

COVID TRACKER AND VACCINATION APP

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ABSTRACT

As COVID-19 continues to spread, Covid tracker and Vaccination app help to contain the pandemic. The main objective of this application is to form it interactive and its ease to use where you'll be able to check what number people are affected and how many already died and recovered with the assistance of graph statistics. It also contains a menu shows the symptoms of COVID-19 and prevention to stay people safe. App displays available vaccination centers and necessary information regarding center name, location, vaccine name, availability of dose1 and dose 2 and other related information. When it comes to authentication it uses firebase authentication. It verifies email implemented through firebase. The app allows user to require self-assessment test and lets them know their risk level.

Keywords: Covid 19, Covid Tracker And Vaccination Android Application, Email Verification, Firebase.

I. INTRODUCTION

Covid Tracker and Vaccination App was selected as our final year project by discussing with each other and with our mentor. As COVID-19 continues to spread, this App helps the user to know about the pandemic. The main objective of this application is to make it interactive and its ease to use where you can check how many people are affected and how many already died and recovered with the help of graph statistics. App contains cases statistics. It also contains a menu shows the symptoms of COVID-19 and prevention to keep people safe. App displays available vaccination centers and necessary information regarding center name, location, vaccine name, availability of dose1 and dose 2 and other related information.

When it comes to authentication it uses firebase authentication. It verifies email implemented through firebase. The app allows user to take self-assessment test and lets them know their risk level. Once user opens the application, user shall be able to login the app by adding their personal information like name, age, phone number, email id, etc. Also user can register by using their email id and also verification of user can be done through email. The number of COVID-19 cases can be shown using a pie-chart which shows the number of COVID cases around world. The user can also book vaccination for COVID virus by booking the nearby slots available to the user.

II. LITERATURE REVIEW

Pandemic caused by the Covid virus came with great imbalances all told areas of worldwide activity. it's a high spread rate in a very short time, and prevention of transmission became a worldwide priority. A basic method employed in this fight is to detect outbreaks and high risk areas of infection. Online environment allows epidemic and pandemic crises surveillance, mitigation of actions, keeping in check of viruses and observing people's reactions. the tactic applied during this study is to look for existing mobile apps to spotlight their benefits and usefulness during the COVID19 pandemic. this text, also, analyzes the importance of developing a mobile application for managing COVID-19 pandemic, what solutions and benefits it brings, the way to optimize the method of monitoring compliance with the recommendations and limitations to stop the spread of the new coronavirus. In essence, users have a good range of knowledge and options. the applying provides an efficient way of showing the identified Covid-19 containment zones to the users through Graphs. With the alarming increase of Covid-19 affected cases throughout the planet, this developed application may be employed as a tool for creating further social awareness among the people. Self-Assessment option during this application identifies the danger and highlights the requirement for taking further precautionary measures for combating Covid-19. the applying has availability of vaccine center with accurate results. We shall be using

Java for the event of the appliance making it fully native. Android relies heavily on Java fundamentals. The Android SDK includes many standard Java libraries (data structure libraries, math libraries, graphics libraries, networking libraries and everything else you will want) additionally as special Android libraries which can facilitate your develop awesome Android applications. For the database part of the applying, we would be using XML. XML is good for hierarchical data -- data which has several levels of varied sizes it is also good for transmitting & formatting. XML files are good for storing configuration settings and spending data between different systems, but data storage and processing should definitely board an accurate DBMS. After we've finished developing our app, we shall jaunt testing, which can be a vital a component of the software development life cycle. If we wish our application to use by as many of us as possible, we must test it to substantiate that it's bug-free, there aren't any vulnerabilities within the project, and it will not fail. we are visiting also divide the procedure into several parts for testing to verify that it's thoroughly tested. As of now, we have got intended to incorporate this system into our project, but within the event of unforeseen interference, certain adaptations is also necessary.

III. EXPERIMENTAL SETUP

For this project we shall be using Java for the event of the appliance making it fully native. Android relies heavily on Java fundamentals. The Android SDK includes many standard Java libraries additionally as special Android libraries which will facilitate your develop awesome Android applications. For the database a part of the appliance, we might be using XML/firebase. XML is nice for hierarchical data -- data which has several levels of various sizes it's also good for transmitting & formatting. XML files are good for storing configuration settings and spending data between different systems, but data storage and processing should definitely board a correct DBMS. After we've finished developing our app, we shall loco mote to testing, which may be a crucial a part of the software development life cycle. If we wish our application to be employed by as many of us as possible, we must test it to confirm that it's bug-free, there aren't any vulnerabilities within the project, and it'll not fail.

