

Wellness Forever (Mobile Application)

Submitted in partial fulfillment of the requirements of
Mini Project
for
Third Year of Computer Engineering

By

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Under the Guidance of

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2021-22

CERTIFICATE OF APPROVAL

This is to certify that the project entitled

“Wellness Forever”

is a bonafide work of

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Mini Project Report Approval

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Internal Examiner

External Examiner

Date:

Place: Mumbai

Declaration

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

Name of student	Roll No.	Signature
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Dipesh Bedmutha	20102A2009	

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Place: Mumbai

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We appreciate everyone who spared time from their busy schedules and participated in the survey. Lastly, we are extremely grateful to all those who have contributed and shared their useful insights throughout the entire process and helped us acquire the right direction during this research project.

Abstract

Wellness Forever is an android application aimed to develop a gateway between volunteers and people in dire need of help. These resources can be anything like food, oxygen, beds, vaccines, clothes, emergency car services, medicines, etc.

Donors will be able to upload any resources they want to share and those in need of help will be notified about the resource and the location of the donor.

We believe that this App will optimize communication as well as transportation of resources from both volunteer and needy sides. This app also aims to provide necessary information about world-wide pandemic and remove many myths which surround the topic. Helping hand application first and foremost aims to raise awareness about volunteer activities.

Along with the main service of resource sharing, We are implementing some of the much needed services in our Android app. Some of these services are scanning medical barcodes, a section containing most common diseases and their symptoms, doctor information etc. Our Project aim is to have an all in one app which will contain the much needed medical services to the patients of all medical backgrounds.

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Introduction

Every year, natural disasters kill around 90,000 people, according to the WHO. The mortality rates alone are staggering, and unfortunately the health impacts don't end with lives lost. The primary focus after a disaster is on helping people who sustained injuries or are at risk of health complications but damaged or destroyed medical facilities prevent timely access to emergency medical care — and that's just one of the health challenges.

Disasters don't just flood homes and destroy infrastructure. They also disrupt the supply chain and wipe out crops. Post-disaster food shortages can result in malnutrition while access to unspoiled food can be a challenge. A lack of clean, available water is also a chief concern. During and after a disaster, water can become contaminated with microorganisms, sewage, agricultural or industrial waste, chemicals, and other substances that cause illness or death

Wellness Forever is a mobile application which helps the needy people to get the resources available on time and a trustworthy platform for those who are willing to help the people .

Problem Definition

When a natural disaster happens , many communication failures lead to resources not being delivered to the location even when they were available. People are not able to get the essential resources like food, water, clothes, medical care ,etc.

A quick examination of media reports on reasons for volunteering during the COVID-19 pandemic highlights that some people want ‘to give back’, having received support from the people for a previous illness; that it can help individuals feel they are doing something at a time of crisis; or that it enables them to cope with sad accounts they hear every day in the media

We just want to provide a trusted medium through which volunteers and patients can communicate and help each other. We aim to tackle this problem and provide the people of state a safe and secure app through which they can safely conduct volunteer activities.

Literature Survey

- Global resource shortages during COVID-19

Published in - July 6, 2020

Published by - Abdallah M. Samy, Faculty of Science, Ain Shams University (ASU), Egypt.

Objective - An important part of addressing the COVID-19 pandemic is adequate testing at the community level. In addition to current shortages of COVID-19 testing globally, the ability to offer COVID-19 testing will likely be further constrained in low-income countries due to already limited diagnostic capacity.

- COVID-19 and risks to the supply and quality of tests, drugs and vaccines.

Published in - April 9, 2020

Published by - Paul Newton, Katherine Bond.

Objective - Production and supply chains for COVID-19 candidate drugs (such as chloroquine and hydroxychloroquine), and for many other essential medical products, are being impaired by this crisis.¹ Supply chains for vital drugs for other diseases (such as systemic lupus erythematosus) are being disrupted because they are being repurposed to use against COVID-19, without adequate supporting evidence.

Proposed System

Wellness Forever is a mobile application which helps the needy people to get the resources available on time and a trustworthy platform for those who are willing to help the people.

The system proposed for this project expands our project related to the covid emergency services. We found out that there are many medical emergency cases where volunteers fail to get the help needed at the right time. Our aim is to increase the scope of our project to involve volunteers from all the medical emergencies. We propose to use the app architecture we created to provide help and other medical services to patients from all medical backgrounds.

