



“Salon Appointment Booking App”

Jayesh Karankal, Chinmay Vaishampayan, Vrunda Kulkarni, Dr. R. C. Samant

GESCOE R. H. Sapat College of Engineering Management Studies and Research, Nashik, Maharashtra.

Abstract:

The idea and features of a brand-new salon appointment booking app that aims to transform the salon business are presented in this abstract. With people depending more and more on technology in their daily lives, this app seeks to make salon appointment booking easier for both clients and salon owners.

Customers can peruse a range of salons, services, and time slots using the app's user-friendly design, which is accessible on smartphones. Customers can easily schedule appointments, choose their favorite stylists, and even leave special messages or requests using the app.

The software offers salon operators a complete administration system for effectively scheduling workers, appointments, and services. The app also provides analytics capabilities to manage inventory, monitor booking trends, and enhance business operations.

Important features include automated appointment reminders, safe payment methods, real-time availability updates, and a rating system that allows stylists and clients to leave comments.

This software seeks to improve the whole salon experience, boost productivity, and spur business growth in the dynamic beauty industry by bridging the gap between clients and salon owners.

Keywords: Flutter, Google Firebase, Salon, Mobile-based, Management system

Introduction:

Salon App explains how to easily and securely make appointments with businesses using a mobile device. A safe online appointment booking solution is suggested because many hair salons still schedule appointments manually. Customers can use this system to schedule an appointment with the hair salon at any time and from any location.

Developing a safe mobile application for the three target users of a hair salon—administrators, employees, and clients—is the aim of this project. Clients can utilize this system to select a time and day for their appointment, verify which stylists are available, and make direct reservations using the salon app. The purpose of this system is to streamline the scheduling of appointments and increase the effectiveness of corporate administration.

Literature survey:

Paper Name	Method Used	Algorithm Name	Implementation Details	Future Scope
Online Spa Appointment Booking System	1) Admin phase, 2) Customer phase, 3) Owner phase	NA	ASP .net: ASP.net is a technology that needs to be integrated into the system in order to develop applications. The application uses the MVC architecture (models, views, controllers). Visual studio: Visual Studio is used to develop applications. I developed the logic using the ASP .net MVC architecture and connected the front-end and back-end applications. Microsoft SQL management: Microsoft SQL Management is used for backend development. The database is used to store application data	By use our membership services to learn better and learn more about our products, how to use them, and how they can help your body.
An Development of Web-based Customer Relationship Management (CRM) system for Beauty Clinic	Waterfall model	NA	PHP My SQL	By using the FAST method, the author becomes easier in terms of collecting the information needed for the system requirements created in the Almeera SkinCare Beauty Clinic Service Information System..
Online Salon Appointment Booking System	1) User Registrati on and Login, 2) Appointm ent	NA	Frontend: HTML, CSS, JavaScript - Backend: Node.js, Express.js -	Expand services with AI-driven appointment scheduling and customer recommendations based on previous preferences

	<p>Booking, 3) Payment Integratio n, 4) Salon Managem ent</p>		<p>Database: MongoDB - Payment: Stripe API integration - Admin Panel: React.js</p>	
<p>A Secure Booking Appointment System with Graphical Password Authentication for Diva Hair Salon</p>	<p>1.Plannin g, 2.require mnt analysis, 3. design, 4.Implem entation, 5 Testing 6.deploye ment</p>	<p>Flowchar t available</p>	<p>The hardware that will be used is an AMD A6-9225 RADEON R4 Processor, Microsoft Windows 10 and RAM of 8GB. Next, VScode studio, phpMyAdmin database, XAMPP, Draw.io and Figma will be used to develop the booking appointment system for Diva hair salon.</p>	<p>Future improvement for the booking system are Users can do payment of deposit directly in the hair salon booking system such as implementing payment gateway, the notification of booking status changes will be sent through the user's email address and develop a calendar feature so that employees can easily view which booking slots they have each month.</p>
<p>IOI Hair Salon Management System Tan Pei Yu1 , Hairulnizam Mahdin1</p>	<p>Waterfall model</p>	<p>Flow chart available</p>	<p>In the implementation phase, the designed databases and wireframes in the previous phase are used as a guideline to develop the system. A mobile-based IOI Hair Salon Management System is created using Flutter framework and Dart client-side programming language on Visual Studio Code platform. The Firebase</p>	<p>i. To design a user-friendly IOI Hair Salon Management System for managing business-related information. ii. To develop a mobile-based IOI Hair Salon Management System for target users. iii. To test the developed system functionality and usability.</p>

