**Project Requirement for Covid Tracker**

**INTRODUCTION:**

This covid tracker application is completely focused on alert notification using GPS by which we can get notification alert of cases in our nearby areas. It also diagnoses whether the user is having any COVID symptoms using the quick survey by fetching the COVID symptoms. Another key objective of this application is state-wise tracking details which shows the active, confirmed, recovered and death cases of various countries across the globe.

**KEY CONCEPTS:**

The main concept here is surveying the user’s symptoms and finding out the risk of infection. Then, sending alert notifications after the details of the users are stored in the cloud storage and updating the state-wise tracking details. Each entry of the application consists of:

* Login field:

E-mail address of the user is required for logging in to the app.

* Password field:

Password is required for the security purpose of the app.

* Account details field:

In order to sign up to the app, the user has to fill up the account details like name, e-mail, number, password, age and these details are stored in the cloud storage which helps to send notifications later to the user.

* Quick survey field:

The questions in the survey are to be answered to identify the risk of infection.

* Area wise tracking search field:

The user needs to give the input of any state name across United States in order to know about the current COVID scenario.

* Notifications:

Alert notifications are sent here daily to know about the number of active cases nearer to user’s locality.

**FUNCTIONAL REQUIRMENTS:**

The major functional requirements of the project are as follows:

1. **Creating entry of user for signup/login:**

The sign up to the application can be done for the entry of the new user. The details of the new user consist of name of the user, address, contact number which are stored in the application database.

1. **Logging in the application:**

Those users who have already signed up to the application have to login to the app. The users will login to the application to keep track on their condition and keep themselves updated with the covid details by taking the survey which will indicate their risk of infection and the patient gets notification for COVID testing.

1. **Surveying user Symptoms:**

In the quick survey page, questions related to various COVID symptoms are asked and by fetching these symptoms the app detects that the patient has low risk of infection which means no symptom or high risk of infection mean mild symptom. In case of mild symptom, the app suggests the patient to have COVID test and those patients are considered as active cases. In case of no symptom, the app suggests that the patient is safe and has low risk of infection.

1. **State-wise Tracking:**

The application will keep track of the covid-19 cases in various states across United States and the data regarding the cases in US are used here using the CDC website. When the user visits the state wise tracking page, it will direct them to the page with the active, confirmed, recovered and death states of various states across US.

1. **NOTIFICATIONS:**

The alert notifications are sent to the users using the GPS locator which notifies the user regarding the active cases in the nearby areas and this follows the digital contact tracing technique.

**Use cases: -**

The following use cases describes a minimum set of tasks that Covid-19 application tracker will support

1. **Login details: -**

**Use case goal:** The user login to the application using the email-id and password which depends on the user’s choice.

**Other resources needed:** The login details of the users’ are stored in the application database which is the cloud server.

**User actions:** The user sign up to the app with the user details and after that it allows the user to login to the app and access the app.

**Product action:** -The user’ account is maintained by the app by saving their data of joining, details while signing in, symptoms while surveying and tracking of COVID cases across United States.

**2. SEND NOTIFICATION**

**Use case goal**: While the user login to the app, the app will notify them about the active cases in nearby locality and the distance of active cases from them.

**Other resources needed:** You can get alert notification when there is another user with COVID symptoms nearer to the user in the locality. Thus, active cases will be notified to the user from staying alert about the emerging COVID cases.

**User actions:** The user login to the app by giving their details and checks status of covid cases within United State which are updated within 24 hours.

**Product action:** When the user starts using the app, the alert notification pops-up and shows the active cases nearby within 0.3 miles.

**3. STATUS OF COVID CASES**

**Use case goal:** The user login to the app using the login details to check the status of COVID cases in state-wise tracking page.

**Other resources needed:** The new COVID cases are updated in the app when the new, active, confirmed, recovered and death cases are confirmed in CDC website whose data is used here.

**User actions:** They login to the app and then by clicking on the state tracking page, this page is redirected to the page with new confirmed, active, recovered and death cases of various states

**Product action:** The status update will work when there are changes in the covid status in the total number of active states to recovered state and so on.

**NON-FUNCTIONAL REQUIRMENTS:**

The non-functional requirement of the project are as follows: -

**Platform**

The application keeps track of the covid cases around the United states and nearby location within 0.3 miles of area using the database stored in the app cloud. A browser is required to access the database stored in the cloud and the application can be accessed using the android mobile as this app is only android compatible.

**Performance**

The application fetches the details of the user and sends them the alert notification as soon as the user login to app and also detects the risk of infection using survey. It can only run using internet otherwise it is impossible to run.

**Security**

The users have their own id and password which is up to the user only and no one knows about it other than themselves. But the details of the users are encrypted so that it would not be accessed by the third party. The data of the user are stored in cloud console where API key is there to store the encrypted data. But the users have access to the database stored like the cases just by logging in to the application.

**User Characteristics**

The users are not required to have any prerequisite knowledge before operating the app as it is the easy-to-use type of interface for all types of user.

**Scale**

The system must support a large number of users, as very large population needs to install it and keep track of their location details so, a large number of file support should be there.

**Data Formats**

The input /output format is simple, the user’s data have their particular format. For ex- Name should be string, Mobile number using number format etc.

**Internationalization**

The project now supports only English language, in future prospect it can support many languages.

**Environment**

No there is no specific physical environment requirement, it can work in any condition.

**Expected Enhancements**

As the system right now is only working for one language as English, in future it will support many languages.

**Date**

The final presentation will be on or about the last day of classes of the Spring 2021 semester. The final demonstration (if needed) and the documentation will be due at the end of finals week.