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SSN College of Engineering, Chennai

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Project Name: Health Hero – Medicine App

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Motivation

- The need for a application to connect all the stake-holders of the medical industry through a well developed digital network.

- To improve the lives of patients, doctors and others through services like online registration, communication, exposure to latest medicines and treatments and specialists.

Problem Statement

- To develop a medical application to for medical industry stakeholders to communicate through an online network

- Implement the application in the domain areas of Android application, Chatbot technology and Augmented Reality.

Objectives

- The project is aimed at establishing a connection between the many stakeholders of the medical/health industry such as medical patients, doctors, reports and laboratories, medical herb cultivators, pharmaceutical companies, transporters/logistics etc. so as to improve overall efficiency and communication between them.
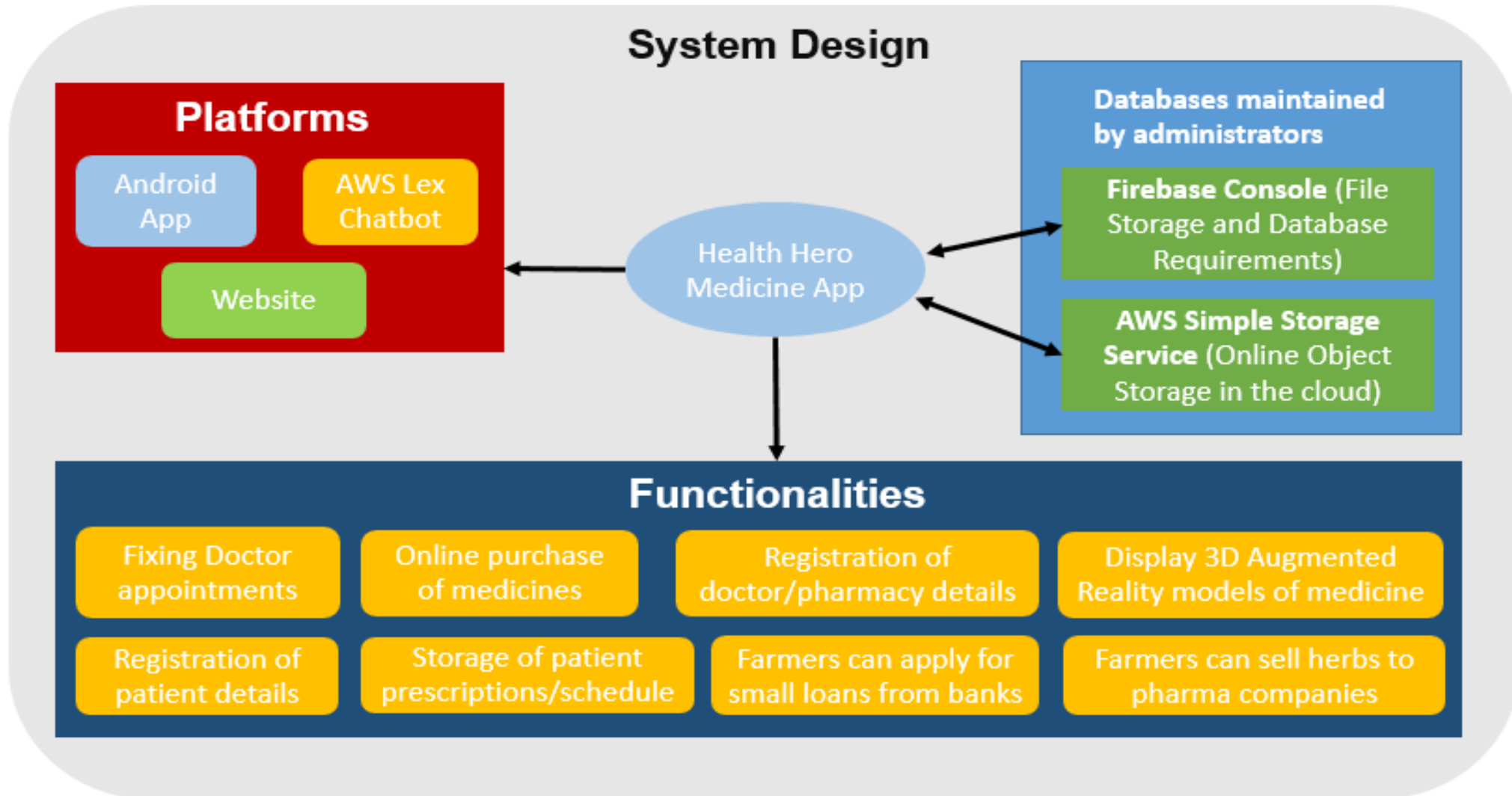
- The project is designed to be multi-platform with Website, Android app (smartphone and smartwatch) and Chatbot platforms for deployment.