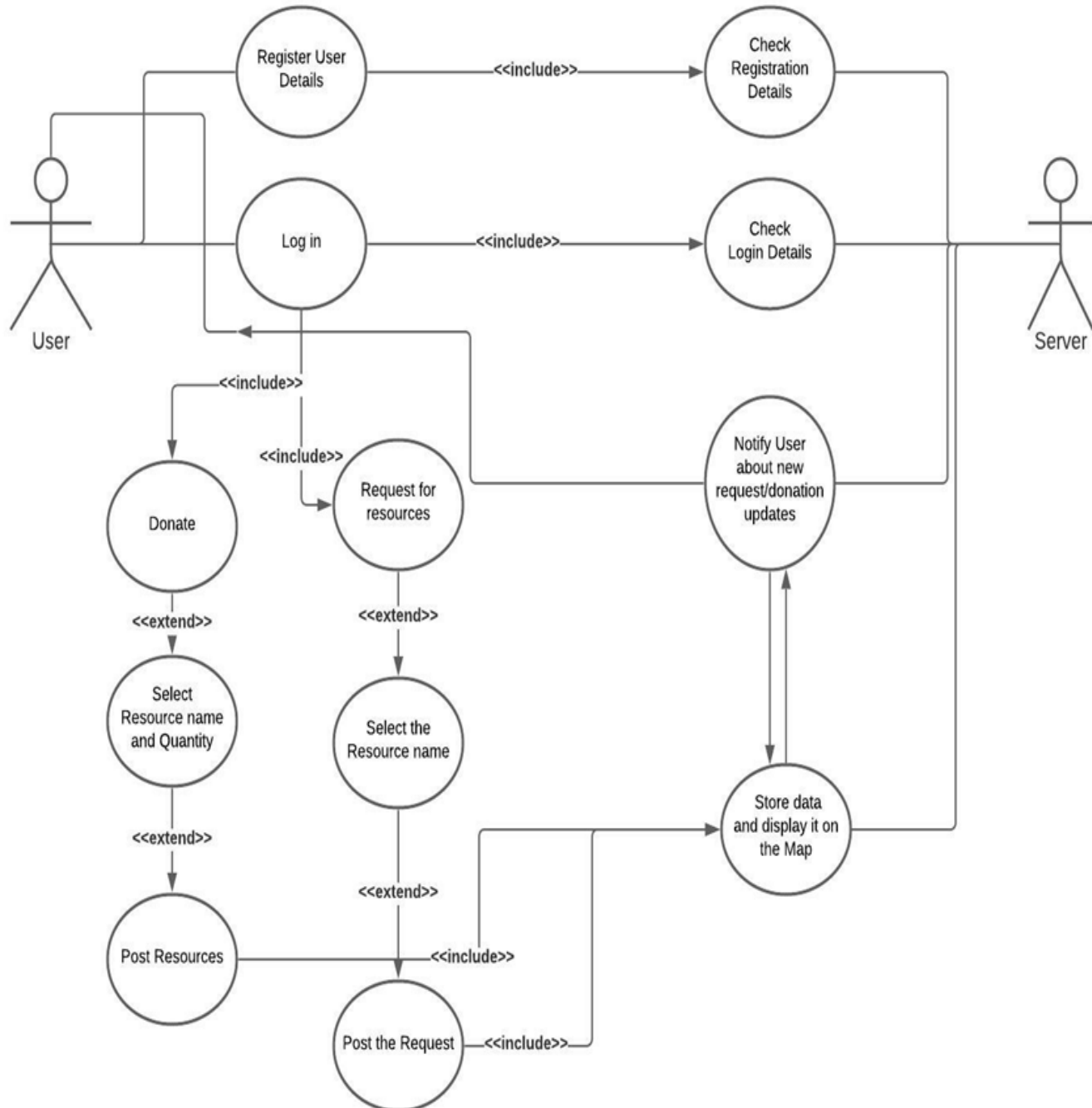
We are providing a trusted medium through which volunteers and patients can communicate and help each other. We aim to tackle this problem and provide the people of state a safe and secure app through which they can safely conduct volunteer activities. The QR code scanner implemented in the app can provide the information for medicines, pills, drugs and/or most medical equipment. Most patients may not have expertise when it comes to taking medicines, the QR code scanners aim to simplify this process.

