PharmaConnect

An initiative proposed under Smart India Hackathon 2018

Problem Category: **Government of Delhi**

Problem Statement: **Nationwide integration of all pharmaceutical groups (Education, Industries and all stakeholders) to share policies, updates, summits, seminars/expo**

Problem Code: **#GDL9**

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ABSTRACT

Till date, there is no single window from where the students or targeted participants get to know the latest developments in the pharmaceutical sector in the country. During policy making process too, the sample size may not be large enough to get to know the success of the policy, as sufficient participants do not participate just because of the communication gap. If there exists an app which links all the pharmaceutical groups and the interested people together under one umbrella for a better communication, there will be more participation overall. The young students will also develop interest in government's policy making decisions if everything is accessible to them easily on their smartphones and they see that they can give some contribution too.

IDEA

So, with regards to this problem, we propose to develop an Android app, which will, in fact, integrate young students, pharmaceutical industrialists, stakeholders and other interested people nationwide, to share policies, updates, information about summits, seminars, expos etc.

TECHNOLOGY STACK

As the platform we are talking about here is Android, we plan to implement the app using **Java.** The development environment for this would be **Android Studio IDE**. However, this completely depends on the design of the app. If we feel, during the hackathon, that we can improve our design, we might use other technologies like **React Native**.

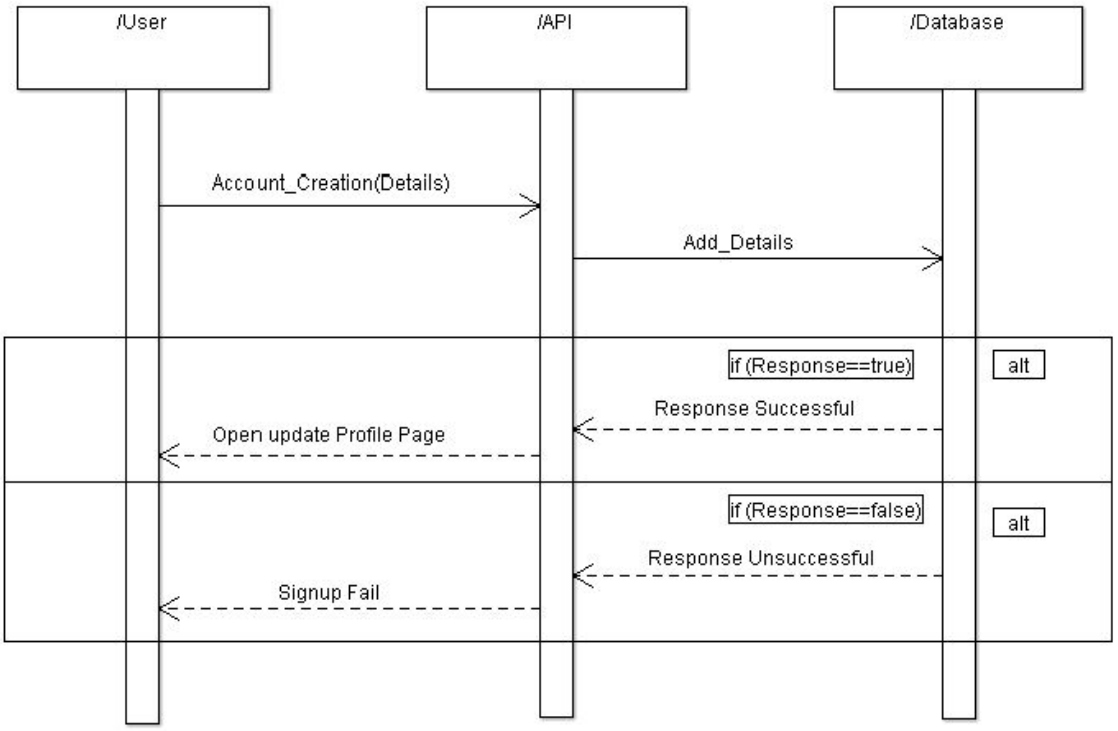
There will also be the need of a backend support for this app, which we plan to satisfy using **MYSQL** as the database model and interfacing this model with the app using a dedicated API. This API will be in-house and will be powered by the traditional web technology stack i.e. **PHP.**

We will primarily be using either **XML or JSON**, if there is any data parsing required between the app and the server. All the HTTP communication will happen using the REST technology.