- In addition, it aims to be a first-of-its-kind project which aims to integrate the entire process of medicine or medical service manufacture/distribution for users to access at their fingertips and construct a smart digital ecosystem.

Literature Survey/Existing System

Medical apps like Practo provide services similar to this project

- Practo Creates a digital presence for the Clinic/Hospital's Services

- Practo helps patients around the Clinic/Hospital's area discover the services offered by them and book appointments

- Practo provides more information on qualifications / experience of medical professionals in their facility

- Practo coordinates with the doctor/front desk to assist in the appointment booking process for the Clinic/Hospital

Proposed System Design/Use Case

Methodology

The User classes are as follows:

• Patient - Individual with medical issues, archived reports, prescriptions, medical appointments regarding personal ailments stored in the project.

• Pharmacists - Individual with store inventory listed on the project for Patients and Doctors to refer and buy easily online.

• Doctor - Individual with access to patient reports, prescriptions, appointments and information about upcoming medicines/drugs in the market.

- Herb cultivators - Individual/group that uses the project to sell their produce to pharma companies at their fixed prices or to connect to banks/self-help groups for small loans.

- Pharma Company - Individual that represents a group. Works with cultivators, transporters, logistics, and doctors to facilitate the production and sale of medicines/drugs.
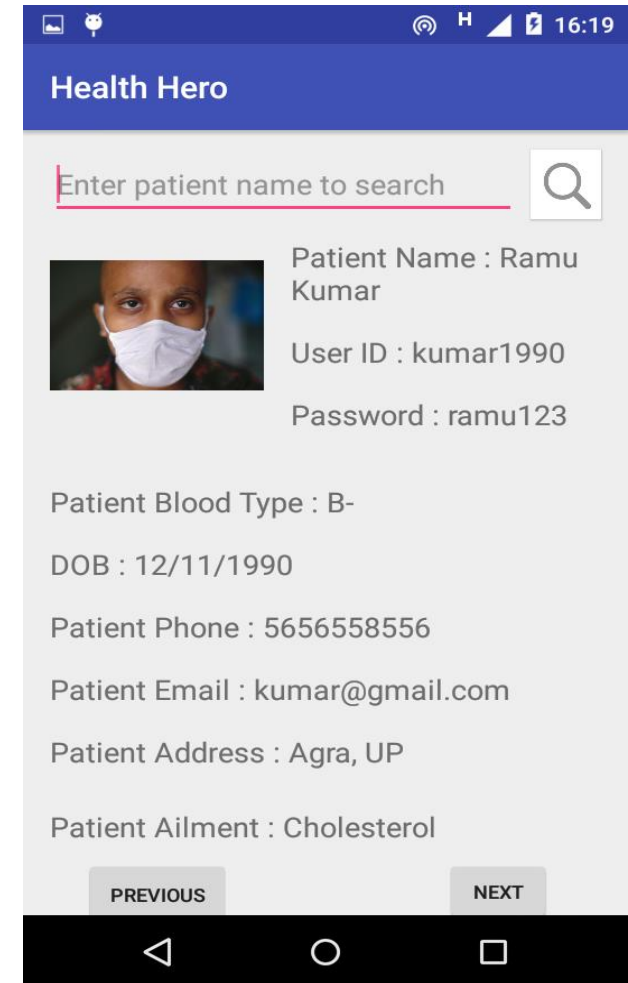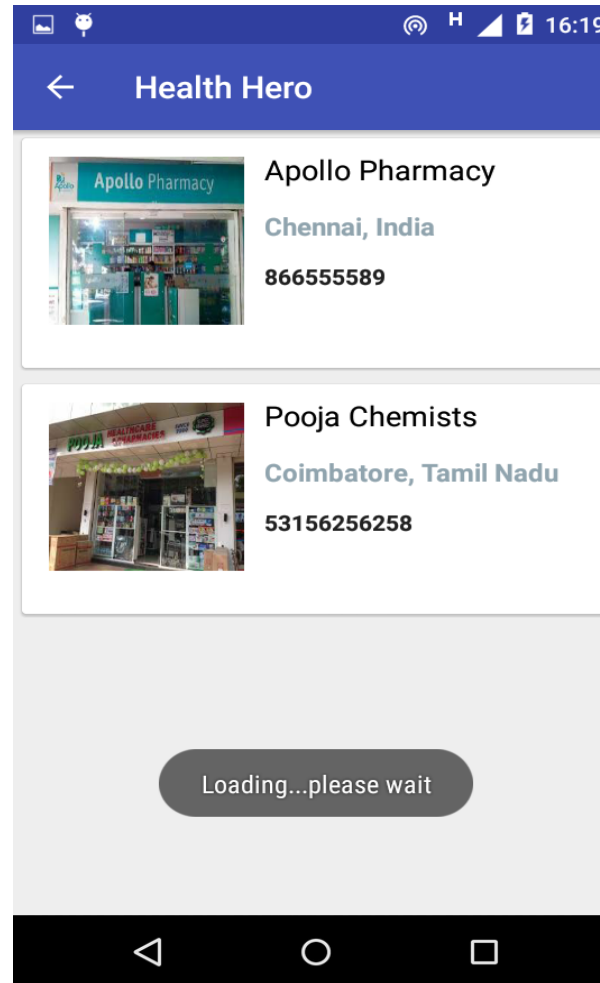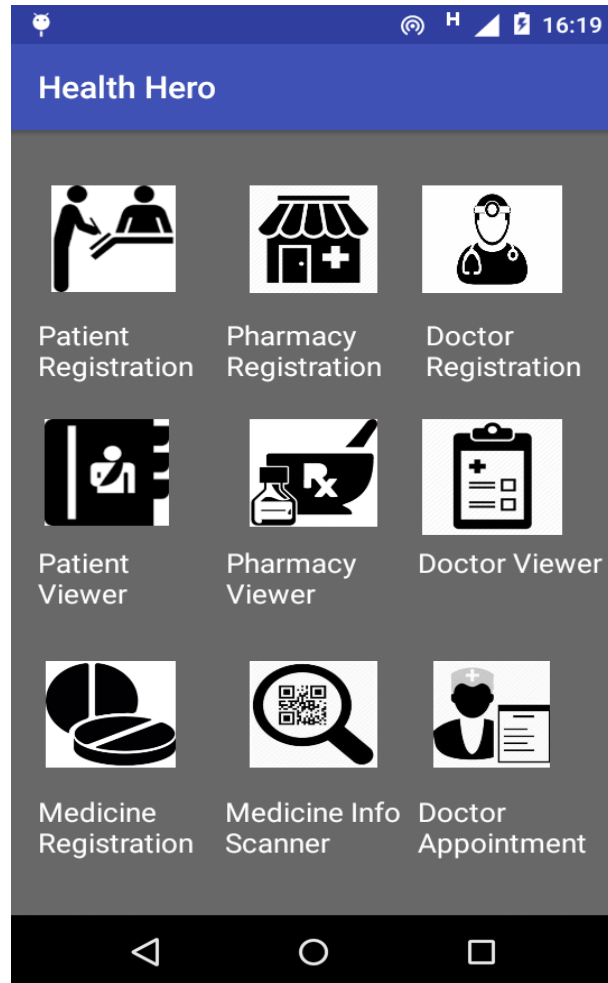
Implementation

