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Patient Profile & Health Consulting Application

Nishant Shingole[1], Vinit Patil[2], Omkar Prabhu[3], Aniket Pawar[4]
Computer Department, MGM'S College of Engineering & Technology Navi Mumbai, Mumbai University

Abstract: ***The Patient Profile and Health Consulting application is a mobile health tool developed using Android Studio. The application allows patients to create and manage their health profiles, including personal information, medical history, medications, allergies, and vital signs. Additionally, patients can use the application to consult with healthcare professionals remotely. The application's user interface is intuitive and easy to navigate, allowing patients to input and update their health information quickly. The app features secure logins and data encryption to ensure patient privacy and confidentiality. The health consulting feature allows patients to connect with healthcare professionals, including doctors, nurses, and other medical staff, through booking an appointment. Patients can use this feature to ask questions about their health conditions, receive medical advice, and request prescription refills. The application also includes medication reminders and an appointment scheduler to help patients manage their medications and medical appointments efficiently. Furthermore, the app provides personalized health recommendations and resources to help patients maintain a healthy lifestyle. In conclusion, the Patient Profile and Health Consulting application is a comprehensive mobile health tool designed to empower patients to take control of their health. The application's user-friendly interface and remote consulting feature make it a valuable resource for patients seeking convenient and accessible healthcare services***

Keywords: Android Studio, Firebase, Patient, Disease, Health Consulting.

I. INTRODUCTION

Patient profile and health consulting applications are becoming increasingly popular as people are more interested in tracking their health and seeking professional advice. These apps allow users to create a profile, enter personal health information, track symptoms, and receive customized advice from healthcare professionals. Android Studio is a popular integrated development environment (IDE) used to create Android apps. It provides a wide range of tools and features that make app development easier, including a layout editor, code editor, and debugging tools. When developing a patient profile and health consulting application, it's important to consider the privacy and security of user data. The app should comply with healthcare regulations and follow best practices for securing user information. One key feature of the app could be the ability to connect with healthcare professionals. This would allow users to receive personalized advice and recommendations based on their specific health needs. Another useful feature could be the ability to track medication schedules and set reminders for taking medication. The app could also provide information about drug interactions and side effects. Overall, a patient profile and health consulting application can help users take control of their health and receive professional guidance and support. By using Android Studio, developers can create a user-friendly and secure app that meets the needs of patients and healthcare professionals alike.

II. LITERATURE REVIEW

Literature review is a critical evaluation and analysis of existing research and publications on a particular topic. In the case of developing a patient profile and health consulting application using Android Studio, a literature review would involve reviewing the current state of research and development in the field of health applications, patient profiles, and mobile app development. To conduct a literature review on this topic, you could begin by searching relevant academic databases such as PubMed, Google Scholar, and IEEE Xplore. Some possible search terms might include "mobile health applications," "patient profiles," "health consulting," and "Android app development." As you review the literature, be sure to critically evaluate the quality and relevance of each source. Look for articles and publications that are based on empirical research or that provide in-depth analysis and insight into the development and implementation of health applications. Also, be sure to consider the methodology and limitations of each study, as well as any potential biases or conflicts of interest. Based on your review of the literature, you might identify some key trends and best practices for developing a patient profile and health consulting application using Android Studio. For example, you might find that successful health applications often incorporate features such as personalized feedback, goal setting, and social support. You might also discover that user experience and design are critical factors in the success of health applications, and that a user-cantered design approach is recommended.

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A. Existing System

1) *Electronic Health Records (EHRs):* These systems are used by healthcare providers to store and manage patient health information. EHRs can provide a wealth of information to patients and healthcare providers, but they are often not accessible to patients themselves.
2) *Health Information Exchange (HIE):* HIE allows healthcare providers to share patient information across different systems, which can be useful in providing better patient care. However, HIE can be complex to set up and may not always be available in all healthcare settings.
3) *Patient Portals:* These are web-based applications that allow patients to access their health information and communicate with healthcare providers. Patient portals are becoming more common, but they can be difficult to navigate and may not be available to all patients.

