Project Report
ON

VACCINE DISTRIBUTION SYSTEM

BACHELOR OF TECHNOLOGY
IN
COMPUTER SCIENCE
SUBMITTED BY

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Under the Guidance of
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Software Requirement Specification

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1. Introduction

1.1 Purpose

- The Vaccine Distribution System allows Subjects to register for the vaccine from the Organization and also allows a smooth transition of orders from the Manufacturers and Providers verifying all the necessary fields.
- The purpose of this document is to collect and analyze all the different ideas that have been gathered to define the system, its functional and non-functional requirements with respect to users.
- Also, the project team shall analyze how the product will be used in order to get a better understanding of the project and outline concepts that may be developed later and documentation ideas that are being considered.
- The purpose of this SRS document is to provide a detailed overview of the software, its parameters and goals from both user and admin ends.
- This document describes the target audience and its user interface, hardware and software requirements. It defines how the client, team and end-user see the product and its functionality.
- It assists any designer and developer in software delivery lifecycle processes.

1.2 Document Convention

The font used in this document is Arial for the body and Times New Roman for the headings. The headings are kept bold and underlined. For uniformity the text color is black. The size of text is 12, for the sub-heading the size is 13, and for the heading size is 15.
ER – Entity Relationship. Organization - Govt.. Subject-End User

1.3 Intended Audience and Reading Suggestions

- This SRS report is the final product of the requirement gathering.
- It is a formal document that will be used by the programmer and the user to verify if all the requirements and the functionalities are present in the project.
- In future the developers who will update the software can also use the SRS to add any extra functional requirements.

1.4 Product Scope

- Vaccine Distribution System software provides a safe and transparent platform for the distribution of vaccines by the Govt.(Organization).
- It showcases the various processes between the Govt., Manufacturer, Provider and the end User(Subject).
- The process of updating the Govt. approvals will be d1 by authorized personnel only making the software reliable and secure.
- Since the system of application to the bill generation is paperless, it also gives an overwhelming convenience and tries to contribute to the environment too.

1.5 References

- Govt. data on Covid-19 vaccines.
- ICMR conditions for vaccine approvals.
- CO-Win project by the Govt. of India.
- Vaccine Supply Chain Management, India.
- https://netbeans.apache.org/kb/docs/java/quickstart.html
- https://docs.oracle.com
- https://www.ionos.com/digitalguide/server/tools/xampp-tutorial-create-your-own-local-test-server/
- https://www.javatpoint.com/example-to-connect-to-the-postgresql-database
- https://www.tutorialspoint.com/javamail_api/javamail_api_sending_simple_email.htm
- https://docs.djangoproject.com/en/3.2/
- https://www.django-rest-framework.org/topics/documenting-your-api/

2. Overall Description

2.1 Product Perspective

- The Vaccine Distribution System gives the common people a platform to apply for vaccines at the convenience of their houses with the touch of a finger.
- The Govt. too gets a reliable, secure and transparent system of approval and dispatch of vaccines from the Manufacturer to the Provider.
- The Govt. receives all the requests through a secured database.
- The registration process for Manufacturer and the Provider makes the software versatile reducing redundancies in the distribution system.
- The billing system helps the users as well the Govt. to store their data and reduce the use of paper.

2.2 Product Functions

- The Vaccine Distribution System allows entries through three different funnels.
- The end User, provides applications for approval for vaccine shots and thereby follow up on the payment procedure and the booking of the shots.
- The Manufacturer, provides applications for approval for vaccines with the Govt. and its dispatch to the Provider with the approval of the Govt..
- The Provider, provides applications by various laboratories willing to arrange for vaccine centers by submitting the suitable permits and requirements.
- Last but not the least, generates the bill for each user cutting paper costs.

2.3 User Classes and Characteristics

- The Vaccine Distribution System at the core provides an Interface to the Govt. officials to put all the vaccine related applications and processes at a single place.
- It asks for the secured user ID and password provided to authorized personnel only.
- The end User is asked for various information for identification such as Aadhar Card number, name, address etc. as well as the reason for the application if it applies.
- The Manufacturer willing to get certified by the Govt. is asked to provide various documents related to trials of the vaccines.
- The Provider willing to get the distribution permit has to submit various necessary documents to the online portal for its approval by the Govt..

2.4 Operating Environment

- Windows Operating System is used for testing and deploying the software. So the software is made to
  work on Windows OS at present.
- Front end is designed using Bootstrap, CSS and HTML, Django and the back end is supported by:Postgresql databases and Java.

2.5 User Documentation

- The format of the software is based on the CO-Win structure of the Govt..
- The interface is easy to handle.
- It asks for ID and password to login to the system.
- Then it shows various tabs such as Subject(The end user), Manufacturer and Provider.
- Then follows basic approvals of applications.

2.6 Assumptions and Dependencies

Assumptions:

1. Admin will be registered by the organisation and vice versa.
2. Admin will verify at least 1 subject, manufacturer and provider.
3. At least one subject, manufacturer and provider will login to the system.
4. At least one subject, manufacturer and provider will view our web-application.
5. Manufacturer and Provider will receive order from the organisation i.e. Govt..
6. Organisation will pay at least 1 manufacturer for vaccine production.
7. Providers will pay the organisation if they get approved.

Dependencies:

- An active internet connection for connectivity to the database
- Users are expected to be fluent in english to understand the content of the website.

3. System Features

The software has the subsequent functional requirements for the product by system features, the most important services provided by the product. The organization of requirements is on the basis of use cases for the software.

3.1 Login

3.1.1 Description and Priority

- Organisation can access the software by logging into the system.
- Logging feature gas given the highest priority.

3.1.2 Stimulus/Response Sequences

- The stimulus for Login is that the correct ID and password which brings the user to the dashboard.

3.1.3 Functional Requirements

- Unique ID and Password, password is secured with 8-16 characters with special symbols.
  REQ-1:Verified ID must be entered.
  REQ-2:The correct password must be entered.
  Error:”Wrong ID or Password. Enter the rightID and Password.”

3.2 Dashboard

3.2.1 Description and Priority

- On Dashboard, the user can access different applications through Subject/ Manufacturers/Provider.

3.2.2 Stimulus/Response

- Post secure login the dashboard page opens and displays various tabs and functionalities.

3.2.3 Functional requirements

- Requirements for dashboard TBD.

3.3 Manufacturer Applications

3.3.1 Description and Priority

- The Manufacturer tab shows the certified manufacturers and also the pending requests for certifications.
- It also consists of details associated with the inventory supplied by each manufacturer.

3.3.2 Stimulus/Response

- Information submitted by the Manufacturer/s through the web-site is pulled from the database and displayed on the manufacturer's tab.

3.3.3 Functional Requirements

- The database must contain a minimum of 1 request for Manufacturer
  REQ-1:At least 1 manufacturer request
  Error:”No pending requests or approved manufacturer. Inventory is zero.”