- Separate registration and login for patients, doctors and pharmacists

- Patient records, prescriptions and appointments screen which can be shared to doctors and pharmacies.

- Booking appointments at doctor's clinic/hospital by patients through the app.

- UI for a list of pharmacies/shops registered with their individual list of medicines available for sale.

Use of software technologies like:

- Android Studio with Firebase cloud support

- Unity and Vuforia for Augmented Reality

- Amazon Web Services for chatbots development using AWS Lex

Results

Panel 1

> Test bot (Latest)   Ready. Build complete.

I would like to order some fever medicines

What is your name?

Eric

What medicine would you like to order form this list?

Fever Medicines
Doctors recommend these for your fever

[Crocin]

[Paracetamol]

[Vicks]

Clear chat history

Chat with your bot...

Panel 2

> Test bot (Latest)   Ready. Build complete.

What day do you want the Crocin to be picked up?

6 March 2019

Pick up the Crocin at what time on 2019-03-06?

Available Timings
Select Timings for picking up your delivery

[9 am to 1 pm]

Clear chat history

Chat with your bot...

Panel 3

> Test bot (Latest)   Ready. Build complete.

Available Timings
Select Timings for picking up your delivery

[9 am to 1 pm]

[1 pm to 4 pm]

[5 pm to 8 pm]

Eric, your Crocin will be ready for pickup by 9 am to 1 pm on 2019-03-06. Can I confirm your order? (Please say Yes or No)

yes

Okay Eric, your Crocin will be ready for pickup by 9 am to 1 pm on 2019-03-06.

Clear chat history

Chat with your bot...

Conclusion

To summarize, the project aims to develop a wide network of medical practitioners, patients, hospitals, labs, pharmacies on city, state and national levels so as to allow the general public to keep better track of their medical records, appointments scheduled and prescriptions needed for treating ailments.

- This is especially useful for senior citizens and terminally ill patients so that their wellness can be continuously monitored by doctors and technicians who may even be located far from the patient, in turn helping the patient to maintain a degree of self-reliance.

- Future work regarding the project involves:

-> Transport and emergency services through tie-ups with Hospital ambulances and cabs

-> Organ Donation registration

-> Hospital registry database with information about hospital location, available specialists, amenities, the status of blood banks, rehabilitation facility etc.

References

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