Medical Helper Using OCR

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Abstract -*In Today's Day to Day Life, more often patients may forget to take their prescribed medications on time, which may lead to delayed in their recovery from that disease. Therefore, it is very important for every patient to take right dosage of medication in right time. So our platform is based on an android application in which user can take a picture of the medicines and with the help of OCR the system will automatically print the text on the screen and save the details of the medicines, it's dosage and it's time. The reminder will remind the patient to take their medicine.*

Key Words: Medical Helper Using OCR, Android, Medicine, MS SQL 2008, Java.

1. Introduction

This is an innovative Android Application System for any user mostly targeting the aged population as a medical helper. The user or anyone behalf of the user can enter the medicine reminders such as tablet color, name, quantity and when it should be taken with a reminder. The reminder helps the user to look into the details of tablets that he or she has to take and will also speak out the details. This is advance application where a doctor himself can enter the details for the patients helping him or her to remind the user. The System also helps the user to click picture of medicines or make use of OCR where the system will make use of the camera and print the text on the screen and the user has to tap the text to save them. The System uses Mobile Vision API for Implementing OCR. This can also be a medium of not typing the name of a medicine while using OCR instead saving lot of time. This system can be useful for a person where he has many tablets to intake. Thus, the system has been named as medical helper.

2. Existing System

The existing system is the one that is currently in use. After studying and analyzing all the existing android applications related to medication reminder, we have concluded with some features of the existing system which reduced their popularity.

- In current scenario, User cannot get notification about the tablet reminder, tablet detail and handy doctor details.
- User has to enter the details of their medicines, time, no of dosage manually.
- In the Existing one, doctor cannot directly enter the reminder for their patients.
- There is no direct communication between patient and doctor to share health related information between them.
- There is nothing automatically done in the existing systems, all the works has to be done manually by the user.

3. Methodology

We have completed the following tasks in the manner described below in order to complete this project:

- Literature Review: This was the first stage, in which we had gone through various number of research papers related to this subject.
- Identifying Problem: In the Next stage we identify many problems after going through the various research papers.
- System Design: In This stage, we have created the user interface for both panel which are user panel and admin panel so that they can access their information.
- Solution: The Last stage was to find out potential solutions so that users can make use of this application for their betterment of health and also for the doctors who can take a check on their patient whenever they want.

