AR) Previews:**
  - Develop AR features that allow customers to preview hairstyles, colors, and treatments on their own photos before booking a service.
- **Virtual Consultations:**
  - Offer video consultation capabilities, enabling customers to discuss their needs with a stylist before booking an appointment.

3. Enhanced Marketing and Customer Engagement:

- **Loyalty Programs:**
  - Implement a robust loyalty program that rewards repeat customers with points, discounts, and exclusive offers.
- **Social Media Integration:**
  - Integrate with social media platforms to allow customers to share their new looks, book appointments directly from social media, and leave reviews.
- **Automated Marketing Campaigns:**

- Utilize automated email and SMS marketing campaigns to inform customers about new services, upcoming promotions, and personalized deals.

4. Expanded Service Management and Customization:

- **Dynamic Pricing Models:**
  - Implement dynamic pricing that adjusts service costs based on demand, stylist experience, and booking times.
- **Customizable Service Packages:**
  - Allow customers to create customized service packages that bundle multiple services at a discounted rate.
- **Subscription Services:**
  - Offer subscription models where customers can pay a monthly fee for a certain number of services or exclusive benefits.

5. Operational Efficiency Improvements:

- **Integrated Inventory Management:**
  - Develop an inventory management system that tracks product usage and automatically orders supplies when stock levels are low.
- **Advanced Scheduling Algorithms:**
  - Enhance scheduling algorithms to optimize stylist assignments and minimize downtime between appointments.
- **Resource Allocation and Optimization:**
  - Implement tools for better resource allocation, ensuring that stylists and other resources are utilized effectively to maximize salon capacity.

6. Data Analytics and Business Intelligence:

- **Comprehensive Analytics Dashboard:**
  - Provide salon owners with a detailed analytics dashboard that offers insights into customer behavior, service popularity, and financial performance.
- **Customer Segmentation:**
  - Use data analytics to segment customers based on their booking patterns, preferences, and feedback, enabling more targeted marketing and service customization.
- **Performance Metrics:**

- Track key performance metrics for stylists and services, providing data-driven insights to improve operations and customer satisfaction.

7. Integration with Other Systems:

- **Point of Sale (POS) Integration:**
  - Integrate with POS systems to streamline the payment process, allowing for seamless in-store transactions and online bookings.
- **Calendar Syncing:**
  - Sync bookings with popular calendar apps (Google Calendar, Outlook) to help customers keep track of their appointments.
- **Third-Party Service Integrations:**
  - Enable integrations with other third-party services such as CRM systems, marketing platforms, and review management tools.

8. Global Expansion Capabilities:

- **Multilingual Support:**
  - Offer multilingual support to cater to a diverse customer base and facilitate global expansion.
- **Multi-Currency Transactions:**
  - Enable multi-currency payment options to accommodate international customers.
- **Localized Marketing Strategies:**
  - Develop localized marketing strategies and content to attract customers in different regions.

6. CONCLUSION

In conclusion, the Saloon Slot Booking System is a web-based application that provides an efficient and user-friendly solution for customers to book appointments with their preferred stylists and services. The system also offers an admin panel for salon owners to manage their services, stylists, and slots. The project was developed using Python, SQL, and Streamlit, which provided a robust and scalable architecture for the system.

During the development of the Saloon Slot Booking System, we faced several challenges, including database design, user authentication and authorization, and slot availability validation. However, we were able to overcome these challenges and deliver a functional system that meets the project objectives. The user feedback we received was positive, and they appreciated the system's ease of use and the ability to view their booking history. Overall, we believe that the Saloon Slot Booking System can significantly improve the salon appointment booking process and provide a better customer experience.

7. REFERENCES

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