III. METHODOLOGY

Frontend development is done using XML and backend development is done using java. For storing the data and authentication purpose and two step verification we have used firebase. API key (razor pay) is being used for payment. Also, for GPS and games we have used the Google maps API key and the specific games API key. Android Studio is the official integrated development environment (IDE) for Google's Android operating system, built on Jet Brains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, mac OS and Linux based operating systems. It is a replacement for the Eclipse Android Development Tools (E-ADT) as the primary IDE for native Android application development

A. Data Collection Methods

The data collection methods for the Patient profile & health consulting application included online surveys and user feedback sessions. The online surveys were distributed through social media platforms and email lists to potential users of the application. The surveys included questions related to the features and functions that users would like to see in the application, as well as their preferences for the design and layout of the application.

The user feedback sessions were conducted with a diverse group of potential users of the application. The sessions were led by a moderator and were designed to gather in-depth feedback on the user experience and user interface of the application. The sessions also allowed users to provide suggestions for additional features and functions that they would like to see in the application.

B. Data Analysis Techniques

The data collected from the surveys and user feedback sessions were analyzed using a combination of qualitative and quantitative techniques. The qualitative data collected from the feedback sessions were transcribed and coded for themes and patterns using a grounded theory approach. The quantitative data collected from the surveys were analyzed using descriptive statistics to identify trends and patterns in the data.

The analysis of the data was used to inform the design and development of the Patient profile & health consulting application. The user-centered design approach allowed for the development of a comprehensive platform that addresses the needs and preferences of potential users.

C. Development Process

The development of the Patient profile & health consulting application was done using the Android Studio development environment. The application was developed using Java programming language and the Android SDK (Software Development Kit). The development process included the following steps:

1) Planning and Design: The features and functions of the application were designed based on the feedback received from users.
2) Development of User Interface: The user interface of the application was designed using XML layouts and was implemented using Java programming language.
3) Development of Backend Functionality: The backend functionality of the application, such as location tracking, user profiles, registration, login, events, rituals, documents, and chat section, was developed using Java programming language and the Android SDK.
4) Testing and Refining: The application was tested extensively to ensure that it was functional and user-friendly. The feedback received from testing was used to refine and improve the application.