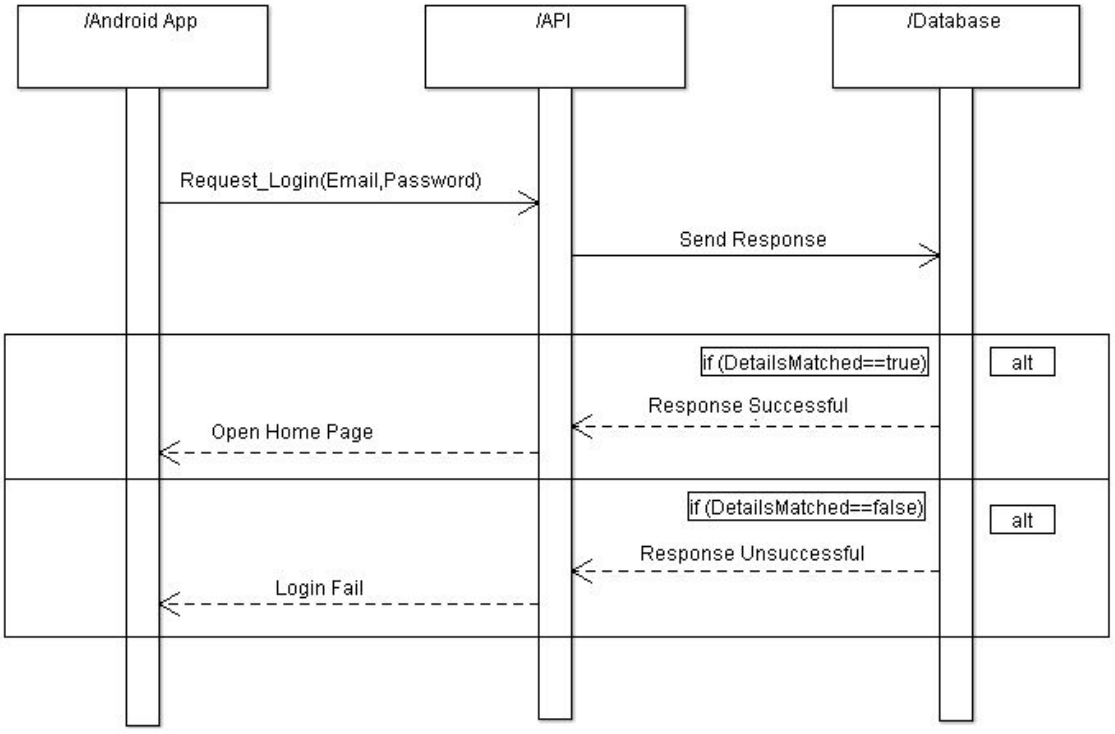
OUR APPROACH

The basic idea is to have a central server that manages the complete database as well as other admin features. The app will interact with this server via an API. We will be working on the Android counterpart and the API counterpart simultaneously, as both of them are dependent on each other. The flow of some basic features is given in the diagrams below.

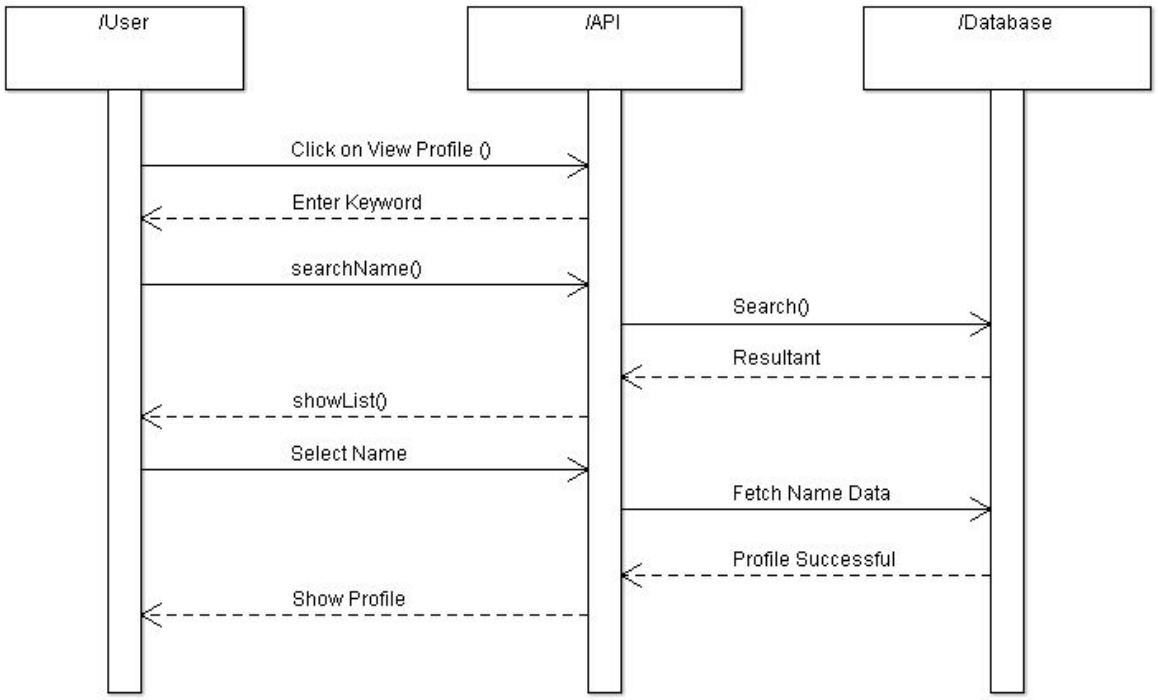
SIGN UP - The diagram below explains the process of a user signing up to use the app. The user interacts with the sign up interface in the app which communicates with the database through the API.