Along with these features, we are proposing a social media feed in our app services. We believe it's important for patients to share their experiences with others. The environment in a critical situation may be very traumatic for people. Wellness forever tries to ease this process by connecting our users with the world from a hospital bed.

The Android app consists of following sections:

- ❖ Donate - section for people who want to share their resources. This part of the app allows donors to select the kind of contributions they want to make and share it on the map
- ❖ Request for Help - Consists of Emergency dial functionality for critical situations
- ❖ Covid Data - Makes use of an API to provide the number of Total Deaths, Active, Recovered and Total cases all around the world. This data is visualized through charts and pie diagrams
- ❖ Book a Vaccine - Clicking on this section redirects the user to the official cowin vaccine booking website
- ❖ Diseases and Symptoms - Contains a list of diseases, cures and their most common symptoms (prototype phase)
- ❖ Connect with Friends - Social media feature for the patients. Still in early development phase
- ❖ Scan Barcodes - QR code scanner for medical equipments such as medicines, pill, drugs and injections

System Architecture

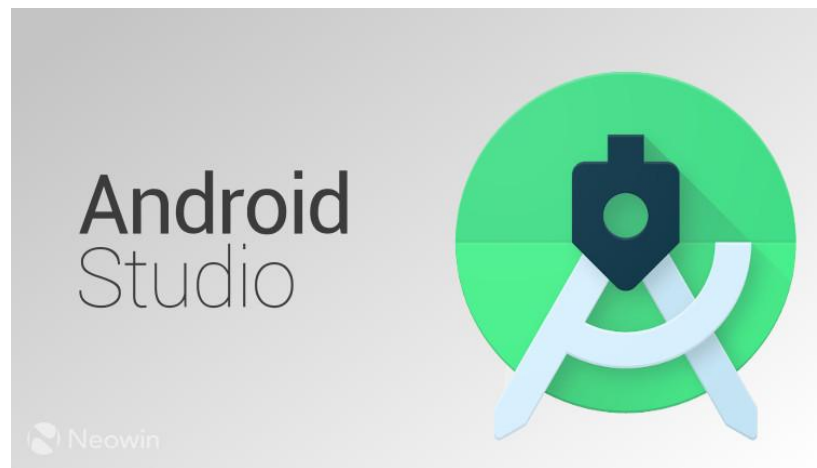


Technologies Used

1) Android Studio

Android Studio is the official integrated development environment for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development.

We will be using Android studio as our preferred framework for developing and testing our android application. Languages used in the development of the android app will vary from Java and Kotlin based on the situation.



2) Firebase

Firebase is a platform developed by Google for creating mobile and web applications. We will be using different firebase services including Authentication, Firestore as well as Cloud storage for our app. Authentication will be used to register users into our app. Firestore will be able to store the user's current location as well as different information about the user including his/her name, age, number of resources and other related information.

Firebase storage will be used to store the images the user chooses to upload in the application and retrieve those images according to user needs.



3) Passwordless Authentication

When we talk about storing medical information of any sort in our application, the developers have to deal with the sensitive information which can be easily misused if leaked. That's why we have decided to migrate from Firebase Authentication to Fingerprint Authentication this year.

We have decided to implement a passwordless authentication method to authenticate users. This method uses a combination of fingerprint, otp and email id to log in a user. The otp on mail is received only once after that the user can directly login using fingerprint and username. To achieve this we are using Sawo Labs API to implement the Passwordless authentication method. Firebase services such as realtime database, storage services, Firestore services can still be used for different situations. The firebase libraries and dependencies will still be present for future references.



4) Google Maps API

With the Maps SDK for Android, add maps to your app using Google Maps data, map displays, and map gesture responses. You can also provide additional information for map locations and support user interaction by adding markers, polygons, and overlays to your map.

The SDK supports both the Kotlin and Java programming languages and provides additional libraries and extensions for advanced features and programming techniques.