			Authentication software development kit (SDK) is used to authenticate users with password and email addresses to know the identity of users and save users data securely in the cloud	
Beauty Parlour Management System	1.1 Analysis 1.2 Specification 3 Design & Development	no	HTML, Javascript, bootstrap ,CSS, JQuery	The colour detection model can be developed if we want to identify a particular colour out of a coloured photo. And the mouse movement can be developed in such a way it can act like a real mouse that will help us for using system without even touching the system's keyboard or mouse.
Enhancing Customer Experience and Satisfaction through Mobile-Based Salon and Spa Reservations on Android Platforms	1.Preliminary Analysis 2.Initial Prototyping 3.Evaluate the Prototype	no	Android	Improve overall experience of customer and barber

Proposed System:

The following technologies are employed to put the system into place:
Flutter

Google developed the open-source Flutter UI (User Interface) software development kit. It is used to create natively compiled desktop, web, and mobile applications from a single codebase.

With Flutter, developers can create code once and have it run on several platforms, including web, desktop (Windows, macOS, Linux), iOS, and Android. Its "write once, run anywhere" philosophy facilitates quick development and lessens platform-specific code duplication. The main programming language used to create Flutter apps is Dart, which was created by Google. With features including a robust type system, support for asynchronous programming, and Just-in-Time (JIT) compilation enabling quick development cycles, Dart is renowned for its simplicity, speed, and productivity.

Dart is easily learned for developers who have worked with languages such as Java, JavaScript, or C#. Google Firebase: Google offers a feature-rich platform for developing mobile and online applications called Firebase. It provides a vast array of resources and tools to assist developers in creating, enhancing, and expanding their apps.

Using the cloud-hosted Firebase Realtime Database, developers may store and sync data in real-time between users. It synchronizes data in real time using WebSockets, allowing updates to be seamlessly shared throughout linked clients. Firestore is a document-oriented database that can be used for a variety of purposes, such as social networks, e-commerce platforms, and content management systems. It saves data in collections of documents.