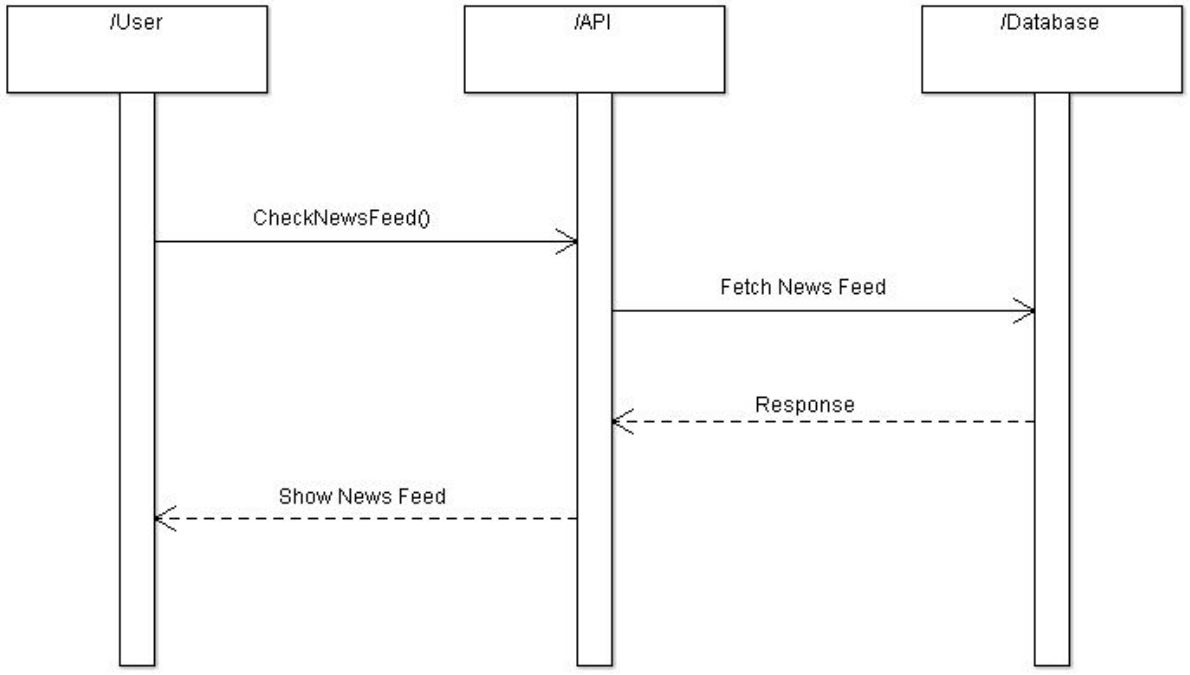
LOGIN - The diagram below explains the process of a user logging in to use the app. The user interacts with the login interface in the app which communicates with the database through the API.