In addition to that we will be using covid's official API to collect information regarding number of cases, vaccination data as well as other information will be incorporated into the app

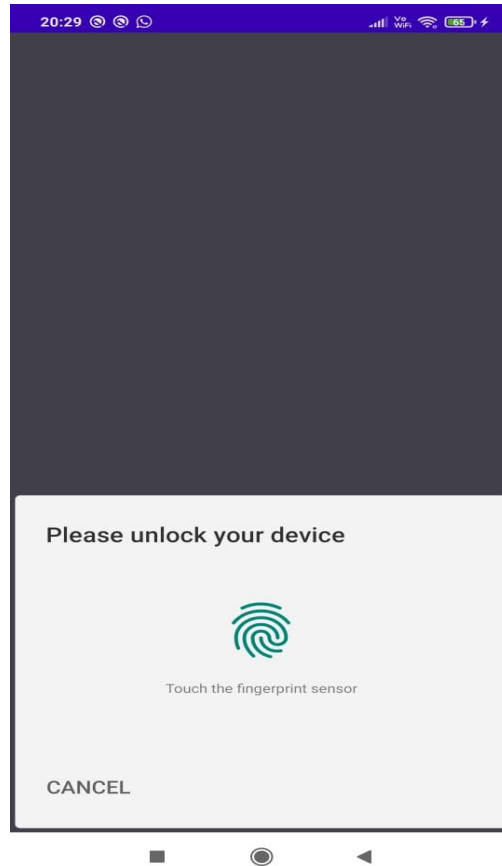
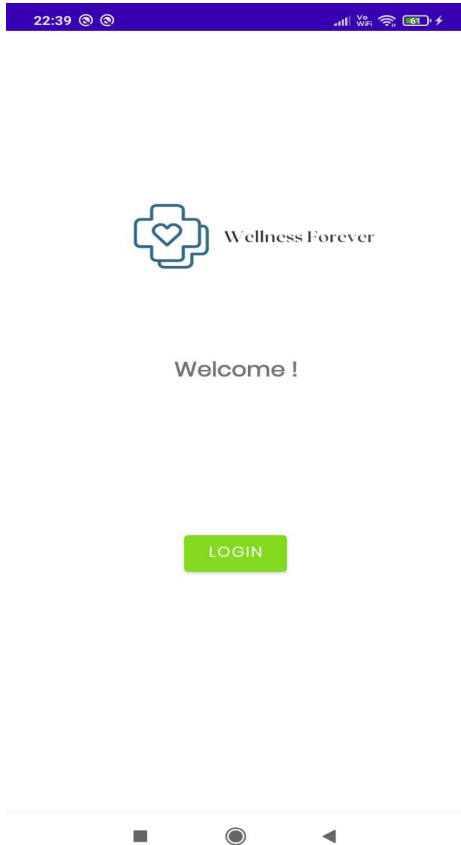


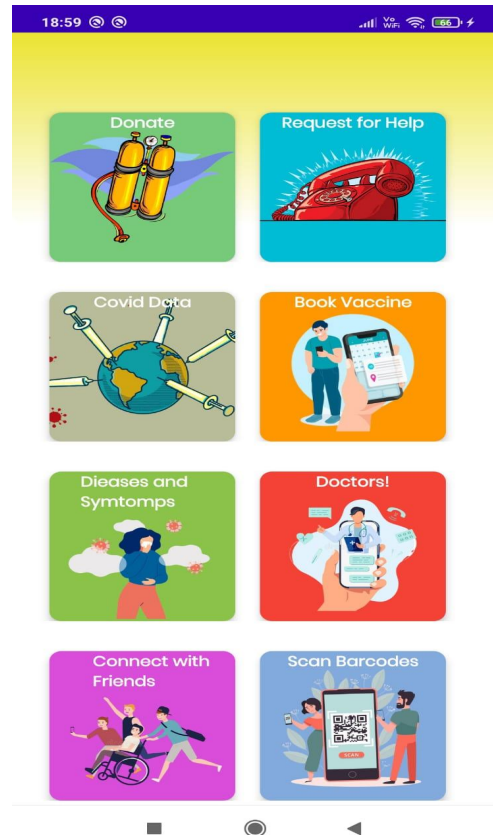
5) Retrofit Client

We have used Retrofit in our App to request and receive responses from the API. Retrofit is a REST Client for Java and Android allowing to retrieve and upload JSON (or other structured data) via a REST based You can configure which converters are used for the data serialization, example GSON for JSON

Retrofit provides a convenient builder for constructing our required object. Retrofit provides a convenient builder for constructing our required object. It needs the base URL which is going to be used for every service call and a converter factory – which takes care of the parsing of data we're sending and also the responses we get.16-Aug-2019


