SAVITRIBAI PHULE PUNE UNIVERSITY

A
PROJECT REPORT
ON

"Appointment Booking in healthcare"

A project work submitted to the Department of Computer Engineering, SITS , Narhe , Pune.
In the fulfillment of the requirements for

LABORATORY PRACTICE II
Third Year (Computer Engineering)

By

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3. Aarti Swami	**(3202065)**

Under the guidance of
Mr. Akash Mhetre

Sinhgad Institutes

DEPARTMENT OF

COMPUTER ENGINEERING

SINHGAD INSTITUTE OF TECHNOLOGY& SCIENCE, NARHE, PUNE

(2022– 2023)

SINHGAD TECHNICAL EDUCATION SOCIETY'S

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NARHE, Pune – 411 041

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DEPARTMENT OF

COMPUTER ENGINEERING

CERTIFICATE

This is to certify that final project work entitled **"**Appointment Booking in healthcare**"** was successfully carried by

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in the fulfillment of the Lab Practice II course in third year Computer Engineering, in the academic year 2022-2023 prescribed by the Savitribai Phule Pune University.

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Dept. of Computer Engineering	**Dept. of Computer Engineering.**

Principal

Dr. S. D. Markande

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1. Introduction

In today's fast-paced world, efficient appointment management has become essential for individuals and businesses alike. With the rapid advancements in technology, mobile applications have become a popular choice for managing appointments conveniently and effectively. Flutter, a cross-platform framework developed by Google, provides developers with the tools to create visually appealing and feature-rich mobile applications. When combined with Firebase, Google's mobile and web application development platform, Flutter becomes an even more powerful tool for building robust appointment management applications.

In this project, we will explore the development of a Flutter-based appointment application with Firebase integration. The application will allow users to schedule appointments, manage their calendars, receive reminders, and interact with service providers seamlessly. By leveraging Firebase's real-time database, cloud storage, and authentication features, we can create a secure and reliable appointment application that can scale to accommodate a large user base.

Throughout this project, we will discuss the key features of our appointment application, including user authentication, real-time data synchronization, push notifications, and intuitive user interfaces. We will dive into the Flutter framework, exploring its widgets, state management options, and navigation capabilities, all of which are crucial for building a seamless user experience. Additionally, we will explore the Firebase platform, learning how to integrate it with our Flutter application to handle data storage, authentication, and notification services. By the end of this project, you will have a solid understanding of how to develop a professional appointment application using Flutter and Firebase. You will be equipped with the knowledge and skills to build your own custom features, tailor the application to specific business requirements, and deliver a reliable and user-friendly experience to your users.

2. Scope

The healthcare appointment booking process can be improved in several ways:

Online Booking: Enhance online platforms to allow patients to book appointments directly through websites or mobile apps, reducing the need for phone calls and saving time for both patients and healthcare providers.

Real-Time Availability: Provide real-time availability of healthcare professionals and appointment slots, allowing patients to choose the most convenient time for their visit.

Automated Reminders: Implement automated appointment reminders via email, SMS, or mobile app notifications to reduce no-show rates and ensure patients remember their scheduled appointments.

Telemedicine Integration: Integrate telemedicine options into the appointment booking system, enabling patients to schedule virtual visits when appropriate, increasing access to healthcare and reducing the need for in-person appointments.

Patient Profiles: Develop comprehensive patient profiles that include medical history, allergies, and previous appointments, enabling healthcare providers to offer personalized care and make informed decisions during appointments.

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Wait Time Updates: Provide patients with real-time updates on wait times, allowing them to plan their arrival accordingly and minimize time spent in waiting rooms.

Feedback Mechanisms: Implement feedback mechanisms for patients to rate their appointment experience and provide suggestions for improvement, facilitating continuous enhancements in the booking process.

Integration with Electronic Health Records (EHR): Integrate the appointment booking system with the patient's electronic health record to streamline information sharing and ensure continuity of care.

Mobile Check-In: Enable patients to check-in electronically upon arrival using their mobile devices, reducing paperwork and contact with physical surfaces.

Multi-lingual Support: Offer multi-lingual support in the appointment booking system to accommodate patients with diverse language preferences and improve accessibility.