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D. Block Diagram

1) Block Diagram

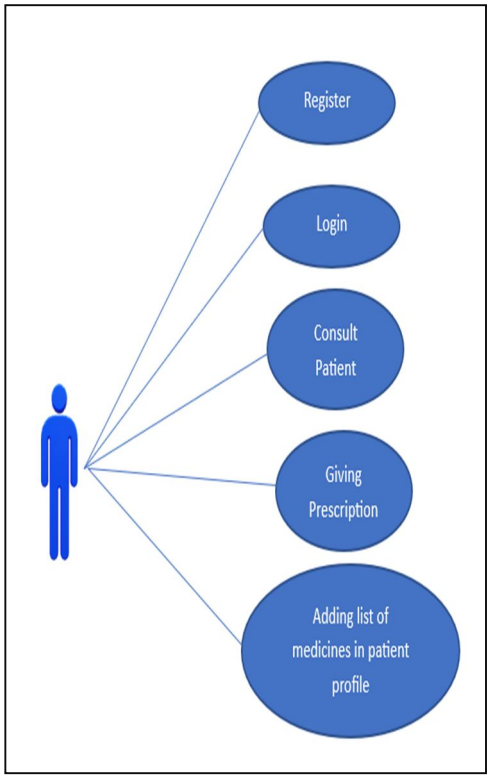


Fig 3.1: Doctors Module

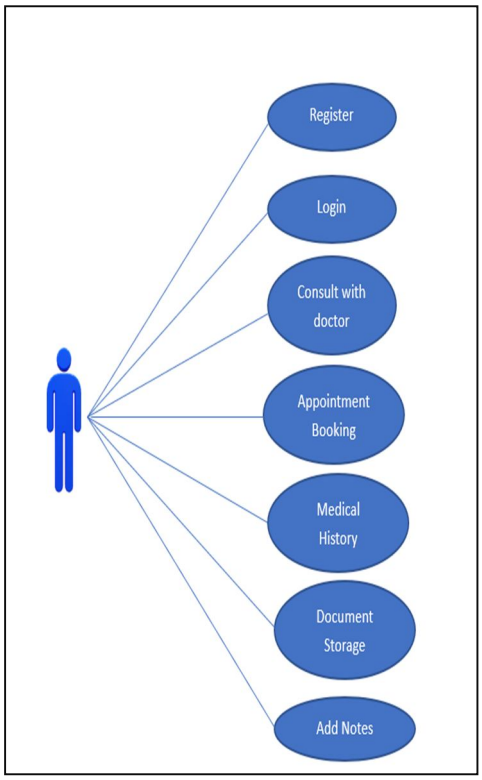


Fig 3.2: Patients Module

2) Interface Design



Fig 3.3: Splash Screen

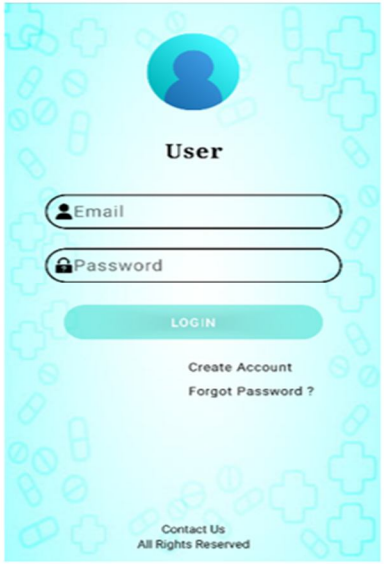


Fig 3.4: Login Screen

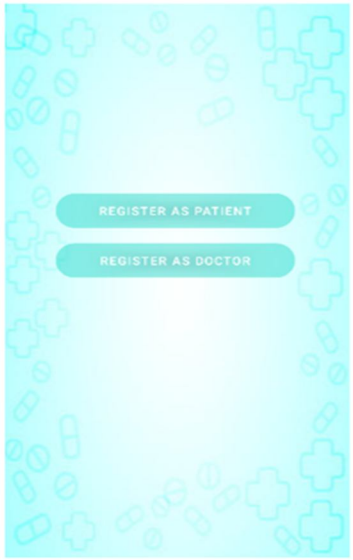


Fig 3.5: Register Screen

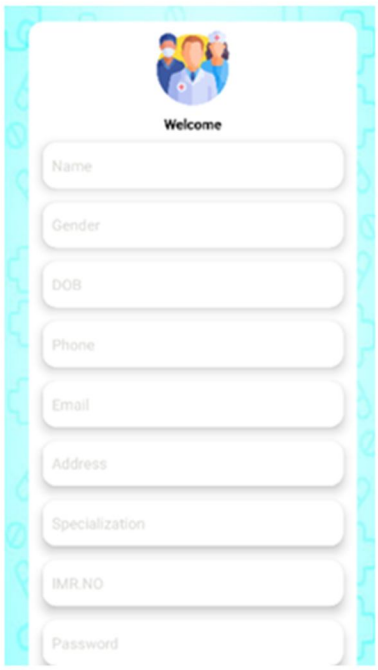


Fig 3.6: Doctor Registration

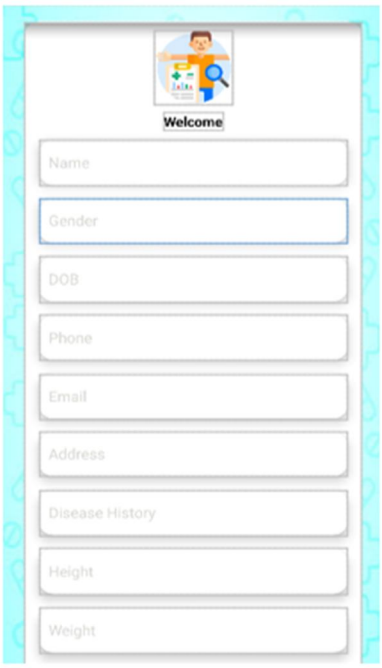


Fig 3.7: Patient Registration

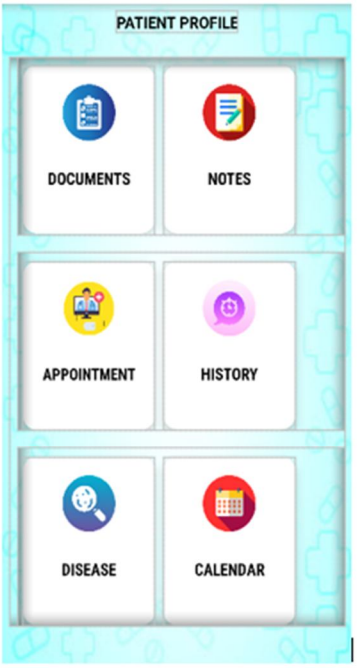


Fig 3.8: Main Screen



Fig 3.9: Reports Screen



Fig 3.10: Notes Screen



Fig 3.11: Calendar Screen

IV. CONCLUSION

In conclusion, developing a patient profile and health consulting application using Android Studio can be a game-changer in the healthcare industry. With the increasing use of smartphones and the internet, this app can provide patients with convenient access to healthcare services and healthcare providers with an effective way of monitoring and managing patient health. The app can also improve communication and reduce healthcare costs by reducing unnecessary hospital visits. To develop such an app, a strong understanding of Android development and healthcare requirements is necessary. As such, developers must be knowledgeable about the latest trends in mobile app development and healthcare technology. Additionally, it is important to ensure that the app is user-friendly, secure, and complies with all necessary privacy laws and regulations. Overall, the development of a patient profile and health consulting application can significantly enhance the quality of healthcare services, making it more accessible, efficient, and convenient for both patients and healthcare providers.