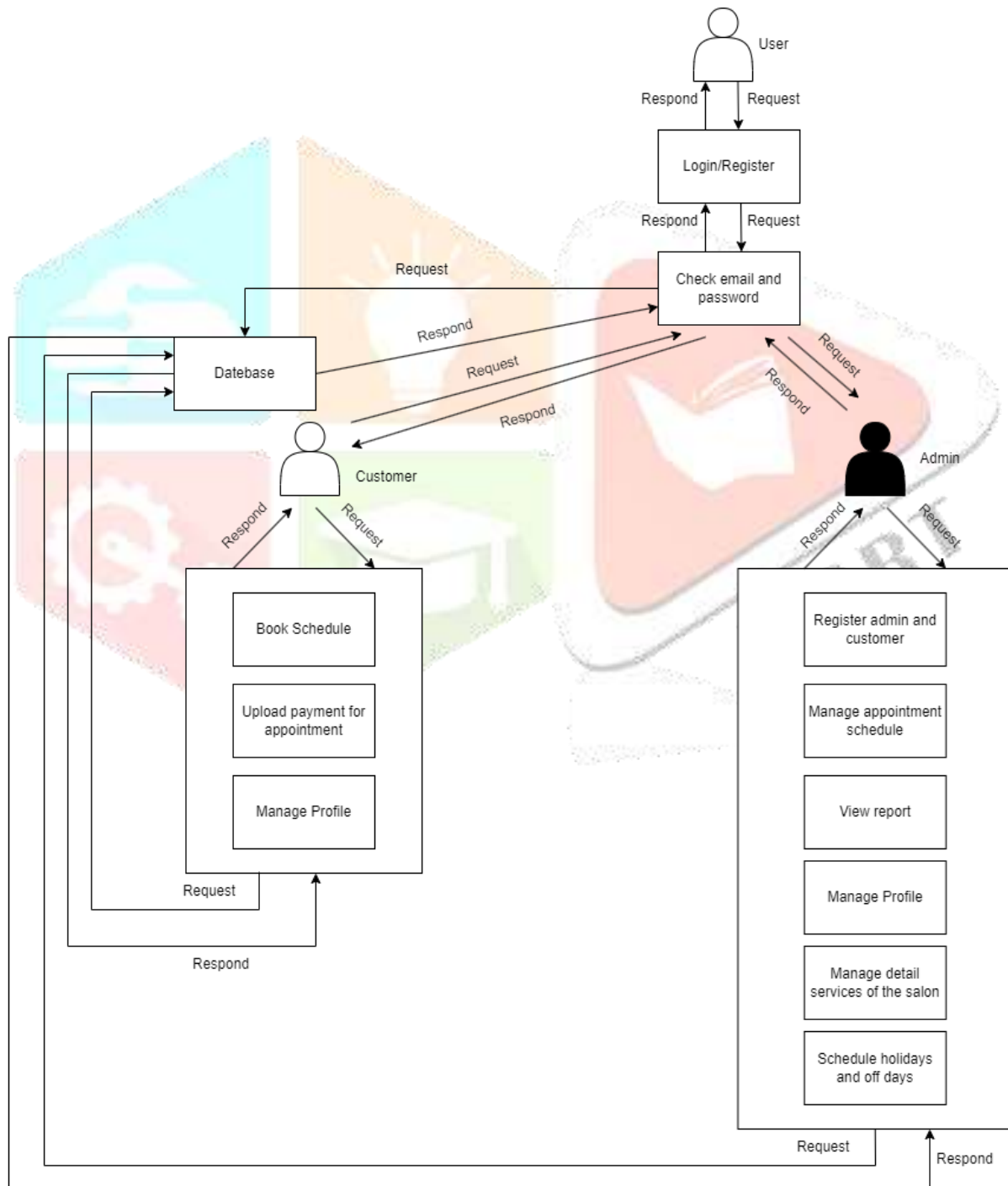


Fig (1): Architecture of system