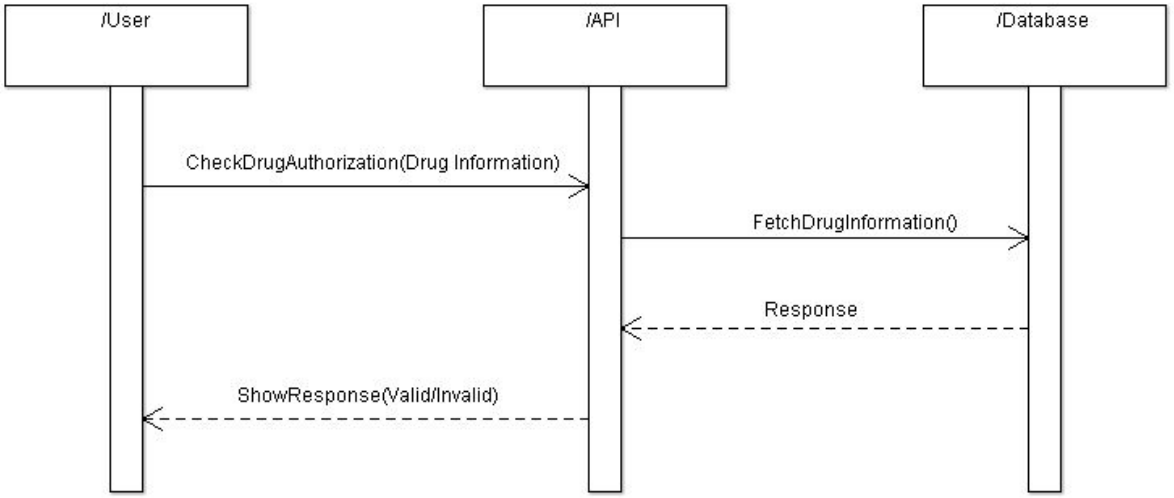
CONNECT WITH PEOPLE - The diagram below explains the case of a user viewing another user's profile and connecting with him/her using other social handles. Again, no direct connection is allowed from the app to the database for security reasons.



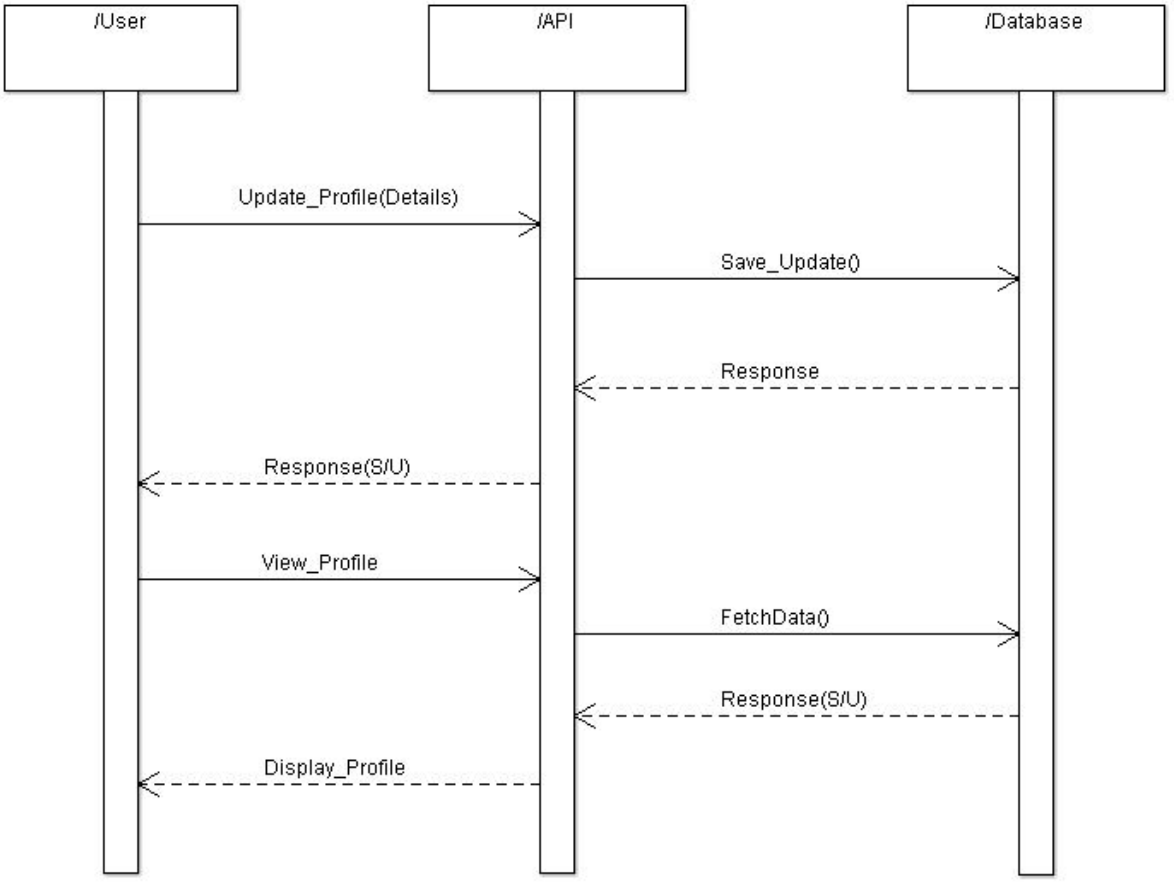
NEWS FEED - The diagram below explains the process of a user viewing the feed in the app. The user interacts with the news activity in the app which fetches the feed from the database through the API.