3.4 Provider Applications

3.4.1 Description and Priority

- The Provider tab shows the certified providers and therefore the pending requests for certifications.
- It also consists of details related to inventory procured by each Provider.

3.4.2 Stimulus/Response

- Information submitted by the Provider/s through the web-site is pulled from the database and displayed on the provider's tab.

3.4.3 Functional Requirements

- The database must contain a minimum of 1request for Provider
  REQ-1:At least 1 provider request
  Error:”No pending requests or approved provider. No doses in distribution.”

3.5 Subject(End User) Applications

3.5.1 Description and Priority

- The approved subjects who will get vaccinated and the subjects with the pending requests are displayed in the Subject tab.
- It also consists of the status of doses given to the approved applicants.

3.5.2 Stimulus/Response

- Information submitted by the end user/s through the website is pulled from the database and displayed on the end user's tab.

3.5.3 Functional Requirements

- The database must contain at least 1 request for Subject
  REQ-1:At least 1 Subject request
  Error:”No pending requests or approved vaccine receivers. No vaccine provided to the citizens.”

4. Other Non-functional Requirements

4.1 Performance Requirements

- This software is meant to run on Windows OS.

4.2 Safety Requirements

- Since a lot of data can fall into malicious hands, the ID and and password for the software should be kept undisclosed and should be well protected

4.3 Security Requirements

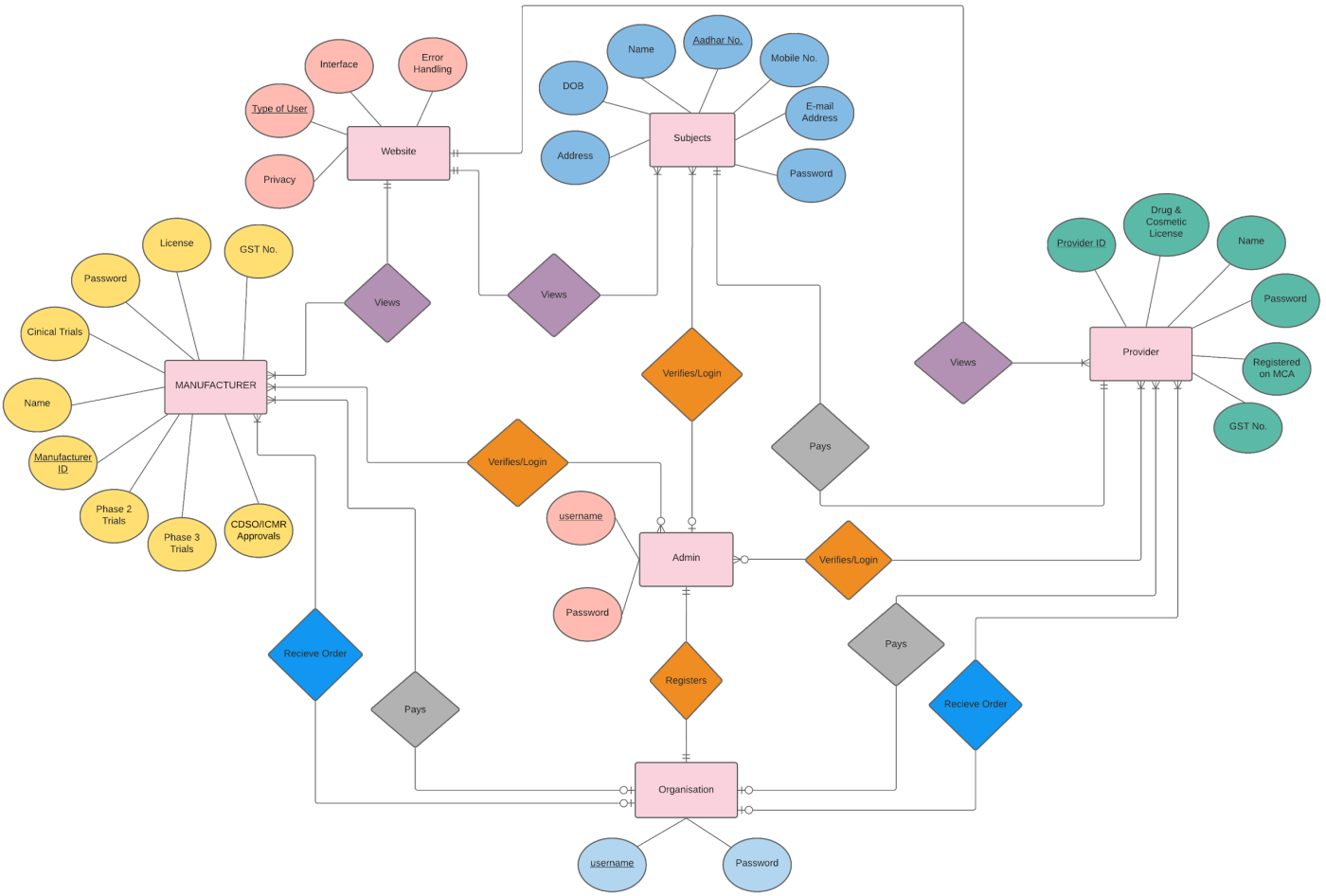
- Breach of ID and password can be disastrous so that should be well protected, It can be changed with help of a form submission to the Admin.
- Due to breach risks, we cannot change passwords online.
- Govt. officials are requested to have a Non-Disclosure Agreement with the Govt. while controlling the software.