3. Requirements

3.1) Software Requirements:

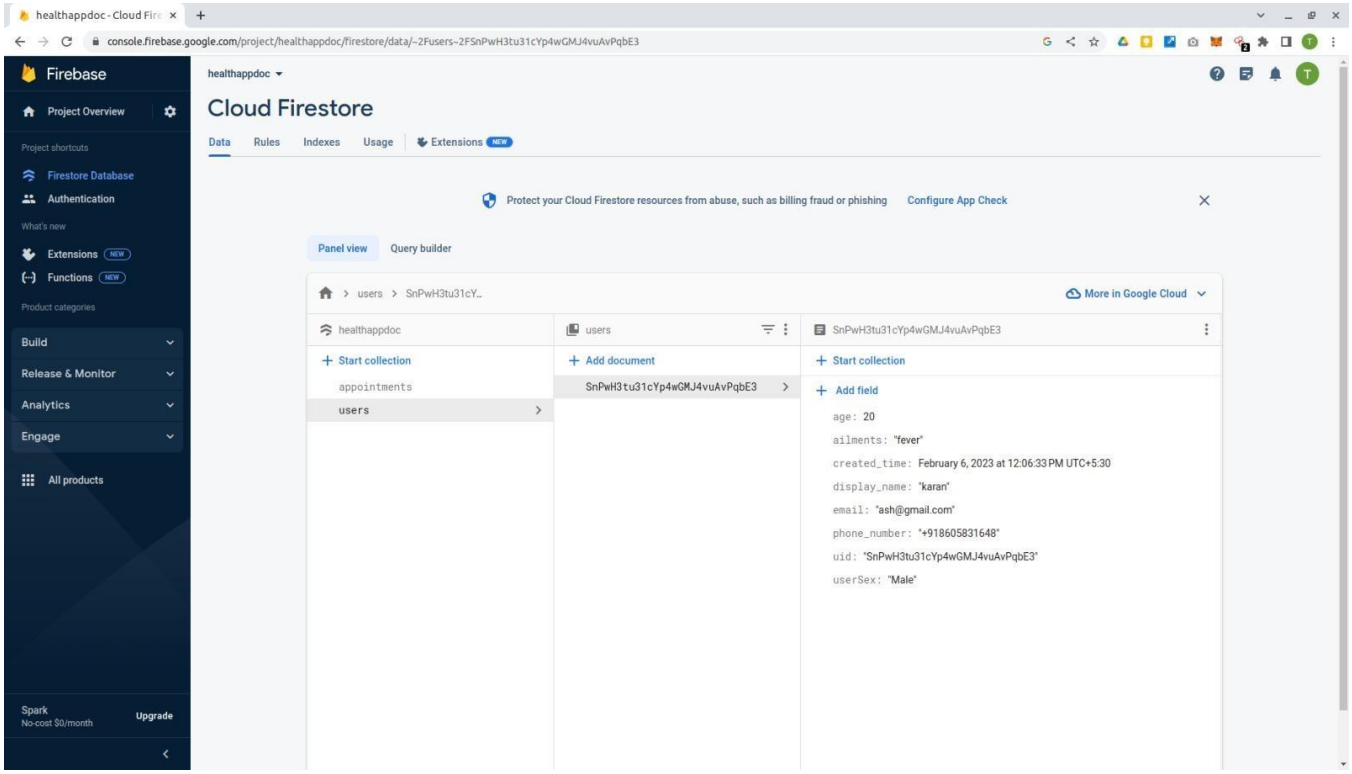
- Operating System : Windows 7/10/11, Ubuntu Language : Flutter, firebase