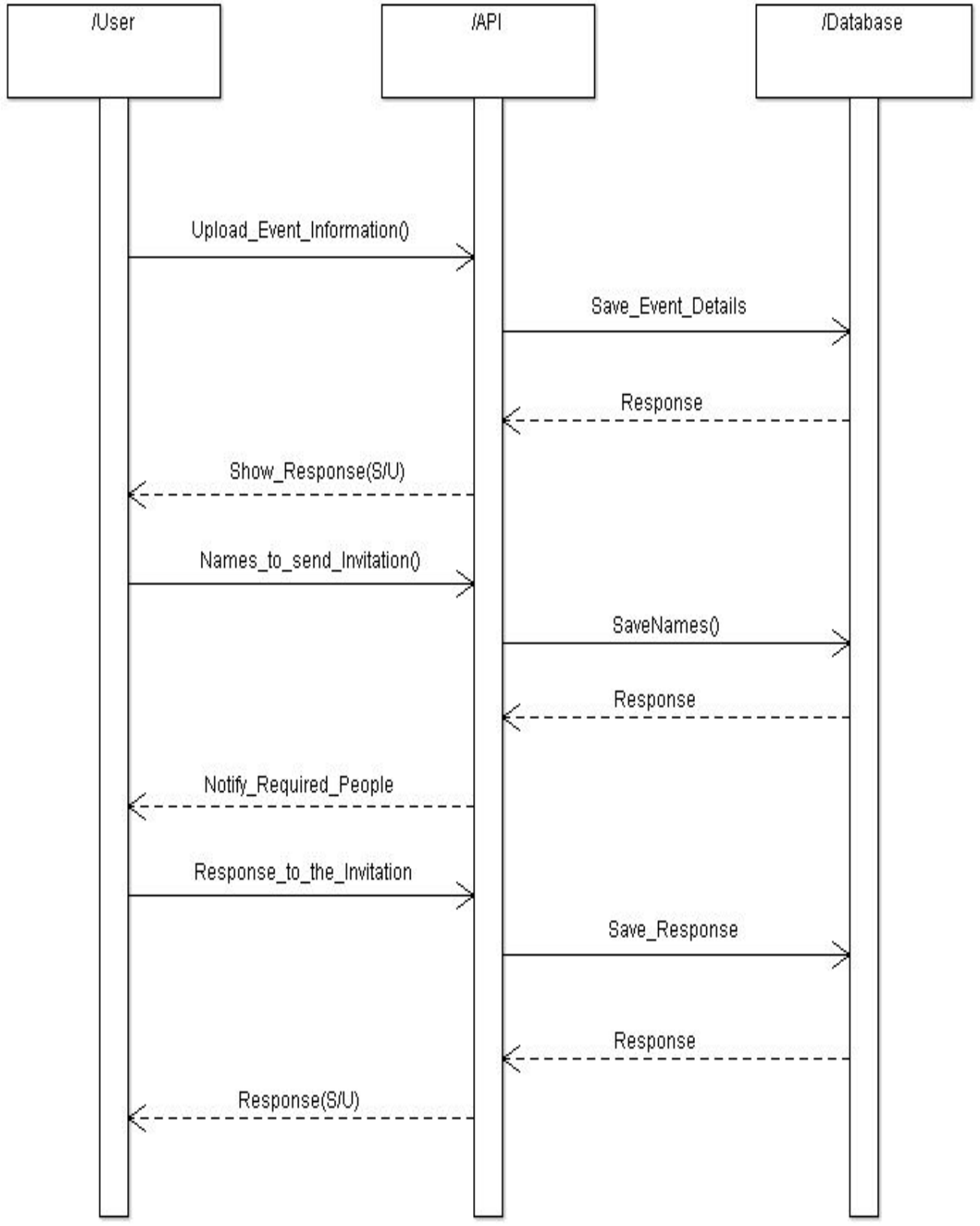
CHECK IF A DRUG IS LEGALIZED - The diagram below explains the process of a user checking for a drug. The user interacts with the drug search interface in the app which communicates with the database through the API.