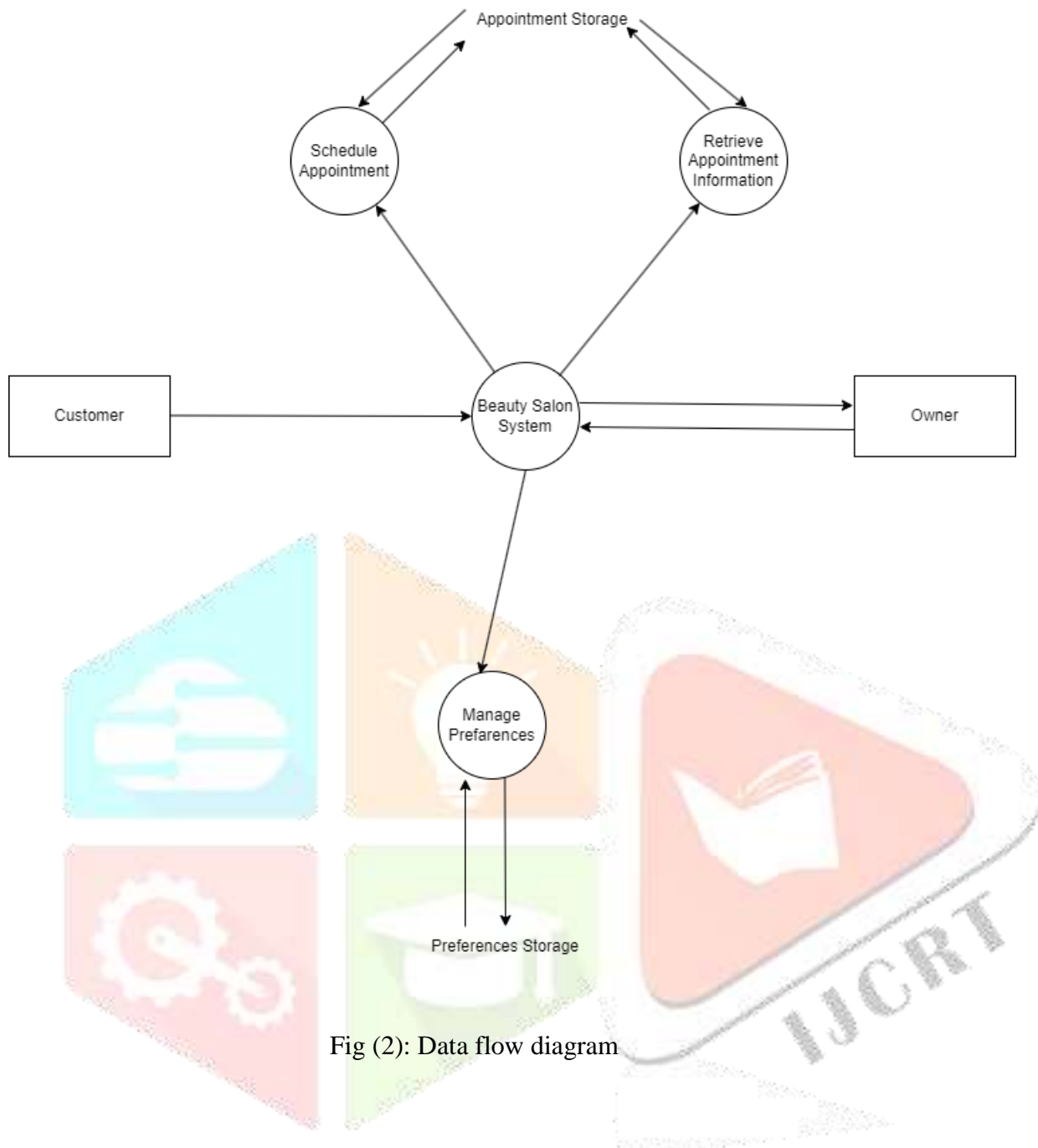
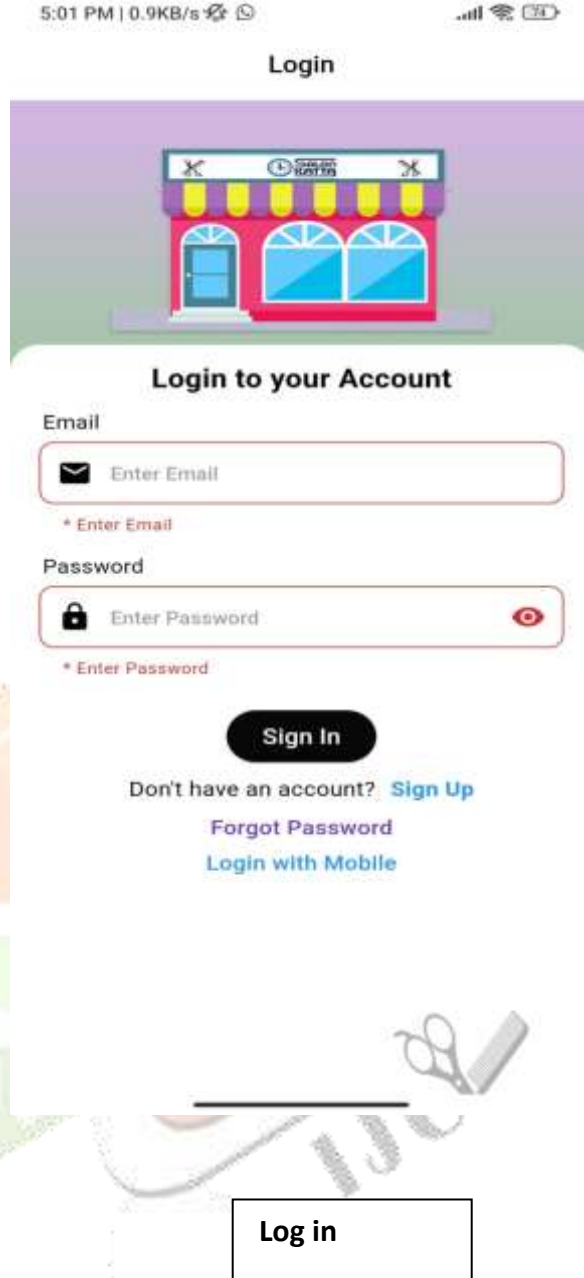