4.4 Software Quality Attributes

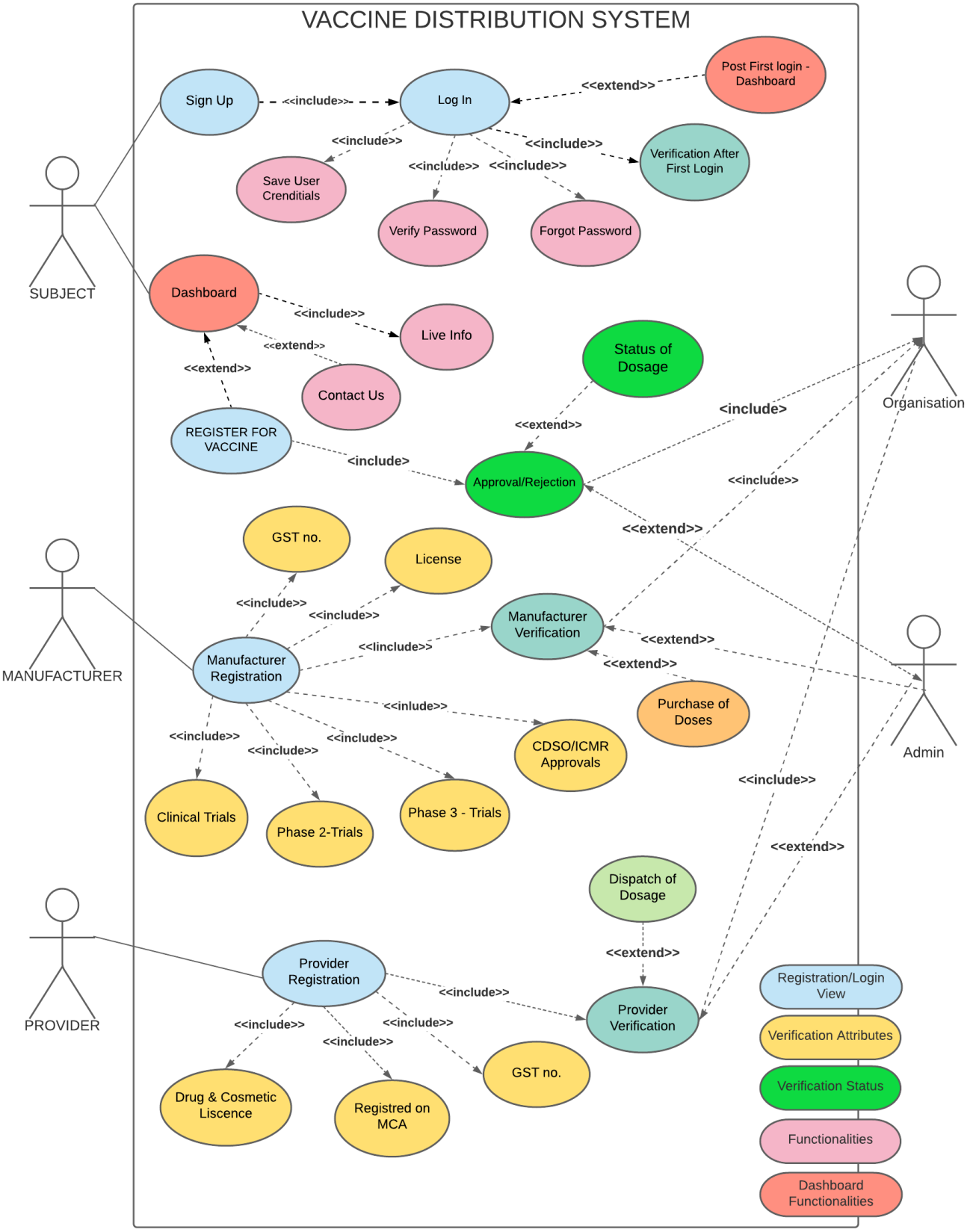
- Reliability- Every possible care has been taken to forestall unexpected crashing or termination of the application. Databases are frequently updated to forestall any data loss in case of termination of application.
- Portability- It can work across all operating systems. The software will be updated on a regular basis.
- Security- Every user needs to sign up with a unique password and username. For more security purposes some criteria are set for strong passwords.
- 24*7 availability
- Better component design to induce better performance at peak time
- Flexible service-based architecture will be desirable for future extension.