Results





23:53

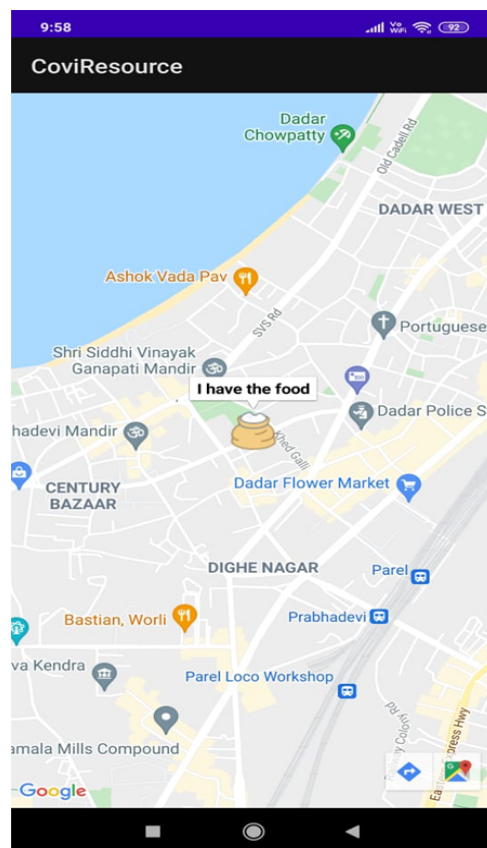
Select an Item

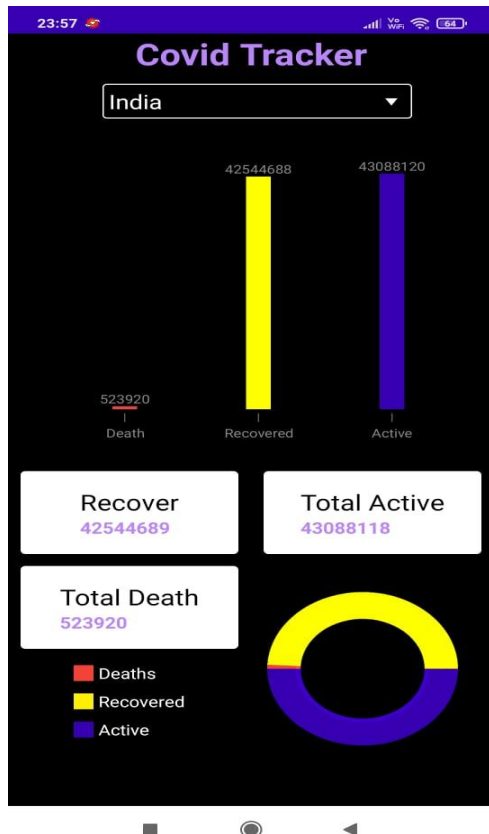
Oxygen 

Enter Quantity

Enter no. of items here..