4. Proposed System

Considering the anomalies in the existing system computerization of the whole activity is being suggested after initial analysis. The android application is developed using Android Studio with JAVA as a programming language. Proposed system is accessed by two entities namely, Doctor and Patient. Doctor and Patient ,both need to register first in order to login with their valid login credentials to access the android application. After successful login, both can access all the modules and perform/manage each task accurately. Doctor can perform task such as Search a patient and view their details, set a can view all the queries from the patient and answer them all. They can also manage tablet details and set a reminder for a specific tablet to be taken on time. Patient can also click picture of tablet while adding a tablet details. Patient can ask their health-related queries to the doctor and chat with them.
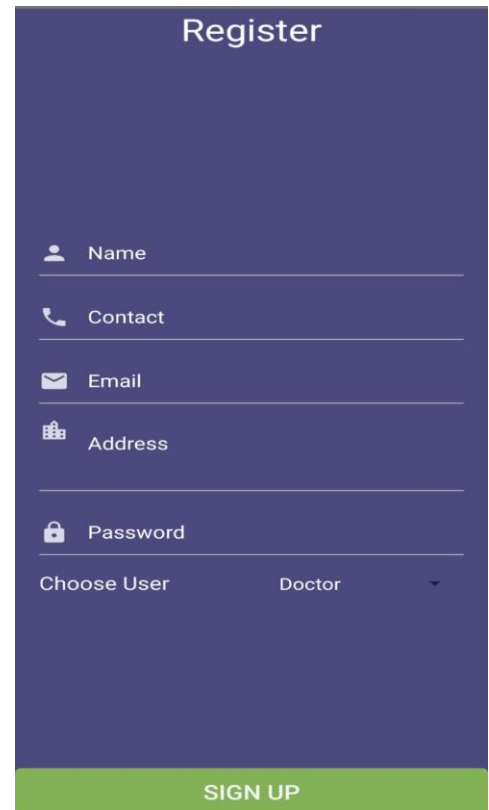
1. Doctor-panel:
    •Registration: The doctor needs to register into the application.
    •Login: The doctor has to login to make use the of the system and is remembered until he logs out.
    •Search Patient: Doctor can search for a specific patient
    •Tabs: Doctor can mark reminders and add tablets and add other attributes along with them for Patient.
    •Queries: A doctor can view all the queries a patient have and answer them in chat section.
    •Notifications: All the management related notifications can be viewed by the doctor.
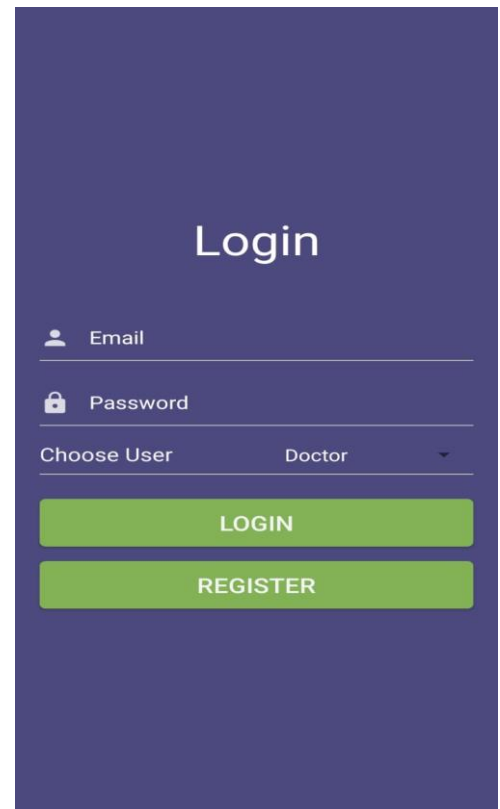
2. Patient-panel :
    •Registration: A patient need to register first in order to login into the application
    •Login: Patient can now login using valid login credentials.
    •Tabs - The user has to add the tablets and its details.
    •Reminders - The user can mark reminders and add tablets and add other attributes along with them.

•Search Doctor & Queries: Patient can search for a specific doctor and ask their queries.

•Notification for Chats: Patient can view all the notification related to chats.