V. FUTURE SCOPE

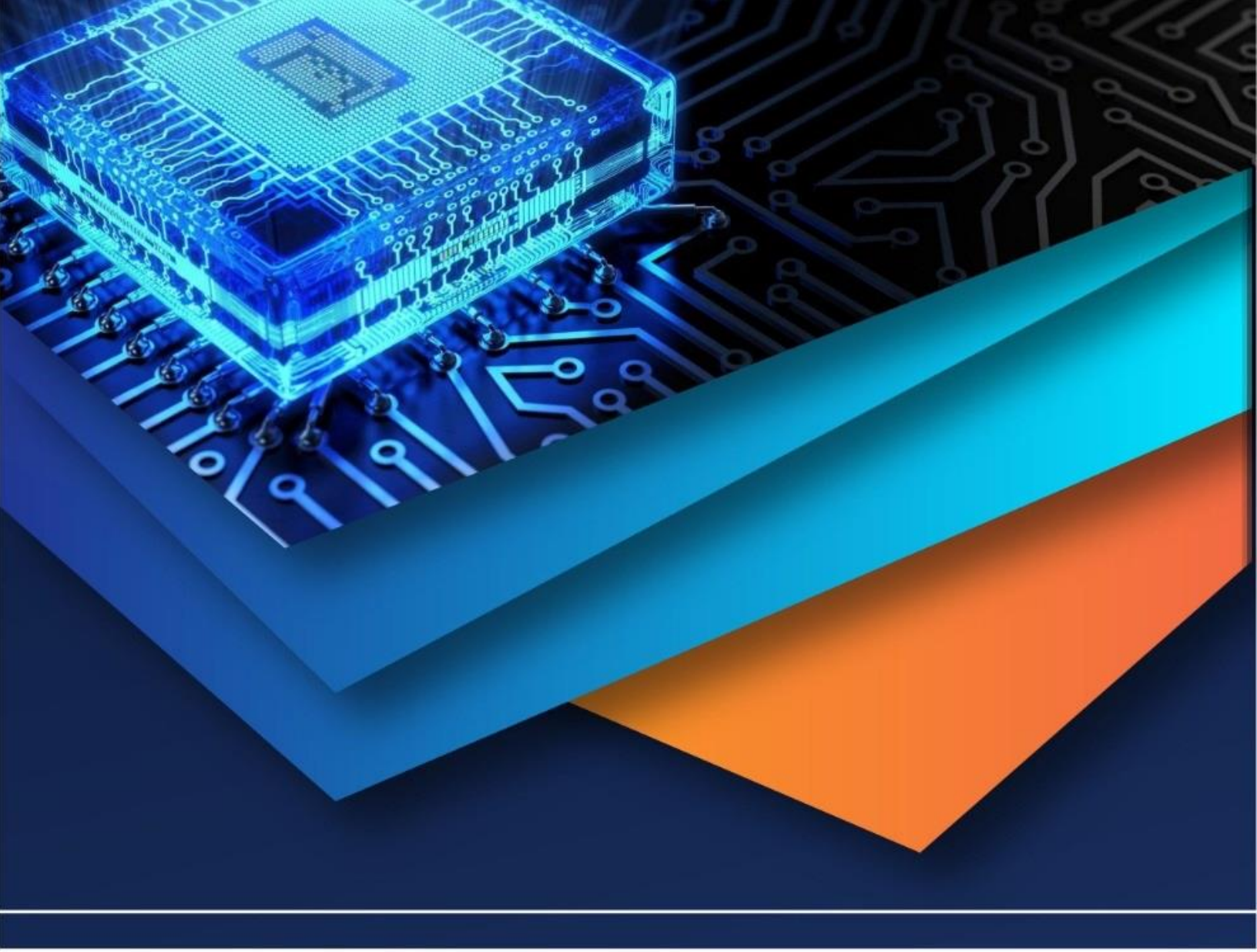
Patient profile and health consulting applications are becoming increasingly popular as people are becoming more health-conscious and are looking for convenient ways to manage their health. The future scope of such applications using Android Studio is immense, and *here are some of the potential developments that can be expected in the future:*

1) *Artificial Intelligence (AI) and Machine Learning (ML) Integration:* AI and ML technologies can be integrated into patient profile and health consulting applications to provide more personalized and accurate health recommendations. The application can use data such as the patient's medical history, lifestyle, and demographics to generate customized health plans, suggest suitable diets and exercises, and give medication reminders.
2) *Wearable Device Integration:* Integration with wearable devices such as fitness trackers and smartwatches can help in real-time monitoring of patient health. The application can collect data such as heart rate, sleep patterns, and daily steps to provide a more comprehensive analysis of the patient's health and suggest lifestyle modifications accordingly.
3) *Telemedicine:* The application can be integrated with telemedicine features, allowing patients to consult with doctors virtually. Patients can use the application to book appointments, send images or videos of their symptoms, and receive diagnosis and treatment plans from doctors.
4) *Block chain Technology Integration:* Block chain technology can be integrated into the application to ensure the security and privacy of patient data. The technology can also be used to maintain an immutable record of patient health data, which can be accessed by authorized parties such as doctors and insurers.
5) *Gamification:* Gamification can be used to motivate patients to achieve their health goals. The application can use game-like features such as rewards and leaderboards to encourage patients to follow their health plans and adopt healthy habits.

Overall, the future scope for patient profile and health consulting applications using Android Studio is vast, and there is a lot of potential for innovation and growth in this field. However, it is important to ensure that these applications comply with relevant data privacy and security regulations to protect patient data.

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