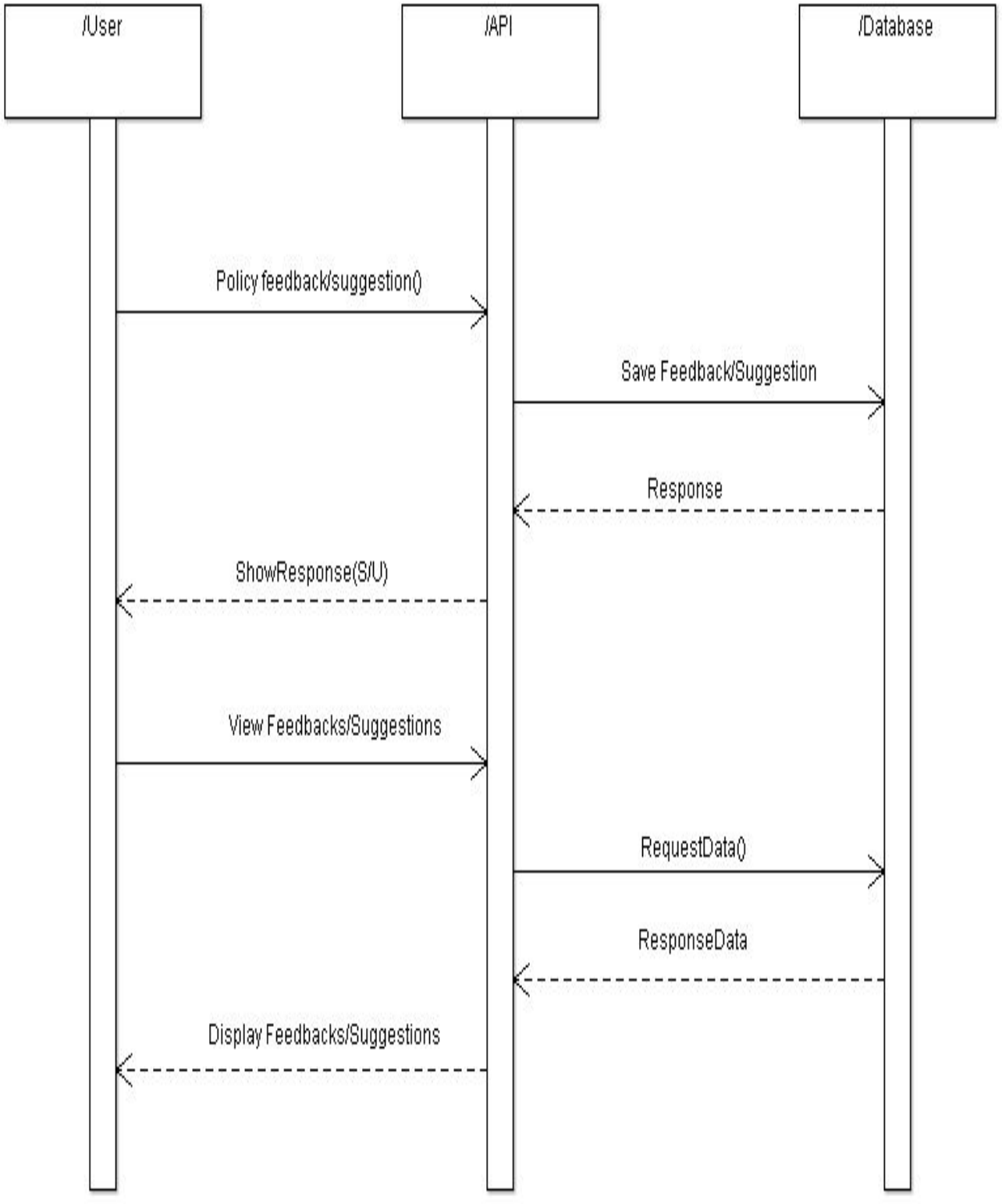
MAINTAIN PROFILE - The diagram below depicts the user updating his/her profile in the app. The user interacts with the app which communicates with the database through the API.



SHARE UPCOMING EVENTS - The diagram below explains the process of a user sharing an event with others.



POLICY FEEDBACK PROCESS - The diagram below explains the policy feedback process.