5. Analysis Models

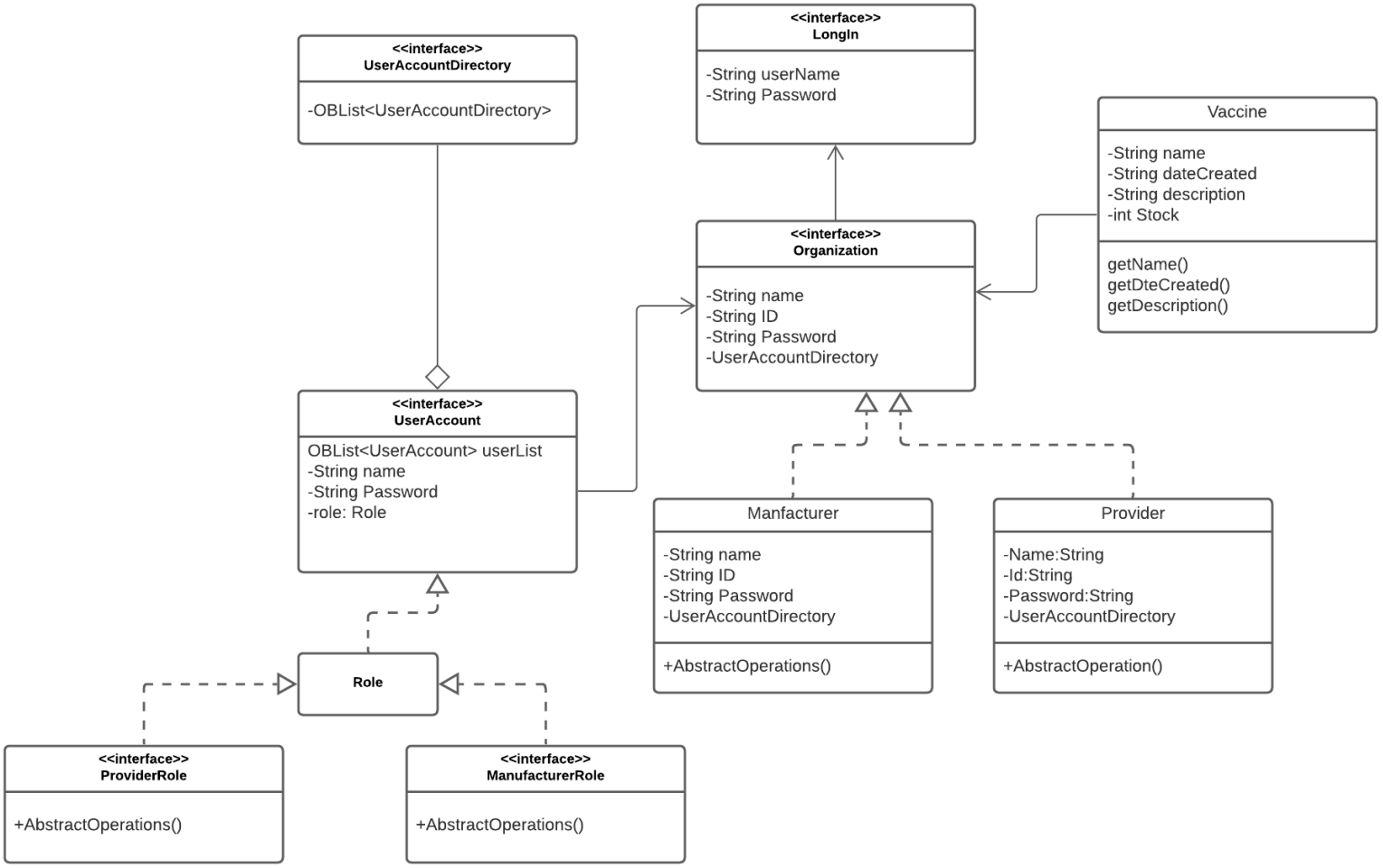
5.2 Entity-Relationship Diagram



5.2 Use-Case Diagram



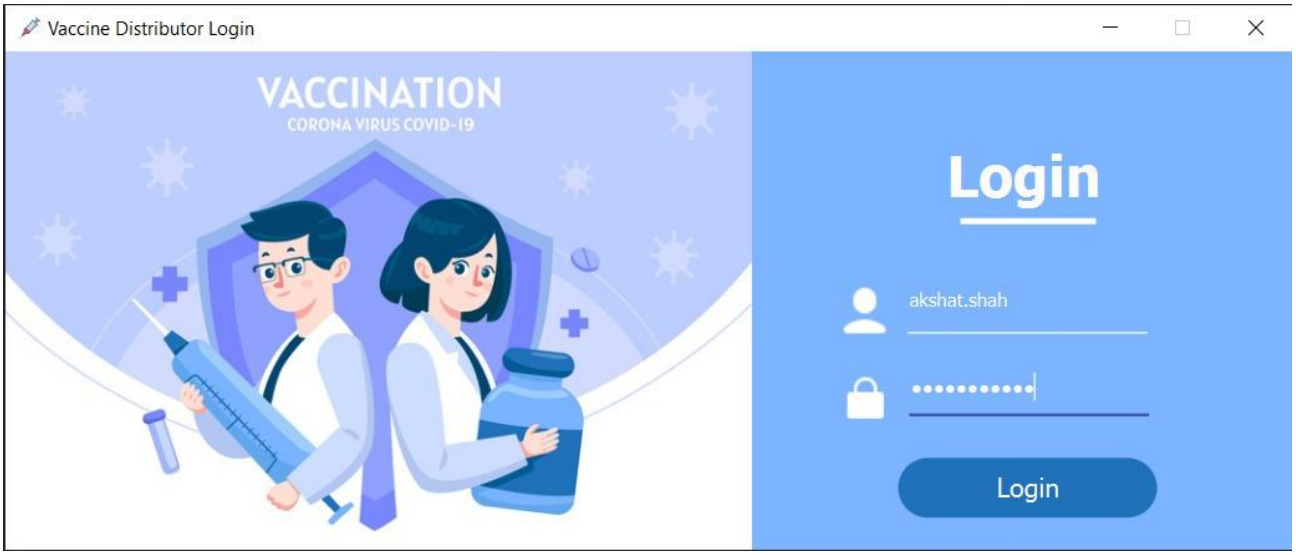
5.3 Class Diagram

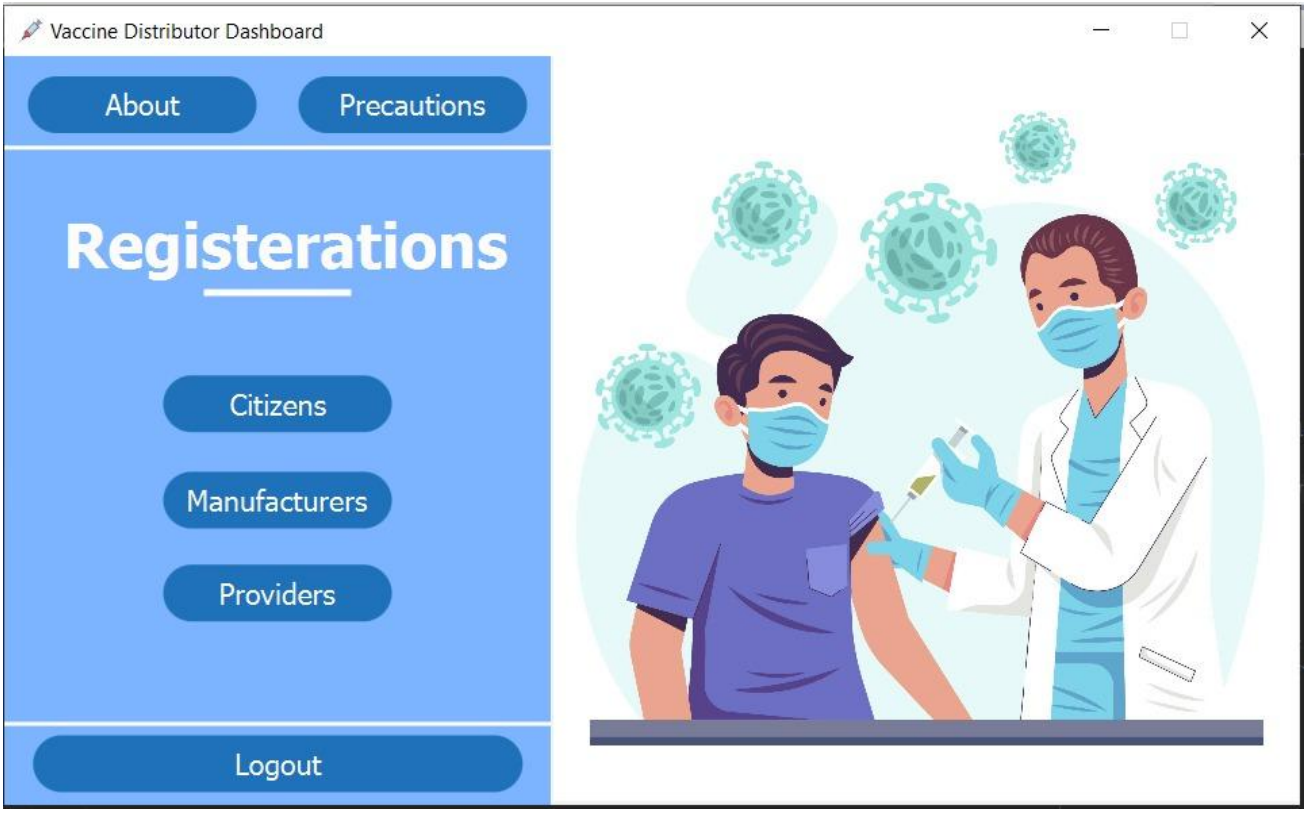


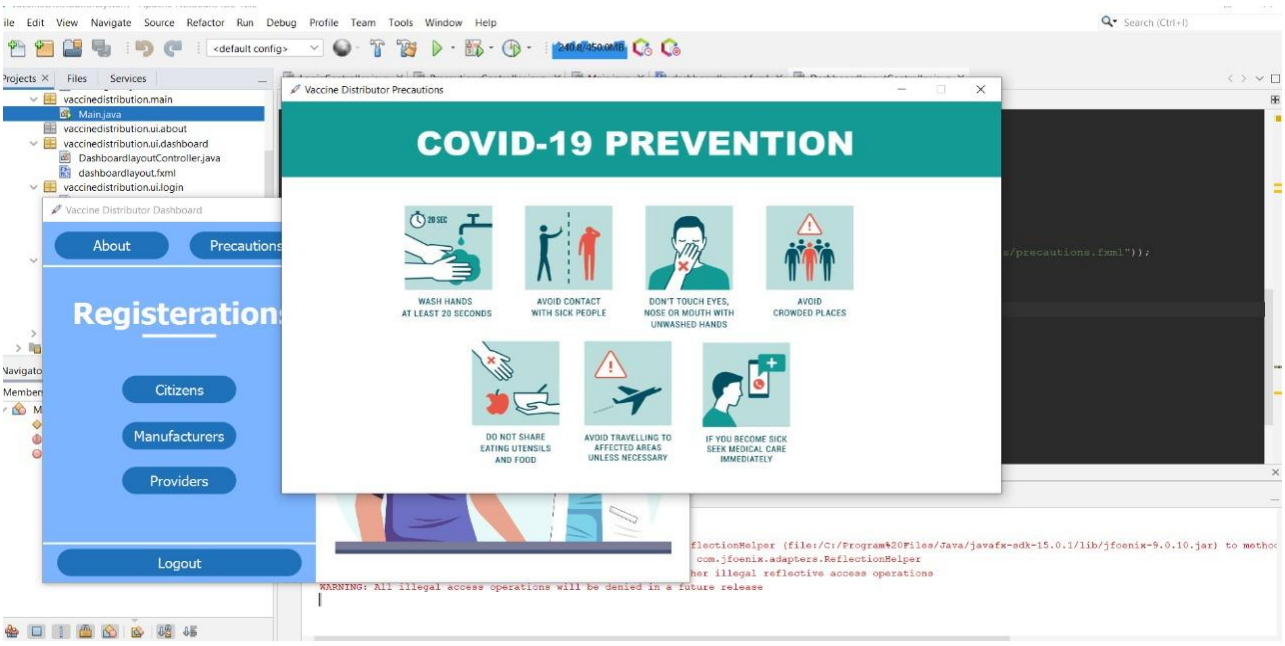
6. Results

6.1 Output Snapshots:

Admin Login



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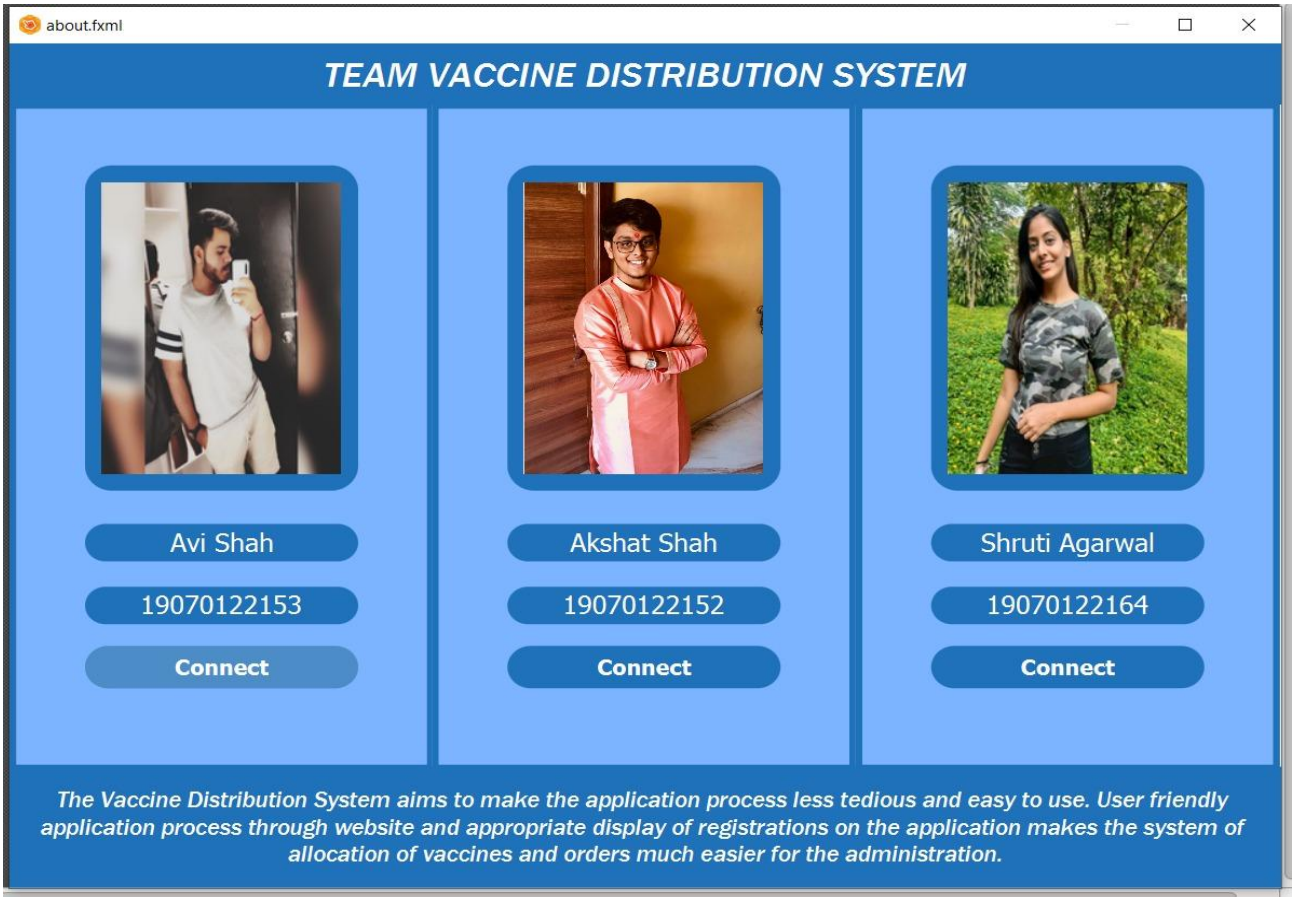
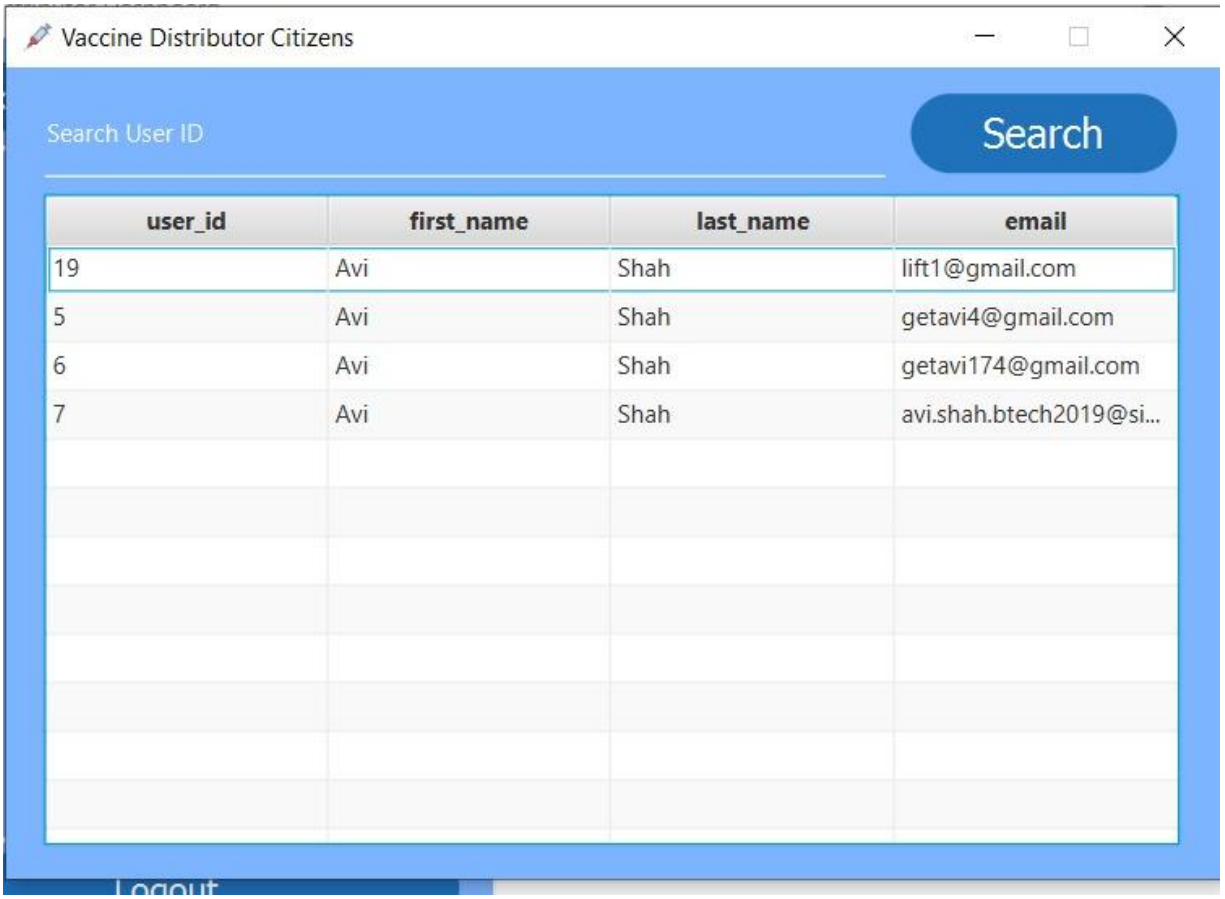
COVID-19 PREVENTION
WASH HANDS AT LEAST 20 SECONDS
AVOID CONTACT WITH SICK PEOPLE
DON'T TOUCH EYES, NOSE OR MOUTH WITH UNWASHED HANDS
AVOID CROWDED PLACES
DO NOT SHARE EATING UTENSILS AND FOOD
AVOID TRAVELLING TO AFFECTED AREAS UNLESS NECESSARY
IF YOU BECOME SICK SEEK MEDICAL CARE IMMEDIATELY
Vaccine Distributor Dashboard
About
Precautions
Registeration
Citizens
Manufacturers
Providers
Logout
WARNING: All illegal access operations will be denied in a future release