Table 1. Hardware Requirements

| Sr. No | Name | Specification |
|--------|-----------------|--------------------------------------------------------|
| 1 | Computer System | 8 GB RAM or more, 8 GB of available disk space minimum |
| 2 | Keyboard | - |
| 3 | Mouse | - |

Table 2. Software Requirements

| Sr. No | Name | Specification |
|--------|-------------------------------------------------|------------------------------------------|
| 1 | Windows/Mac/Linux | Windows - 8/10/11, MacOS 10.14 or higher |
| 2 | Android Studio + Android SDK + Android Emulator | 2020.3.1 version or above |
| 3 | Java | JDK 1.8 or above |

- A. Android Studio:** Android Studio provides a unified environment where you'll be able to build apps for Android phones, tablets, Android Wear, Android TV, and Android Auto. Structured code modules allow you to divide your project into units of functionality that you just can independently build, test, and debug. With the assistance of the android studio, we are able to easily develop android studio for various android versions and screen sizes.
- B. Java:** The Android SDK includes many standard Java libraries (data structure libraries, math libraries, graphics libraries, networking libraries and everything else you'll want) likewise as special Android libraries which will facilitate your develop awesome Android applications.

C. Firebase: Firebase may be a Backend-as-a-Service (Baas). It provides developers with a range of tools and services to assist them develop quality apps, grow their user base, and earn profit. it's built on Google's infrastructure. Firebase is categorized as a NoSQL database program, which stores data in JSONlike documents.

IV. MODELING AND ANALYSIS

The main focus of the modeling and analysis is to provide a detailed report on the modeling of the report .In this section we present the graphs and charts to show the analysis and the glimpse of our research work. In this we have made a app named as Co-fight app which is used to help to contain the covid pandemic.

Algorithm:

- Start app i.e, Open the app
- Access to login account or signup for new user
- Select various options from navigation menu
- Book vaccination slot
- Stop