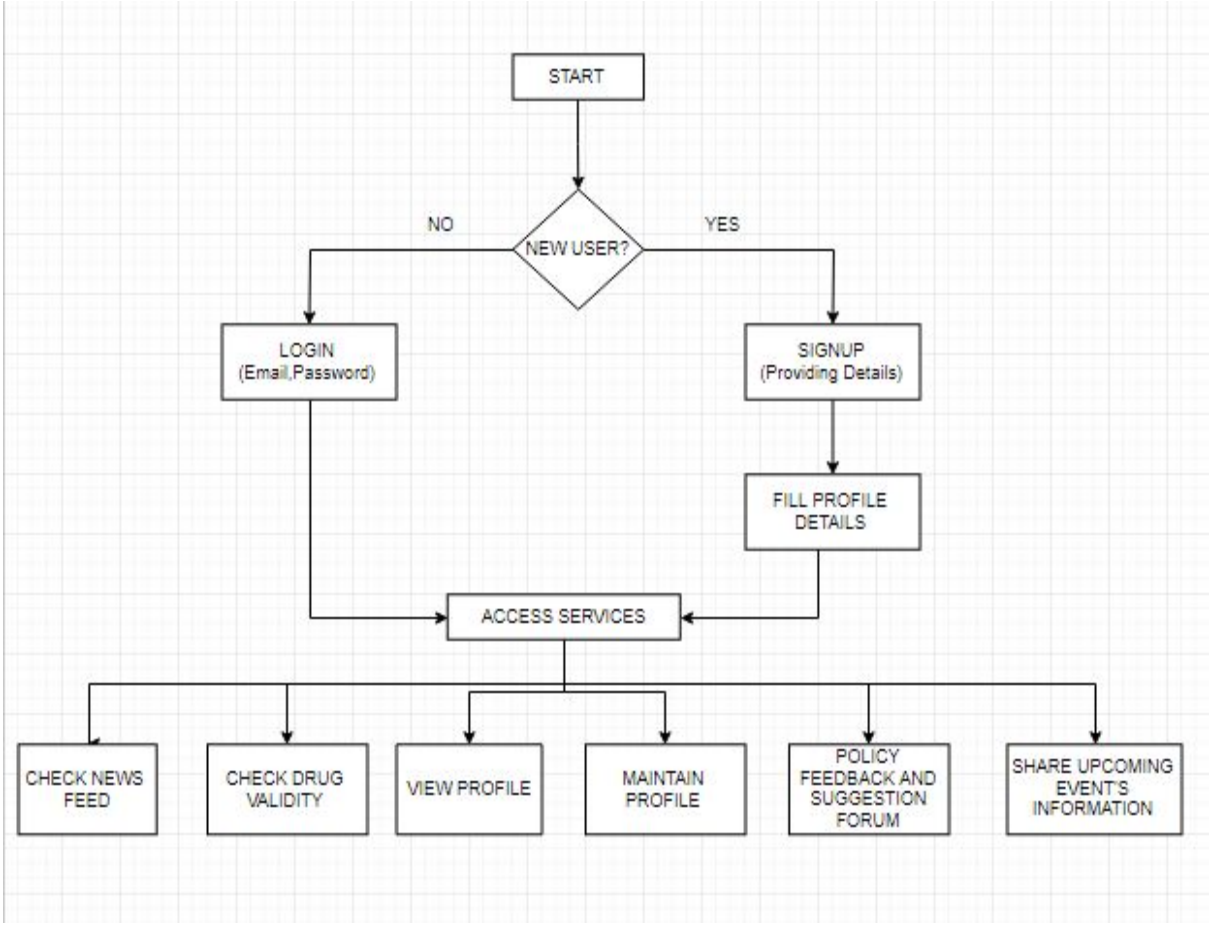
USE CASES

There is a small video which we have made to better explain the use cases. The video can be found at the following link - https://youtu.be/vyp5zJ-VRwY .

These are the few use cases and features that are planned for this app.

1. Login using social handles like Google, Facebook, etc.
2. The app will provides information on latest policies and updates in pharma industry.
3. Users can check if a medicine is government approved or not.
4. Users can maintain their profile (Student Profile, Doctor Profile, Researcher Profile etc).
5. Users can share information of upcoming events, summits and expos concerning the pharma industry.
6. A policy feedback and suggestions forum, where the policy makers can put up surveys, which will be filled by the users.
7. Users can view other people's profiles to get in touch with them in order to expand their network.

Given below, is a basic flow for a user of the application.