about.fxml
TEAM VACCINE DISTRIBUTION SYSTEM
Avi Shah
19070122153
Connect
Akshat Shah
19070122152
Connect
Shruti Agarwal
19070122164
Connect
The Vaccine Distribution System aims to make the application process less tedious and easy to use. User friendly application process through website and appropriate display of registrations on the application makes the system of allocation of vaccines and orders much easier for the administration.


Vaccine Distributor Citizens
Search User ID
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user_id
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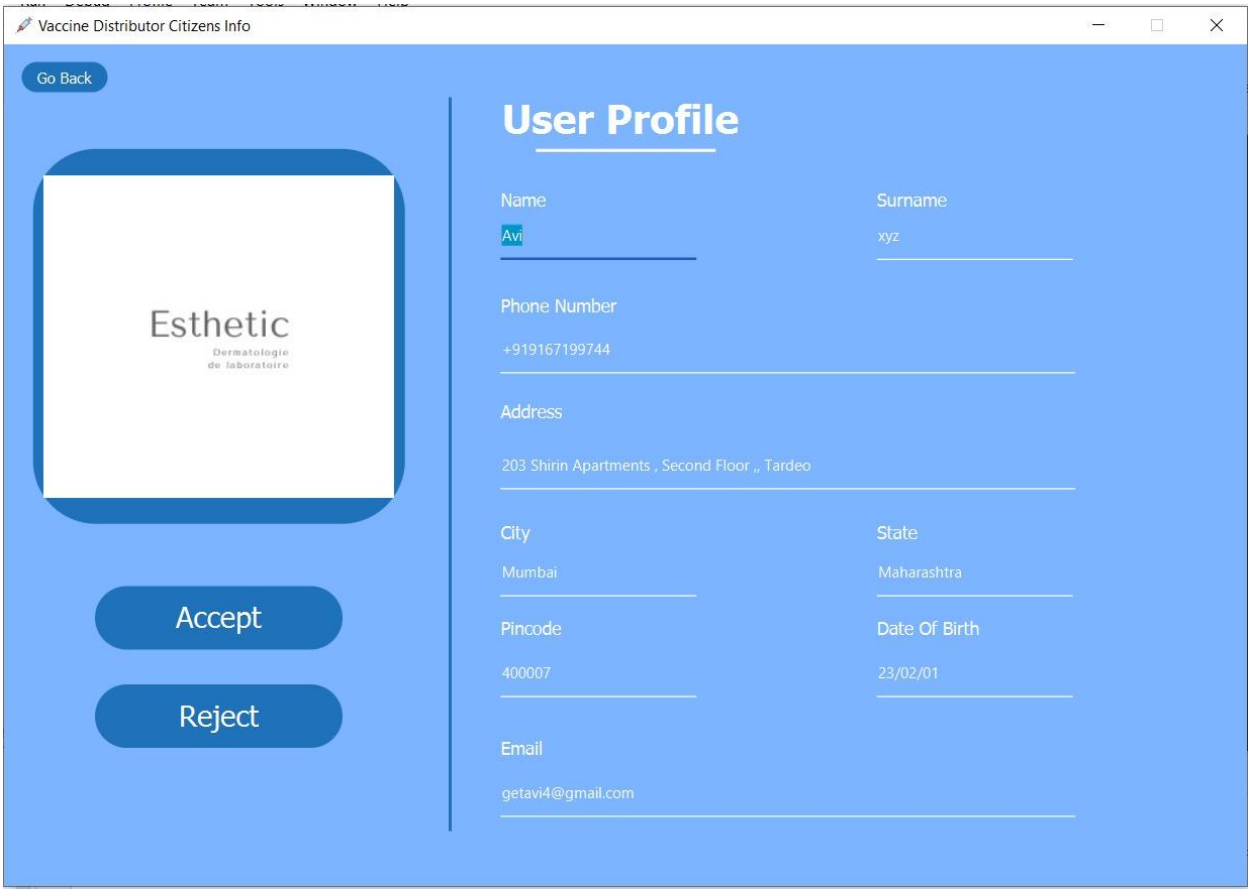