POST





23:59 selfregistration.cowin.gov.in

Ministry of Health and Family Welfare English

Co-WIN
Winning Over Covid-19

Register or Sign In for Vaccination

An OTP will be sent to your mobile number for verification

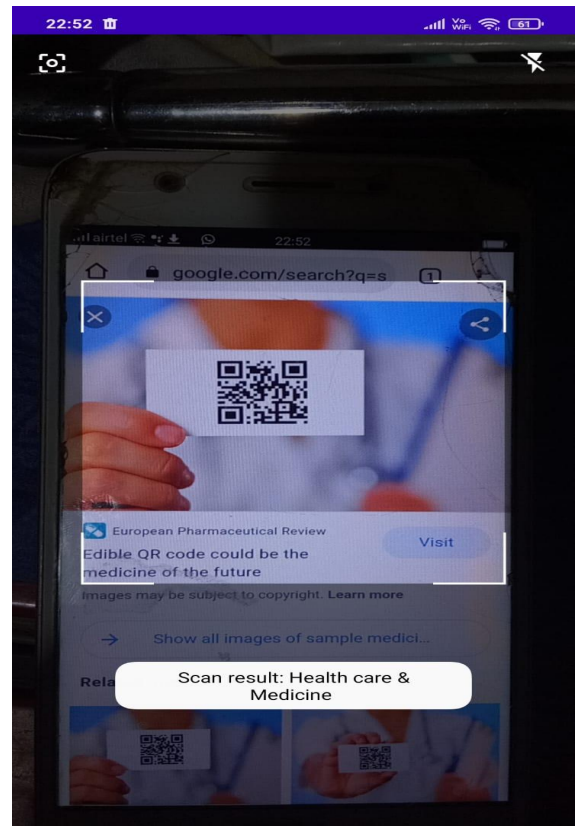
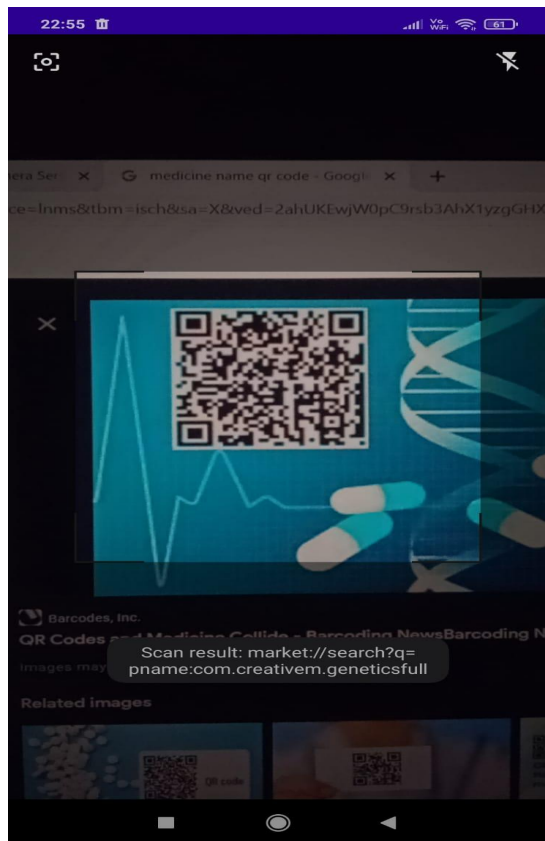
GET OTP

By Sign In/Registration, I agree to the Terms of Service and Privacy Policy

OR BOOK AN APPOINTMENT USING

Aarogya Setu UMANG
THE SPIRIT OF NEW INDIA

VACCINATION SERVICES PLATFORMS



ruth346@gmail.com
10 mins ago



when its your final day at the hospttal!

sara23@gmail.com
2 hrs ago

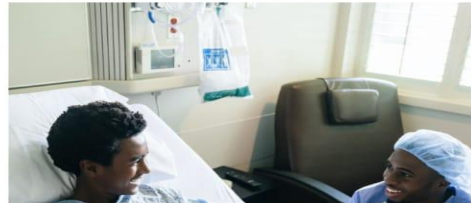


me_ruth@gmail.com
Yesterday



thanks a lot mrs olsen and the hospital for taking such a good care of me

elizabeth12@gmail.com
5 hrs ago





big surgery today! but not at all scared of anything!!

mike64@gmail.com

5 mins ago



bunch of happy faces



sara23@gmail.com

2 hrs ago



celebrating patients day in the hospital!

me_ruth@gmail.com

Yesterday



Conclusion and Future Scope

Our aim with “Wellness Forever” is to create an app which is ready to connect the user with emergency services at any given time. Our project’s goal is to minimize the harmful impacts of catastrophic situations. These situations can be anything from a minor car accident to large scale events such as a pandemic, earthquake, major road accidents, medical emergencies etc.

Throughout the course of this project, we learnt many things including Android app services, Communicating with REST Api’s, Firebase services, UI/UX Design principles, Passwordless authentication services, Android permissions and manifest files which describe the essential information about your app to the Android build tools, the Android operating system. We worked in a collaborative environment to achieve the best results and used version controlling system in our project i.e Github. We worked as collaborators on github and contributed equally throughout the development process.

The Future scope of the app includes

- ☐ Refining the features and UI/UX of the app
- ☐ Utilizing the MVVM architecture for the code files A
- ☐ Adding payment gateway for economical resource sharing
- ☐ Implementing the donor system
- ☐ Upgrading the social media feed feature in the app using firebase authentication, realtime database and firebase storage for storing images and posts.
- ☐ Making the app fully functional and uploading it on the app store

References

- Global resource shortages during COVID-19
<https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0008412>
- COVID-19 and risks to the supply and quality of tests, drugs and vaccines.
[https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(20\)30136-4/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(20)30136-4/fulltext)
- <https://developer.ibm.com/callforcode/blogs/health-care-challenges-during-and-after-a-natural-disaster/>