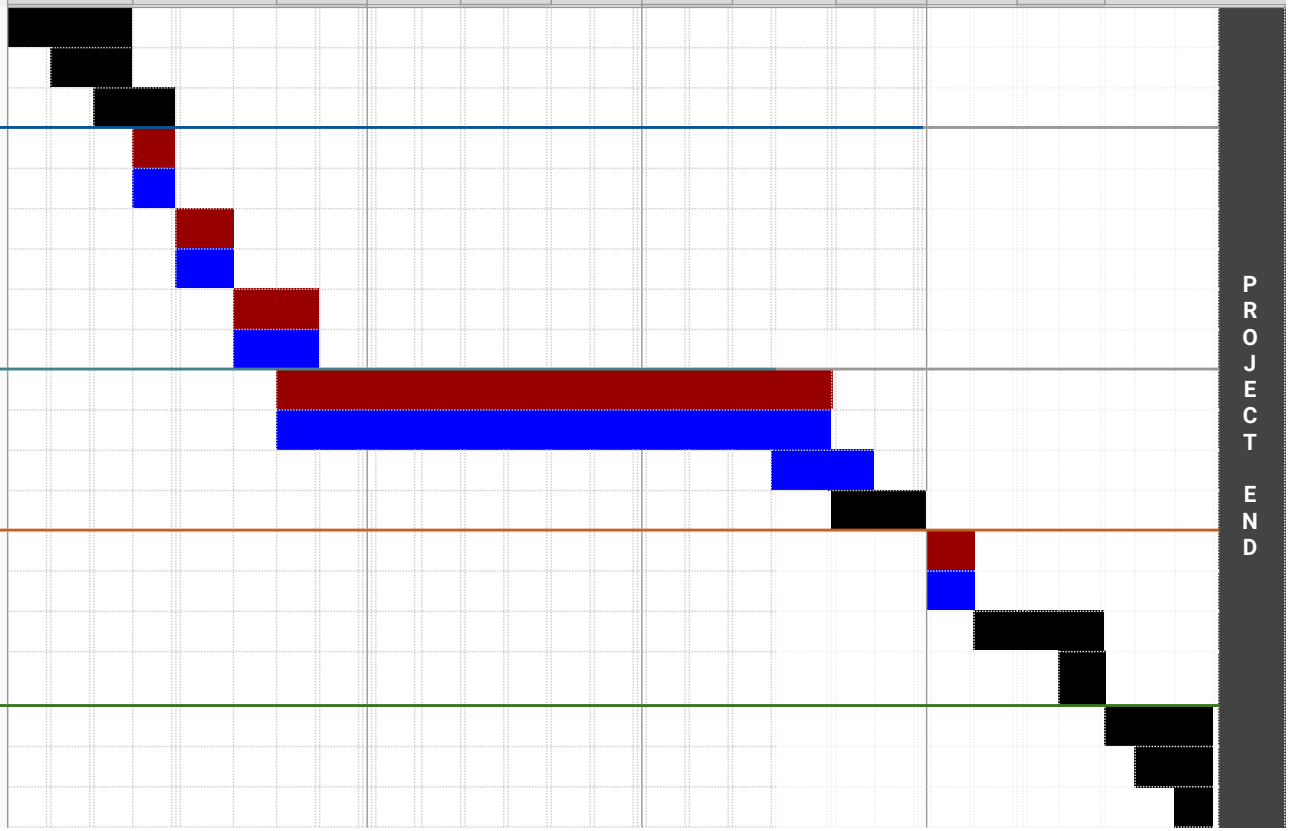


WORKFLOW

Attached below is the workflow of this project that we plan to follow during the 36-hour hackathon final phase. This is just a tentative chart and is subject to minor changes during the actual event.

Complete team | API team | Android team

PHASE		DETAILS
		Q1 (9 hours): 2 hours, 3 hours, 4 hours; Q2 (9 hours): 3 hours, 2 hours, 4 hours; Q3 (9 hours): 3 hours, 3 hours, 3 hours; Q4 (9 hours): 2 hours, 2 hours, 5 hours
1	Project Conception and Initiation	- Project Planning - Plan Review and team division - Initiation
2	Skeleton Building	- API Environment setup - Android App setup - Designing the API Endpoints - Designing the Android Flow - Building a test endpoint - Building a test android thread
3	Development Phase	- API Endpoints - Android Backend - UI/UX improvements - Sampling with test data
4	Testing Phase	- Testing the API independently - Testing the app independently - Collobarative testing - Performance improvements and bug fixes
5	Project Closing	- Minor documentation - Pitch Deck Preparation - Pitch and Close



DEPENDENCIES

The following are some of the expected dependencies that are necessary to deploy this project, both from the user side and the maintainer side.

USERS

1. An Android smartphone with approximately 10MB of free system space to install the app. A minimum of 1GB RAM is required for this app, although it is recommended to have over 2GB of free RAM to ensure smooth running of this application.
2. Internet Connectivity - Required (Wifi / 3G / 4G / 5G / any other advanced technology)

MAINTAINER

1. A server with approximately 500MB to 1GB of disk space, as required. (varies in accordance with the amount of data required to be stored on this server)
2. Apache Web Server that can host a PHP REST API.
3. MYSQL backend, preferably MariaDB. For easy management of this database, phpmyadmin is recommended.
4. A Google Play Developer Account to host and distribute the app through Google Play.

REFERENCES

1. Department of Pharmaceuticals, Government of India- http://pharmaceuticals.gov.in/
2. Smart India Hackathon 2018- https://innovate.mygov.in/ministry_state/government-of-delhi/
3. Android Developer Guide- https://developer.android.com/index.html
4. Central Drugs Standard Control Organization- http://cdsco.nic.in/forms/list.aspx?lid=2056&Id=11