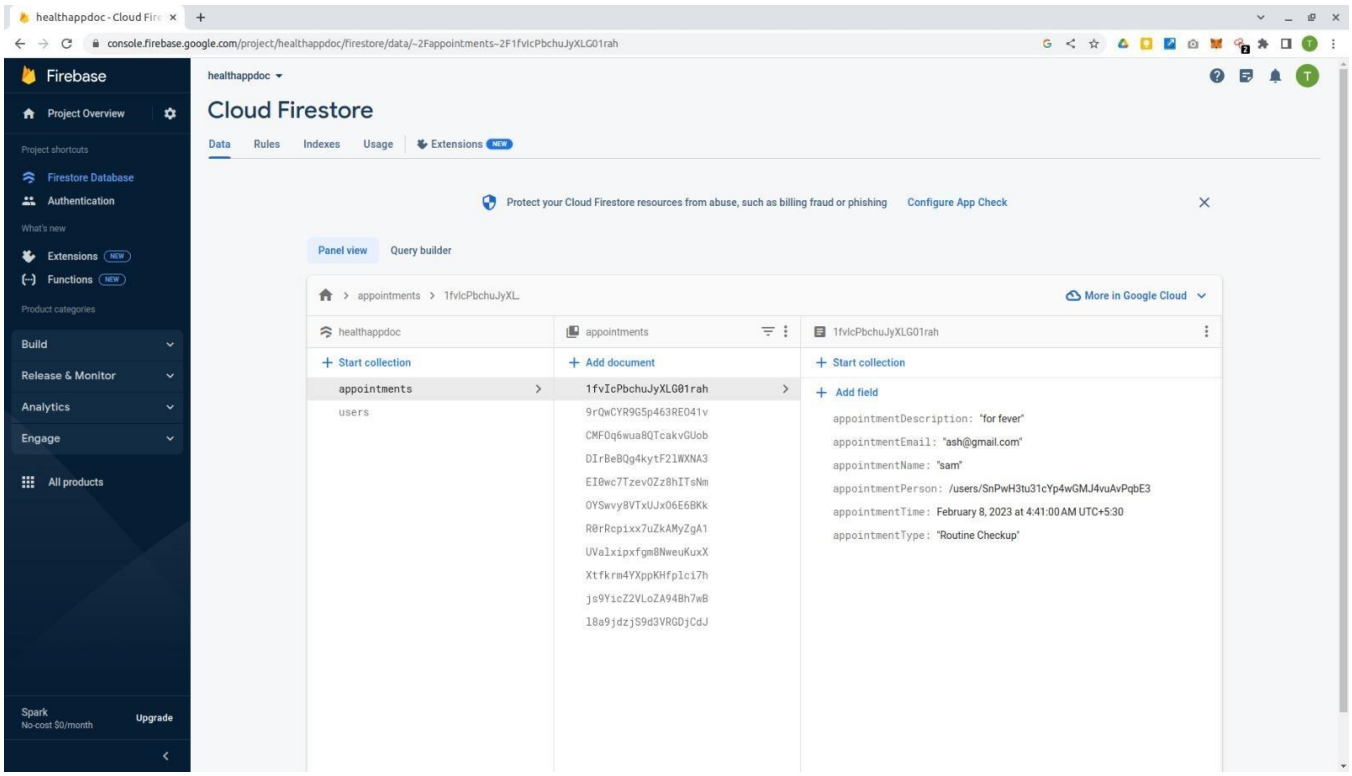
3.2) Hardware Requirements:

- Processor: Intel Core i5
- RAM: 2 GB or More
- Hard disk: 500 GB or More
- Internet Connection

4. Graphical user interface

The Proposed System is a Stack overflow clone Application which shows all the information.