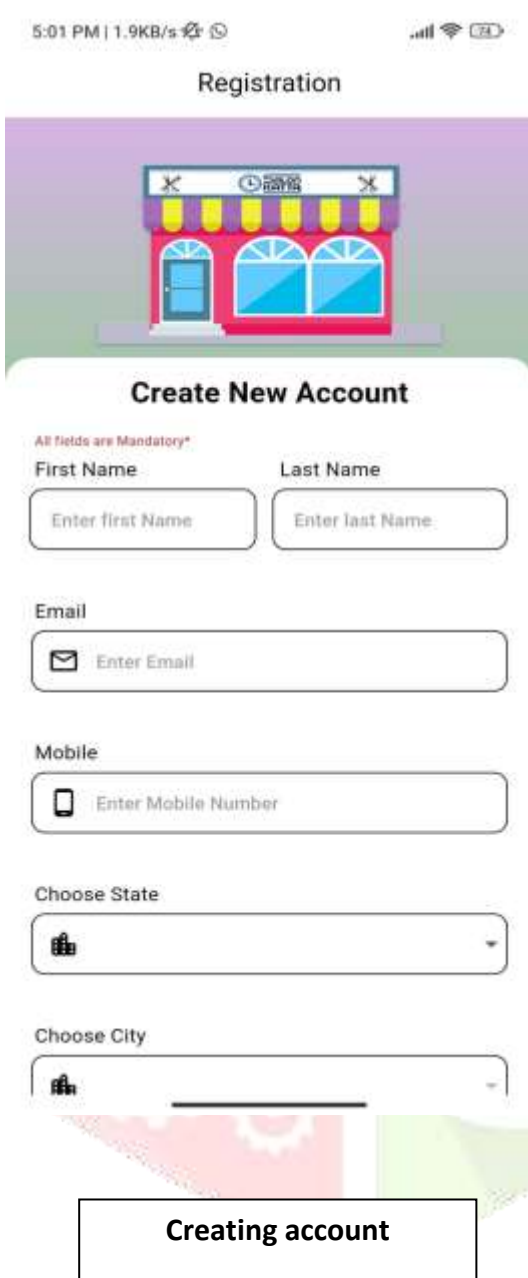
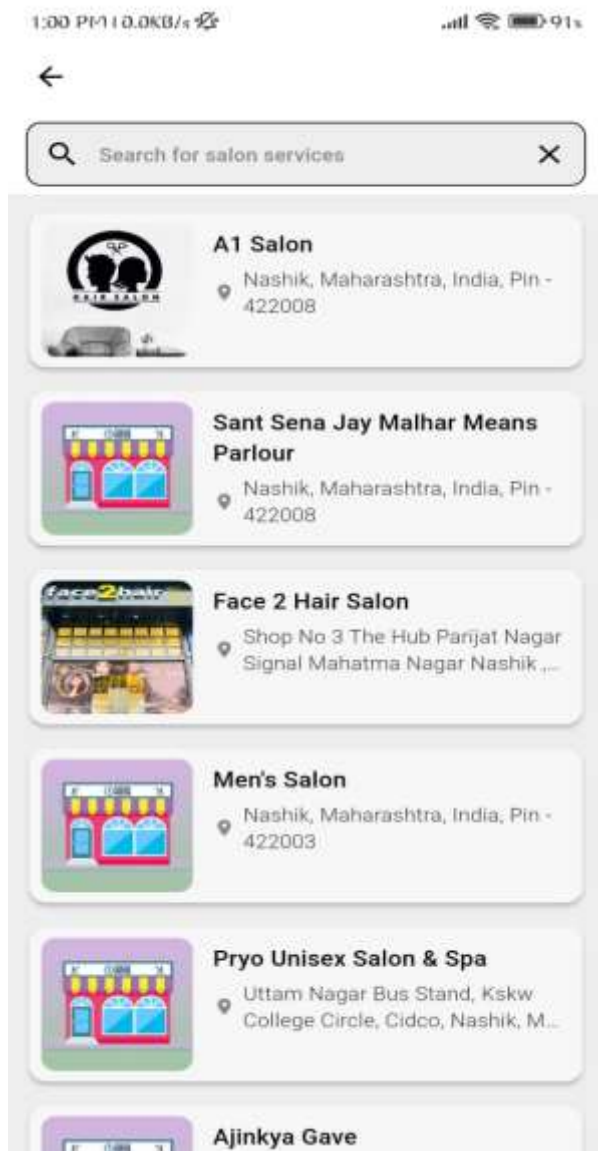