Vaccine Distributor Citizens Info
Go Back
Esthetic
Dermatologie
de laboratoire
Accept
Reject
User Profile
Name
Avi
Surname
xyz
Phone Number
+919167199744
Address
203 Shirin Apartments , Second Floor ,, Tardeo
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State
Maharashtra
Pincode
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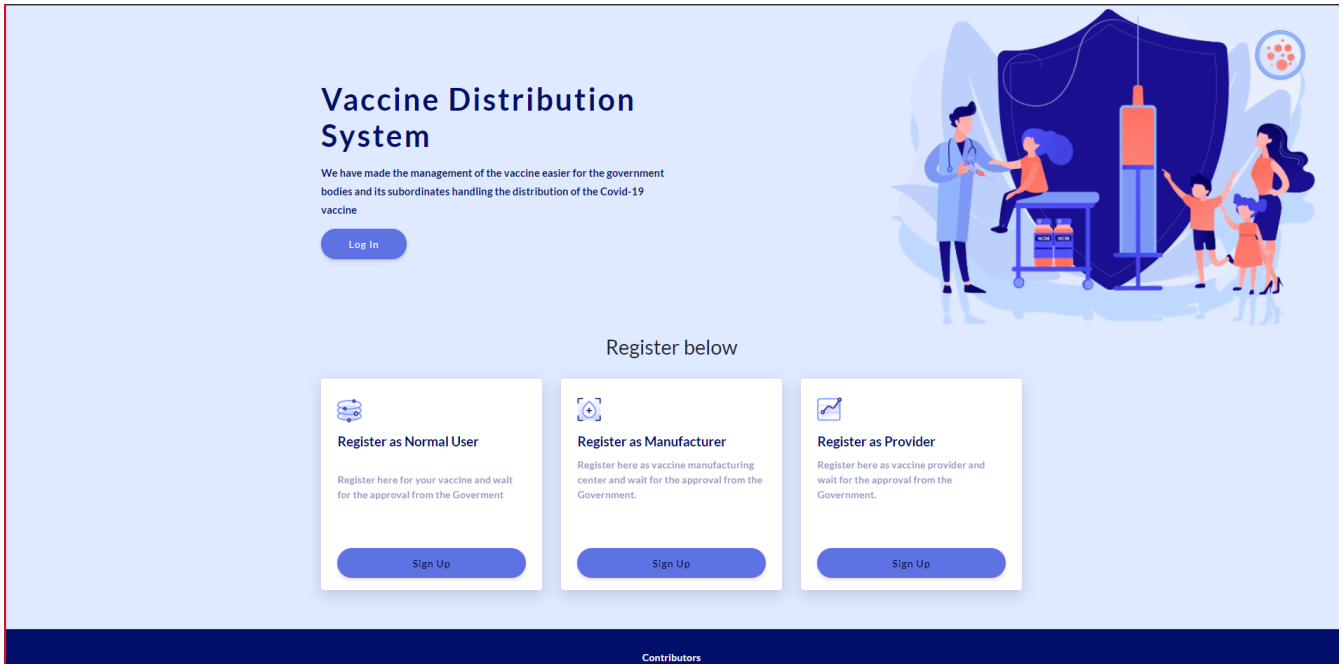
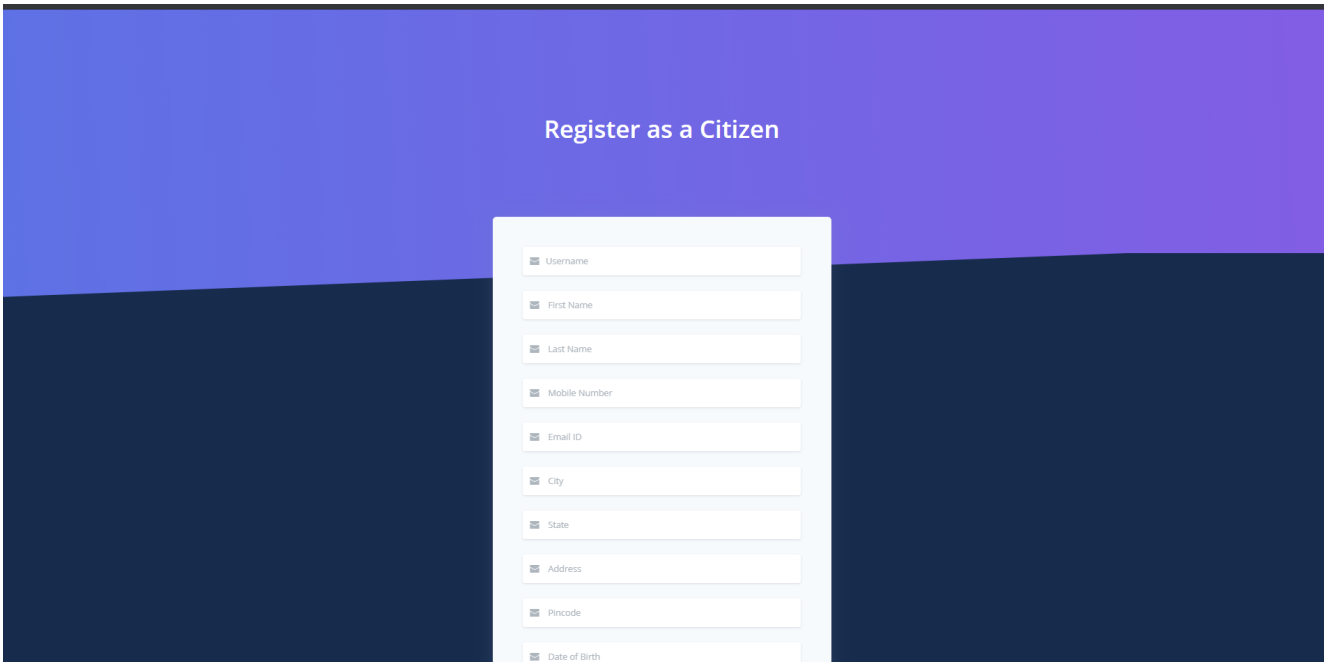
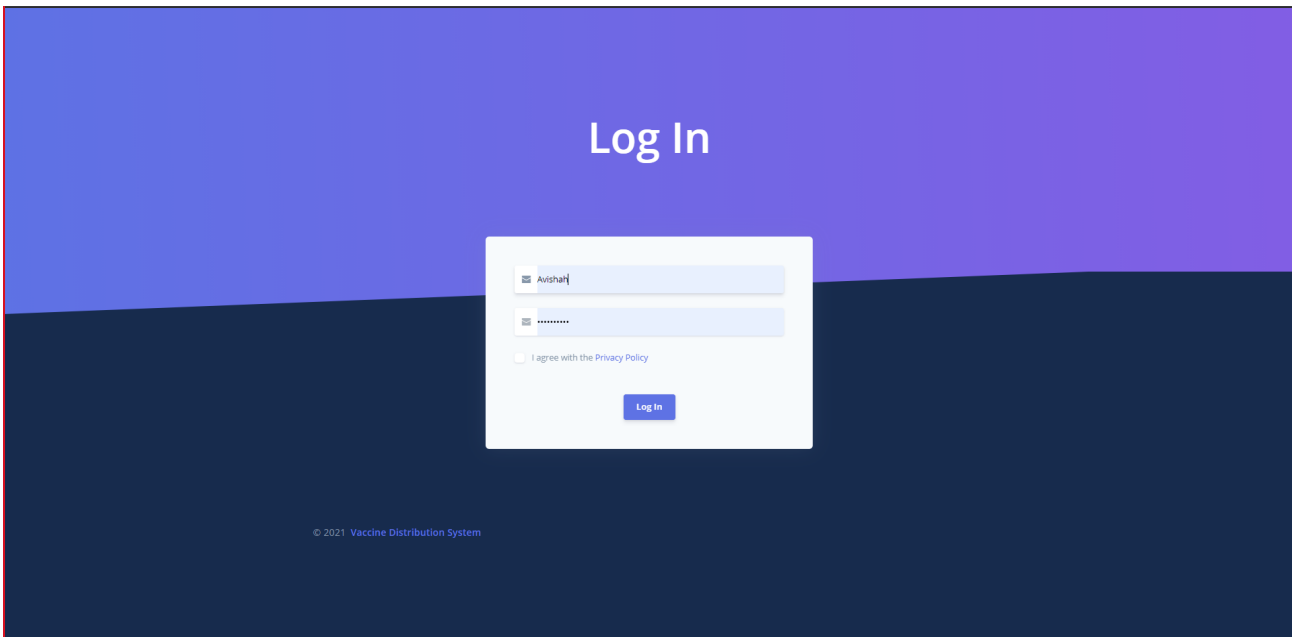
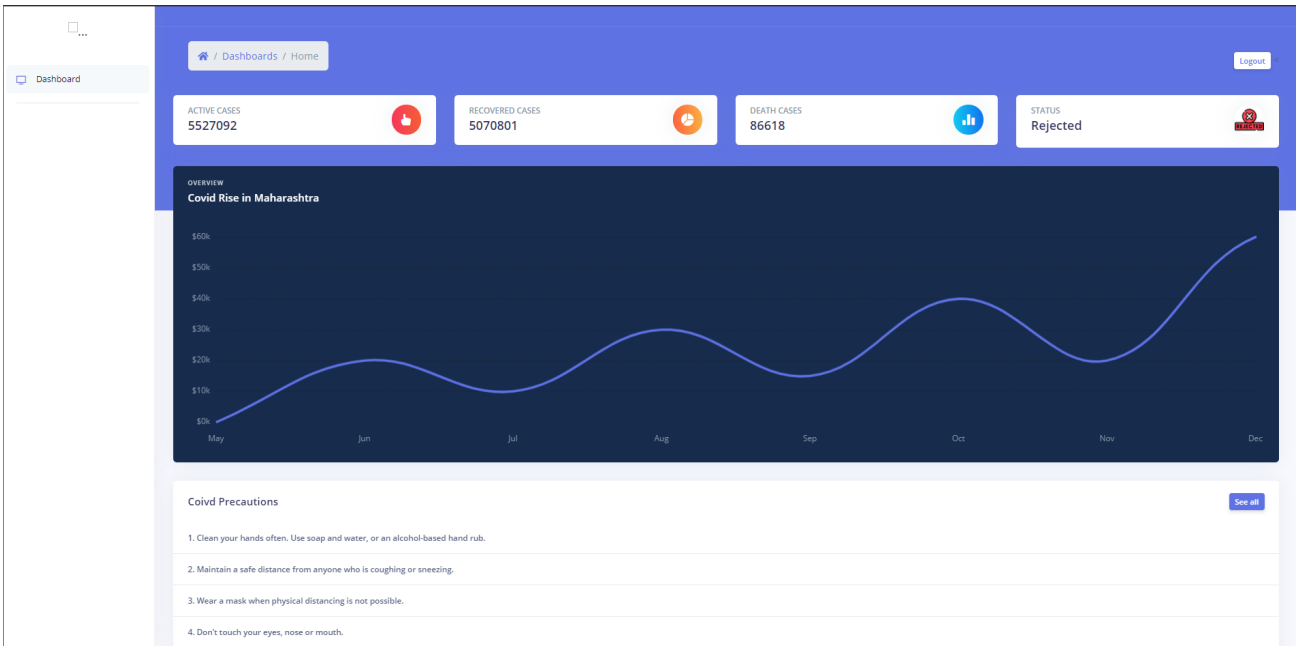
Date Of Birth
23/02/01
Email
getavi4@gmail.com