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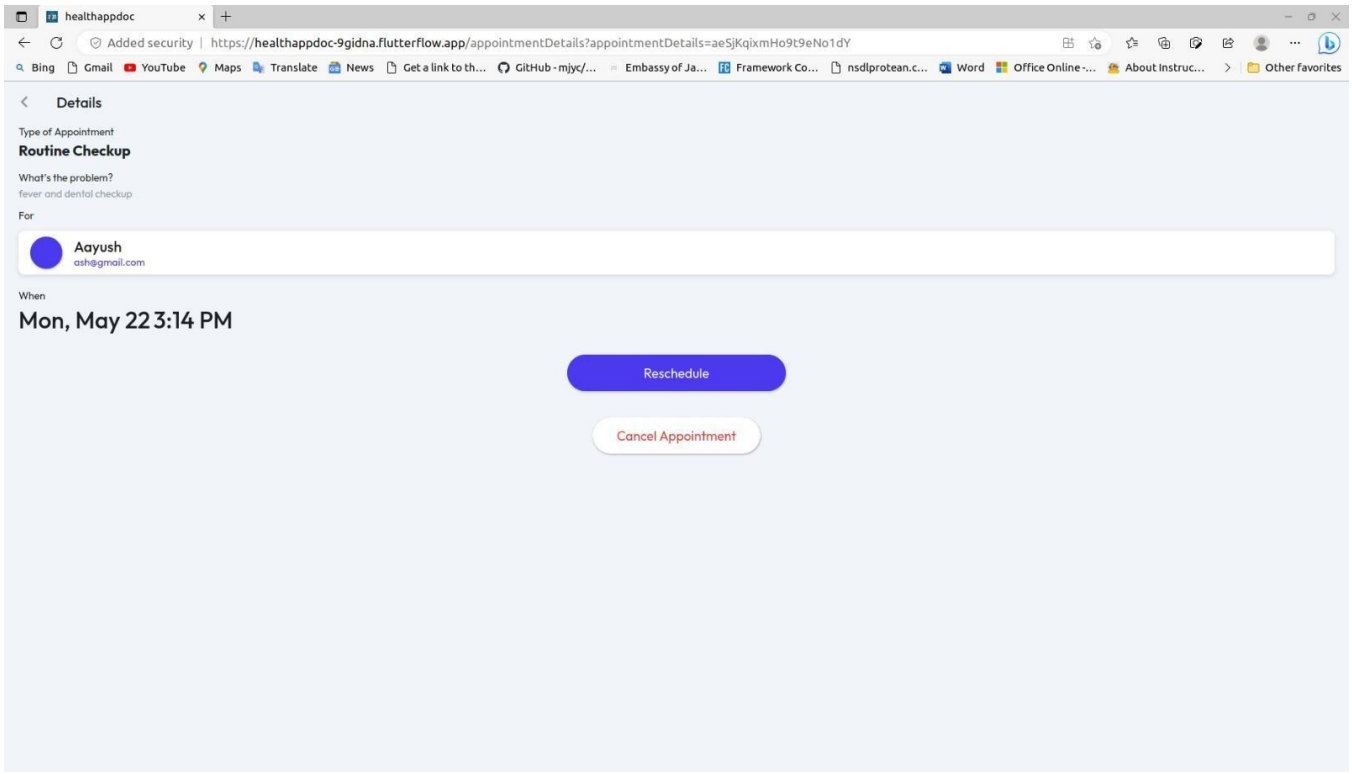
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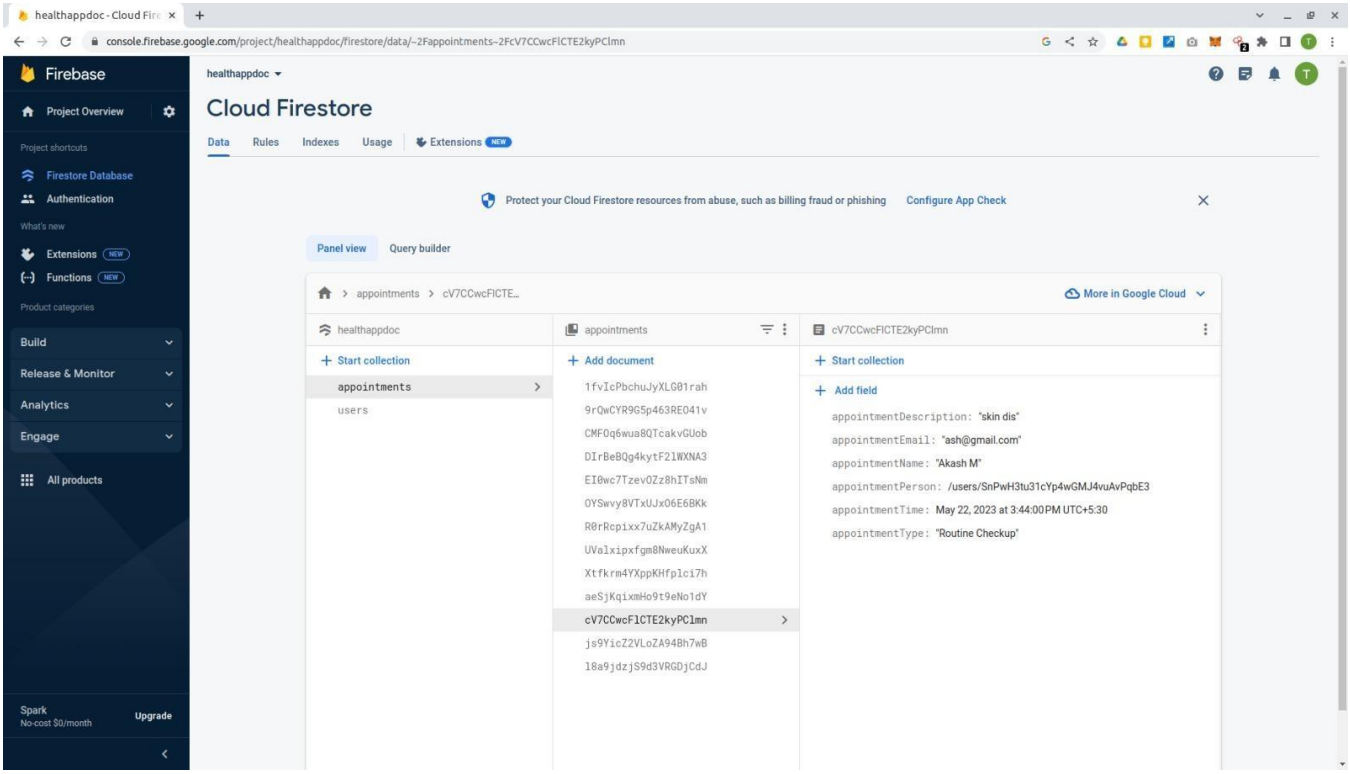
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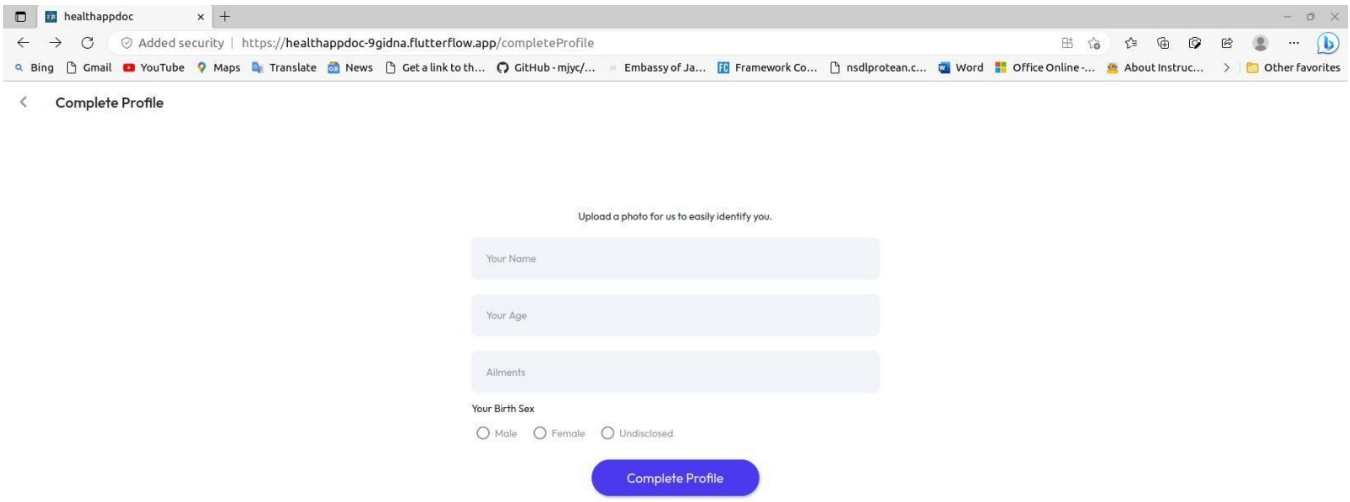
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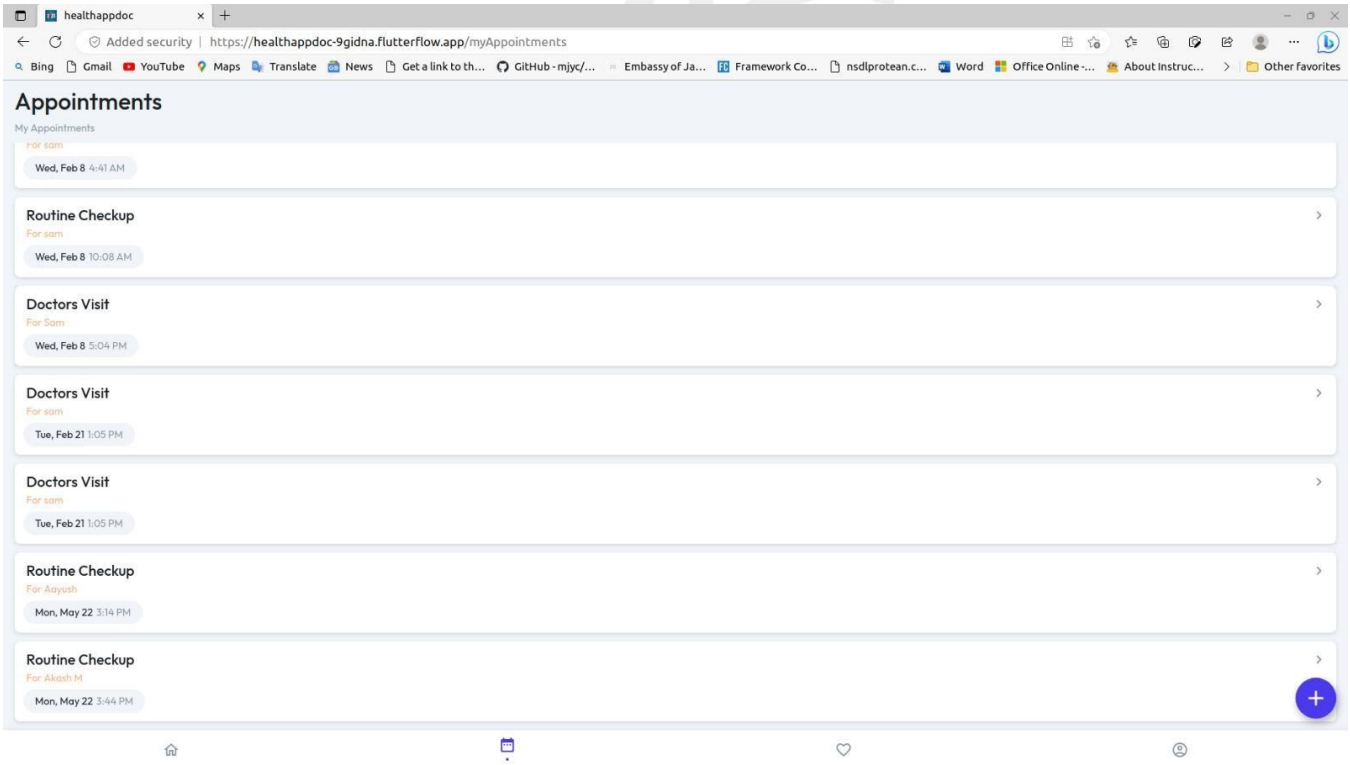
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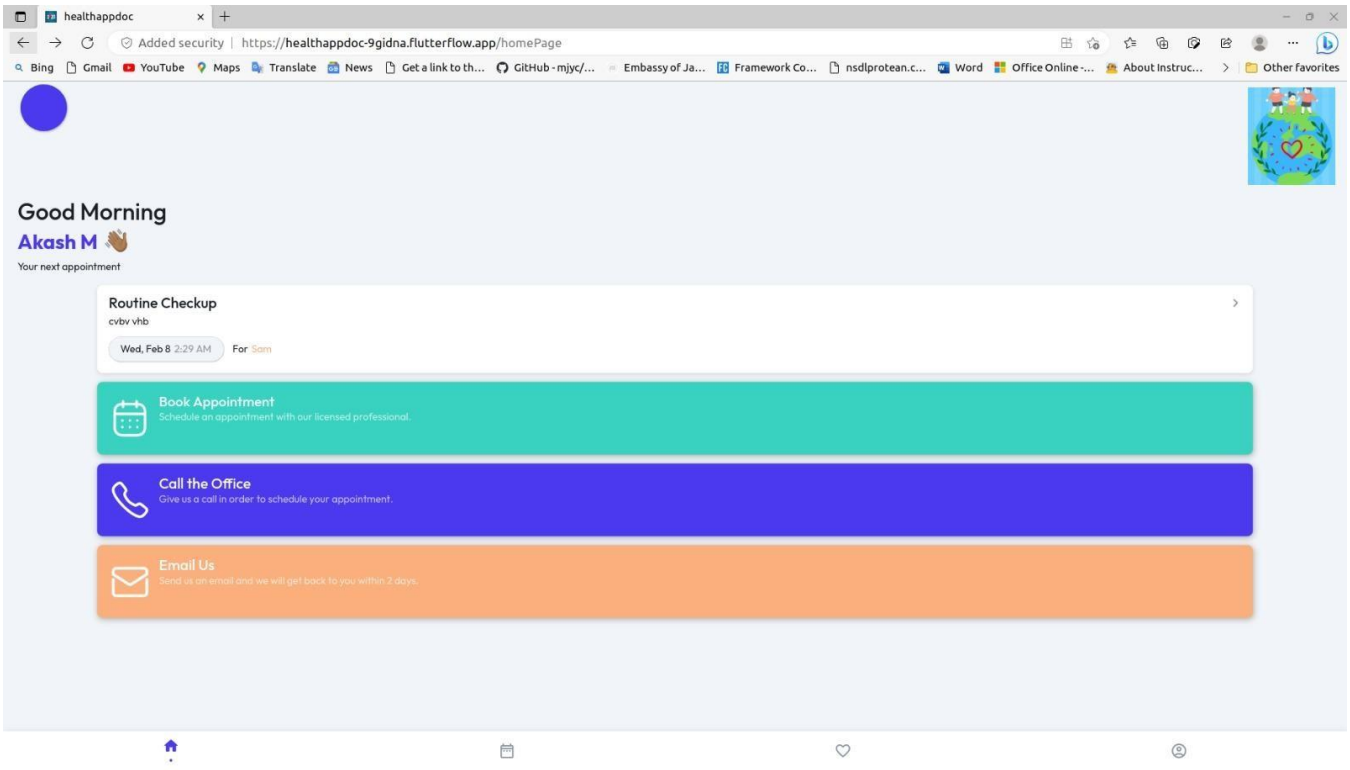
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Call the Office
Give us a call in order to schedule your appointment.
Email Us
Send us an email and we will get back to you within 2 days.

5. Conclusion

In conclusion, the development of a Flutter-based appointment application with Firebase integration provides a powerful solution for effective appointment management. By leveraging the capabilities of Flutter, we can create a visually appealing and responsive user interface, ensuring a smooth and engaging experience for both service providers and clients. Integrating Firebase into our application enables us to leverage its robust backend services, including real-time data synchronization, authentication, and cloud storage.

Throughout this project, we have explored the key features and functionalities required to build an appointment application, such as user authentication, data storage, and push notifications. We have learned how to utilize Flutter's widget library, state management options, and navigation system to create a seamless user experience. Additionally, we have integrated Firebase into our application, utilizing its real-time database, authentication services, and cloud storage capabilities.

The combination of Flutter and Firebase offers a comprehensive and efficient development environment for building cross-platform appointment applications. Whether you are developing an application for a small business, a healthcare provider, or a service-based organization, this project has equipped you with the necessary knowledge and skills to deliver a reliable, scalable, and userfriendly solution.

By harnessing the power of Flutter and Firebase, you can now embark on your own journey of creating innovative appointment applications, providing convenience, and improving efficiency for users worldwide.