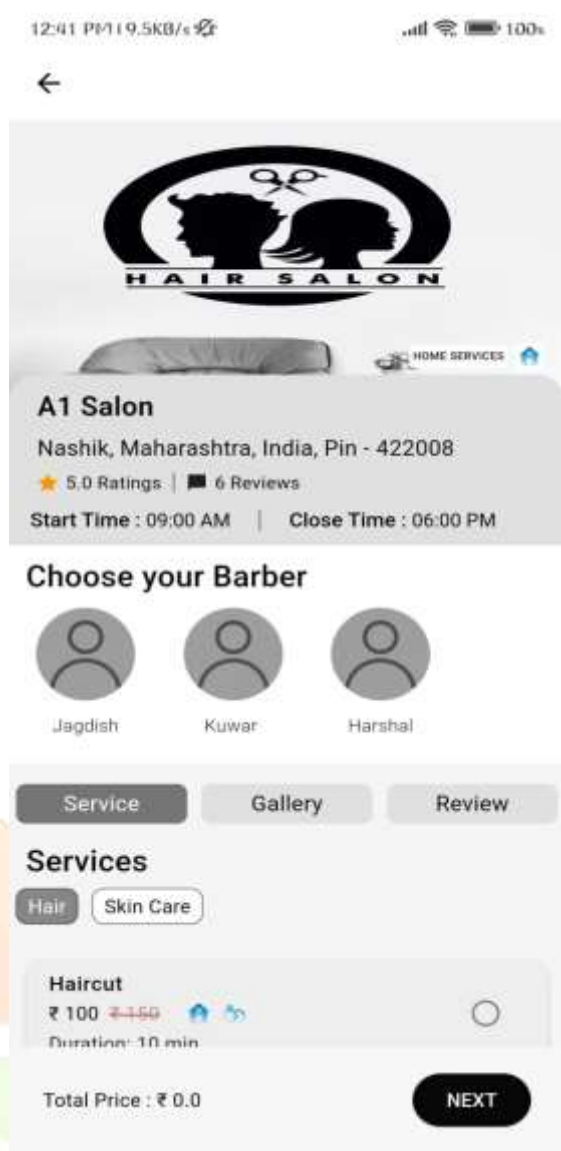
Fig (2): Data flow diagram

Screenshots:

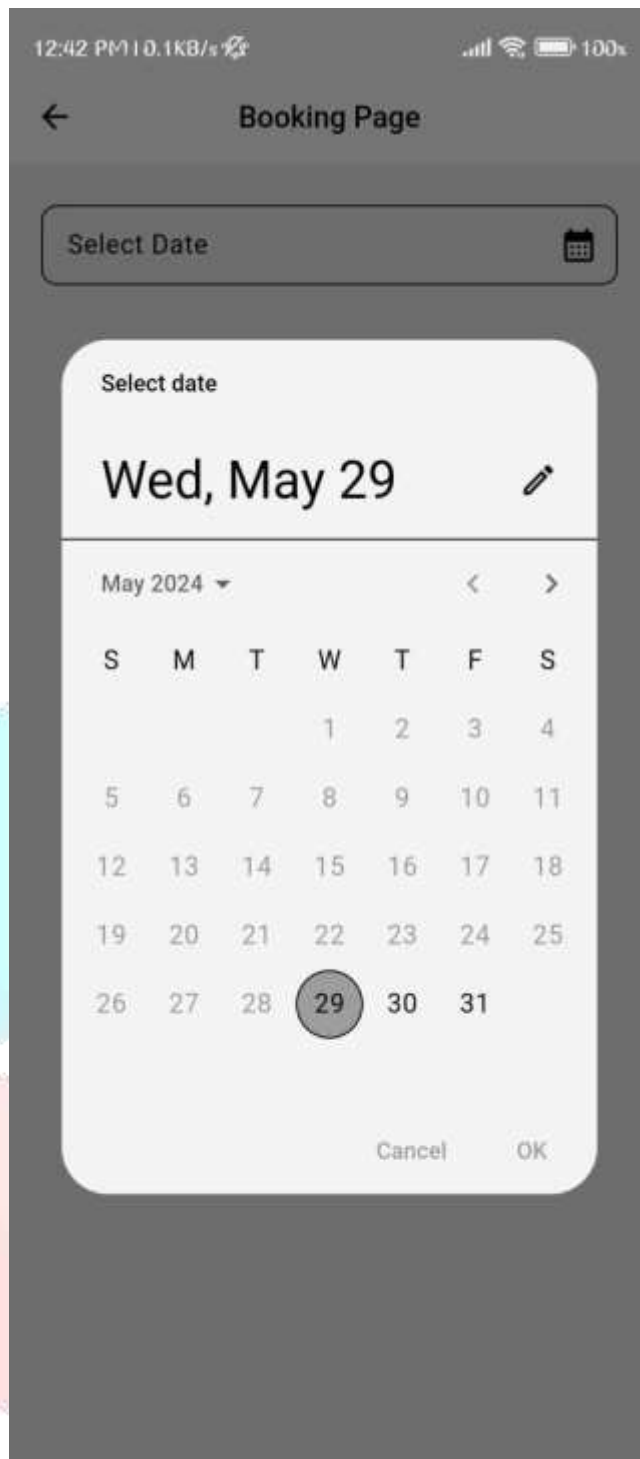




Select salon



Select barber



Selecting time and date of appointment

Methodology:

1. Login Description: Provide a secure means for users to authenticate and access their accounts.

Implementation: To authenticate users, utilize Firebase Authentication.

2. Registration Description: Make it possible for new users to sign up and access the platform.

Implementation: Create a registration form with all required fields and include Firebase Authentication into it so that users may register.

3. User Profile Management: Permit users to examine and modify the data on their profiles.

Implementation: Provide an intuitive user interface so that consumers may update their personal information. To store and retrieve user profile information, utilize Firebase Firestore.

4. Services Details Management Description: Give details about the services that are offered on the platform.

Implementation: Create an interface that shows the service information that was retrieved from the Firebase Realtime Database or Firebase Firestore.

5. Payment Description: Permit customers to pay for goods or services.

Implementation: For safe transactions, integrate a payment gateway like PayPal or Stripe.

6. QR Code Verification: Permit the use of QR codes to confirm the completion of particular tasks or services.

Implementation: Use Flutter plugins to implement QR code generation and scanning capability. For backend verification and processing, use Firebase Functions.

7. Notification Description: Inform users of significant changes, occasions, or activities.

Implementation: To send push notifications to users' devices, use Firebase Cloud Messaging (FCM).

Creation and Execution Limitations:

Platform: A mobile application built on Android.

Framework: For cross-platform development, make use of the Flutter framework.

Language: Use the Dart programming language to create the application.

Backend: For backend functionalities, integrate Firebase services (authentication, firestore, cloud functions, cloud messaging).

User Experience: Put your best effort into designing an interface that is simple to use and has a low learning curve.

Future Scope:

This system is being created as an Android-based mobile application with the Flutter framework, Dart language, and Firebase. A system that is easy to use and requires little training for users is developed. It is important to remember that this system will probably follow what is offered. In light of this, the most flexible and transportable technology ought to be applied. Since the system is operational, it possesses criticality. Employees must remain unaware of any outages in the system or observe that it returns to normal promptly (in a matter of seconds). The system needs to be dependable enough to function virtually without crashes or glitches, or it needs to have robust error recovery capabilities so that malfunctions are never revealed to its end-users.

Conclusion:

In summary, the creation of a salon booking app with Flutter is a major step toward transforming the beauty business. Through the utilisation of cross-platform programming, we have developed a flexible solution that makes scheduling appointments easier for clients and salon owners.

Not only does our app make the booking process easier, but it also improves the salon experience by offering simple-to-use features for scheduling appointments and streamlining workflow. Its easy-to-use interface meets the needs of contemporary consumers by guaranteeing accessibility and ease.

In addition, our experience with Flutter highlights how technology has the ability to completely redefine conventional business structures. We're still devoted to providing excellence and bringing about good change in the beauty business even as we develop and improve our app.

Essentially, our salon booking app is a monument to creativity and a driving force behind the ongoing development of customer-focused companies in the digital era.

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