Flow Chart

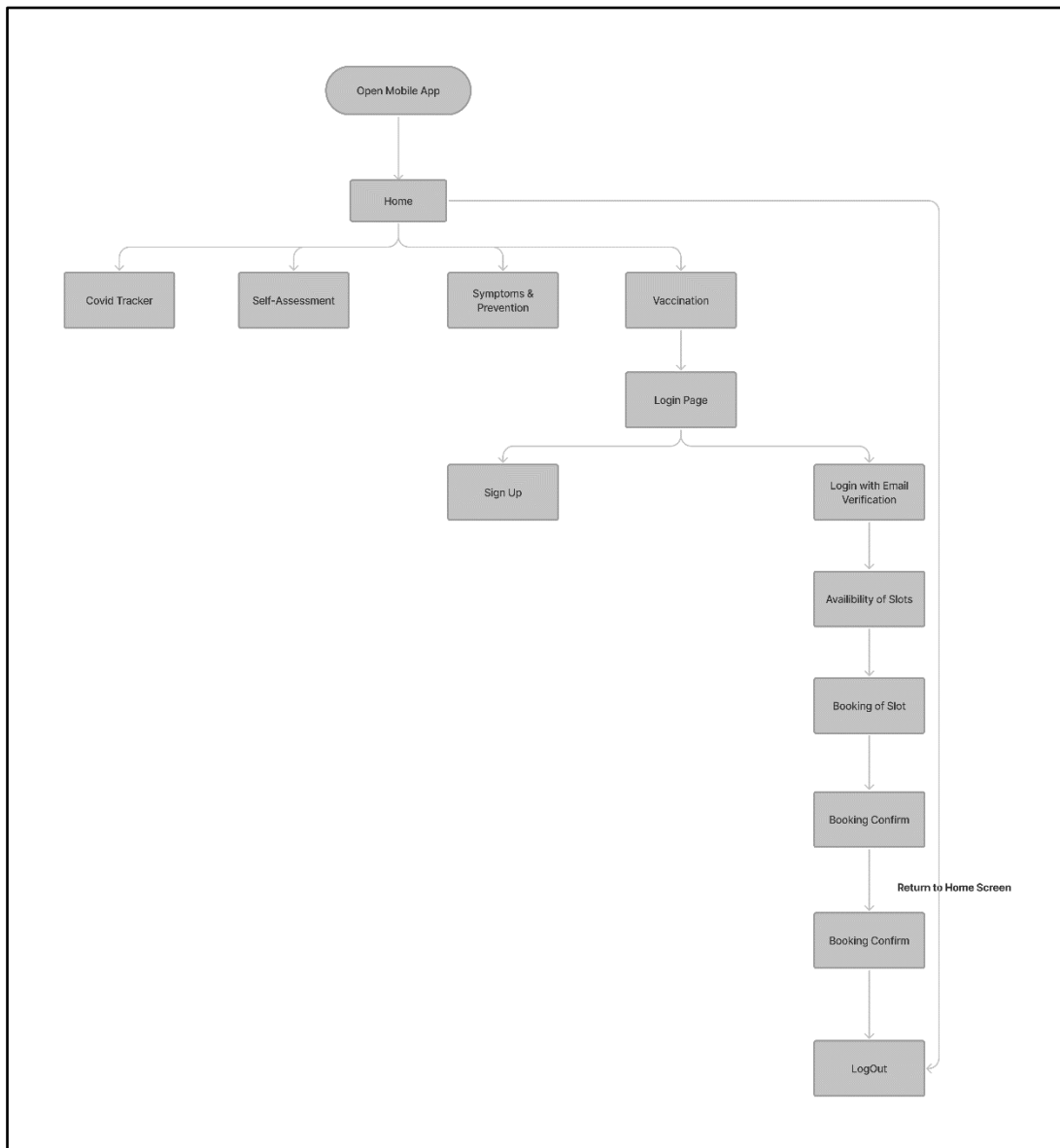


Figure 1: Flowchart of the application

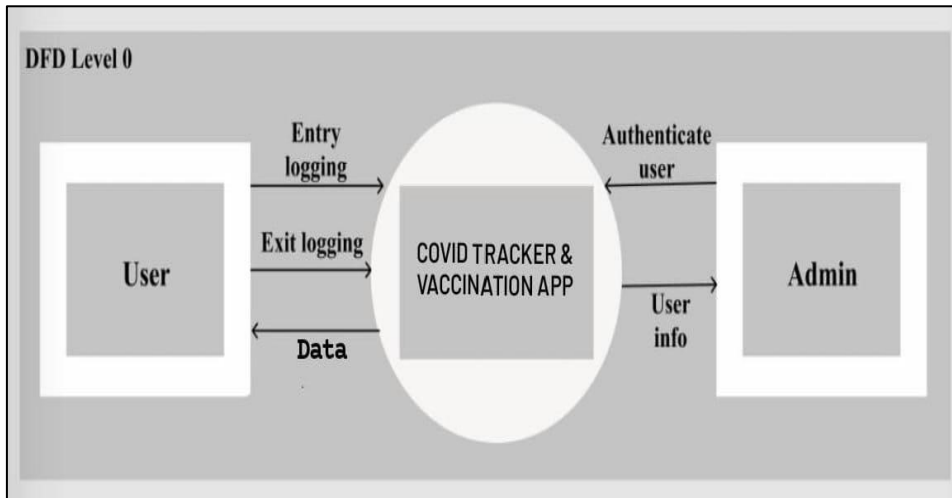


Figure 2: DFD Level 0 Diagram of the proposed system

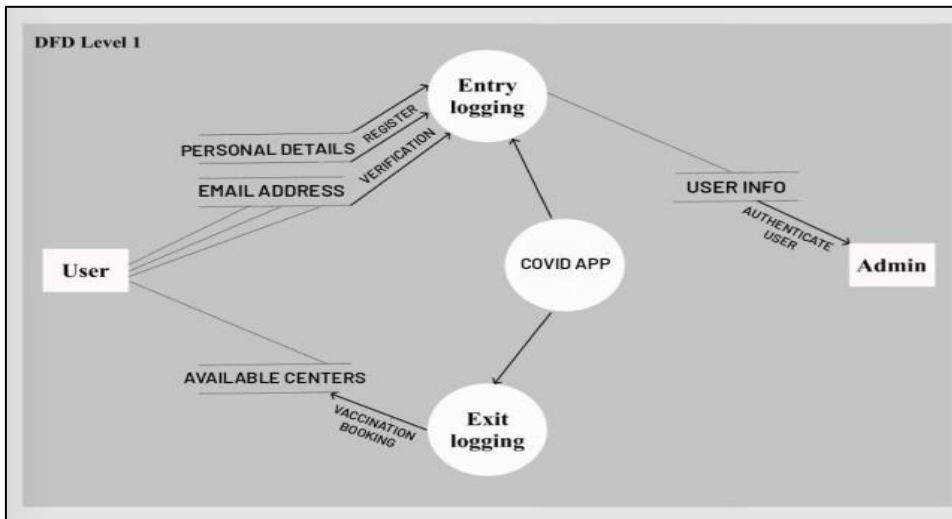


Figure 3: DFD Level 1 Diagram of the proposed system

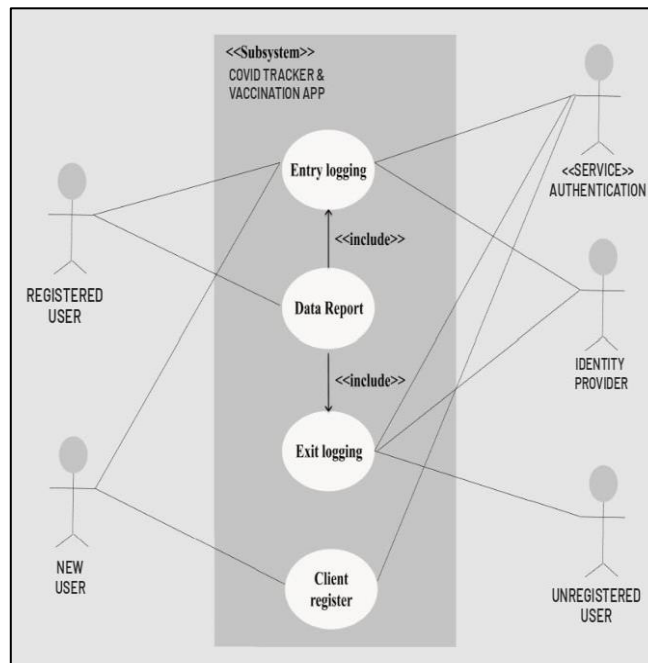
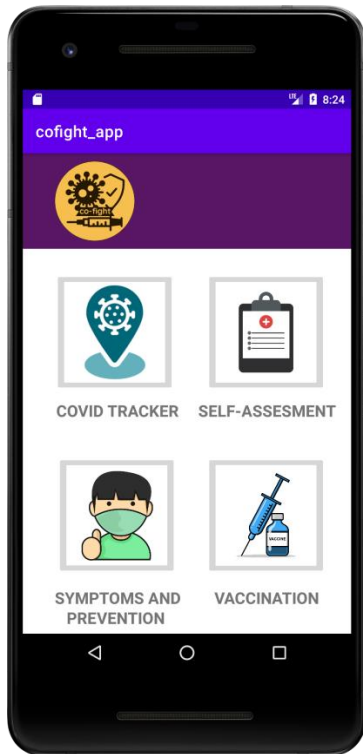


Figure 4: Use case Diagram of the proposed system

V. USER INTERFACE DESIGN



Home Page



Covid Tracker



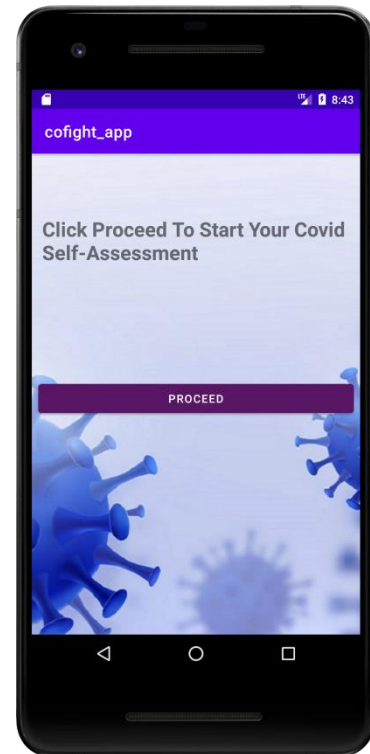
Symptoms & Prevention



Symptoms



Precautions



Self-Assessment

VI. FUTURE SCOPE

Pandemic caused by the Covid virus came with great imbalances altogether areas of world activity. it's a high spread rate in a very short time, and prevention of transmission became a world priority. A basic method employed in this fight is to detect outbreaks and highrisk areas of infection. Online environment allows epidemic and pandemic crises surveillance, mitigation of actions, keeping in check of viruses and observing

people's reactions. the tactic applied during this study is to look for existing mobile apps to focus on their benefits and usefulness during the COVID19 pandemic. this text, also, analyzes the importance of developing a mobile application for managing COVID-19 pandemic, what solutions and benefits it brings, a way to optimize the method of monitoring compliance with the recommendations and limitations to forestall the spread of the new coronavirus. In essence, users have a large range of knowledge and options; they will protect themselves using online environment.

VII. CONCLUSION

Covid Tracker and Vaccination App was selected as our final year project. As COVID-19 continues to spread, Covid tracker and Vaccination app help to contain the pandemic. Online environment allows epidemic and pandemic crises surveillance, mitigation of actions, keeping in check of viruses and observing people's reactions. the tactic applied during this study is to look for existing mobile apps to focus on their benefits and usefulness during the COVID19 pandemic.

VIII. REFERENCES

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