Web-app and Rest Api






Log In
Avishah
I agree with the Privacy Policy
Log In
© 2021 Vaccine Distribution System


Dashboard
Dashboards / Home
Logout
ACTIVE CASES
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RECOVERED CASES
5070801
DEATH CASES
86618
STATUS
Rejected
OVERVIEW
Covid Rise in Maharashtra
$60k
$50k
$40k
$30k
$20k
$10k
$0k
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Coivd Precautions
See all
1. Clean your hands often. Use soap and water, or an alcohol-based hand rub.
2. Maintain a safe distance from anyone who is coughing or sneezing.
3. Wear a mask when physical distancing is not possible.
4. Don't touch your eyes, nose or mouth.

7. Project Outcomes

- Easier application process for the consumers as well as efficient system for administration.
- The user gets a prominent interface to interact with and is prompted of all the errors if occurred.
- The email prompt feature enables seamless message transmission eradicating ambiguities.
- The project is bridged using postgres server, running queries to retrieve and push data both on the application and the website.
- Though there are limitations of using JAVA-FX, integrating the project with a web-app makes it effortless.

8.Conclusion and Future Scope

- All the functions that have been put up in the software are working properly. Also the software can be easily loaded on any windows supported system and can be used. Using this system one can track the number of vaccinated people in the country and also get the information regarding covid.
- It helps in stock efficiency, quality management and visibility of vaccine supply.
- In future, it can be extended to other countries as well as made available in more languages
- We can integrate the billing system as well.
- We can add blogs and news reports panels.
- We can have FAQs and open chat panels for the ones who have administered a jab.
- We can have a virtual fundraising events portal where people can donate for vaccine procurement.