5. Result
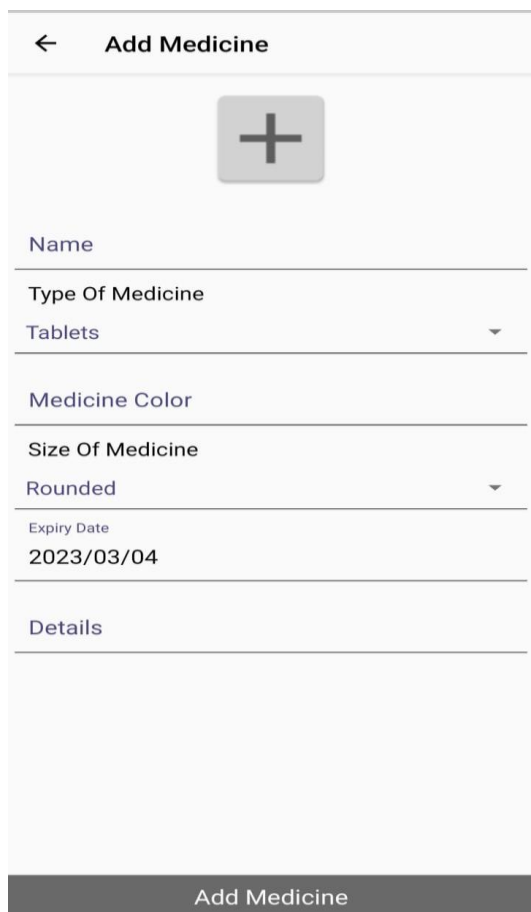
Fig -1: Registration Page

Fig -2: Login Page

Fig -3: Add Medicine Details

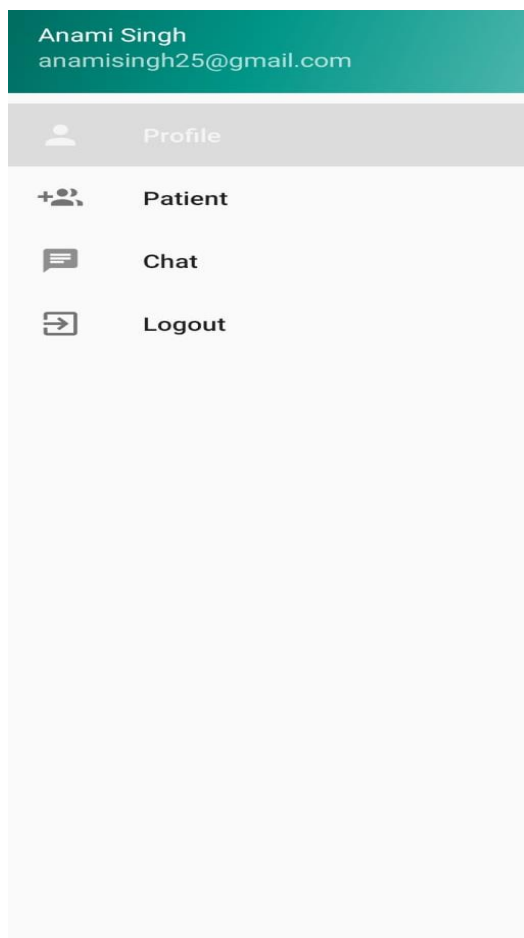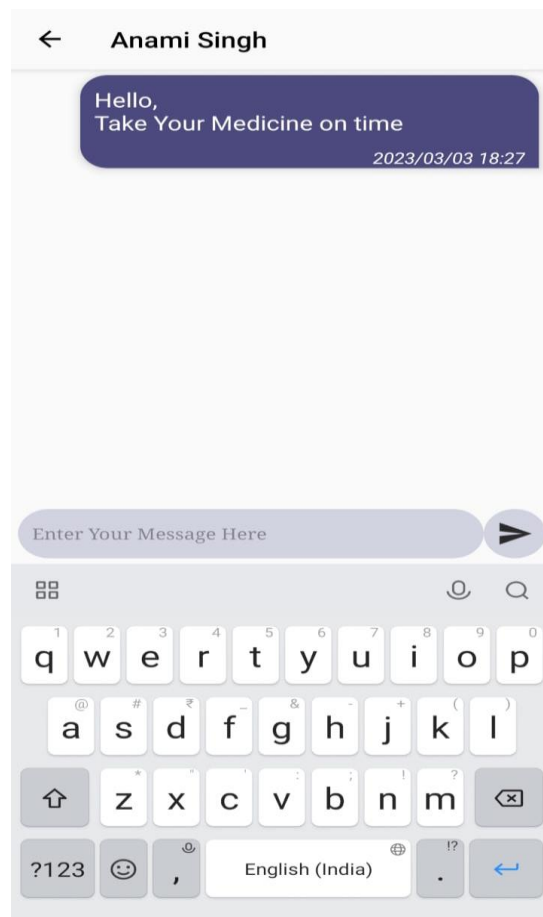**Fig -5**: Add Reminder Details

Fig -5: User Details

Fig -6: Chat Details

6. Conclusion

This was our project of System Design about "Medical Helper using OCR" Android application based on Java. The Development of this system takes a lot of efforts from us. We think this system gave a lot of satisfaction to all of us. Though every task is never said to be perfect in this development field even more improvement may be possible in this application. We learned so many things and gained a lot of knowledge about development field. We hope this will prove fruitful to us.

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