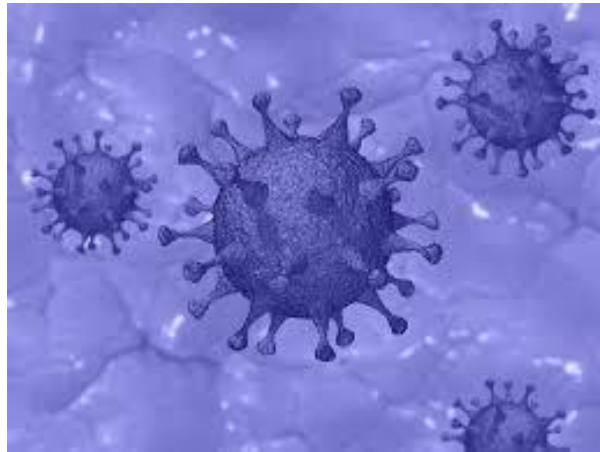


SOFTWARE REQUIREMENT SPECIFICATION FOR COVID TRACKING SYSTEM



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INTRODUCTION

- 1.1 Purpose of this document
- 1.2 Scope of the development project

DESCRIPTION

- 2.1 Product Overview
- 2.2 Product Functionality
- 2.3 Design and Implementation constraints

FUNCTIONAL REQUIREMENTS

OUTPUT/POST CONDITION

OTHER NON FUNCTIONAL REQUIREMENTS

- 4.1 Performance Requirements
- 4.2 Safety and Security Requirements

4.3 Software quality Attributes

4.3.1 Reliability

4.3.2 Adaptability

Introduction

1.1 Purpose of this Document

The purpose of this SRS document is to provide a detailed overview of our software product, its parameters and goals. This document describes the project's target audience and its user interface, hardware and software requirements. It defines how our client, team and audience see the product and its functionality.

1.2 Scope of the Development Project

The goal is to design software for a Covid Tracking System. In emergency situations such as corona virus pandemic, communication plays a significant role. For instance, people may need to communicate with others to appeal for help. Or they may want to be informed about the situation. However, in such situations it is very likely to spread fake news and provide fake information. This application will deal with this problem, and it will allow users to get the latest and correct information. As a result of this, people become more aware and also can help others in this situation. The application will be able to set a GPS connection using the internet. A similar kind of mobile tracing application has been developed in India, namely, Aarogya Setu. The App is designed in such a way that it informs the user whenever they meet an infected person through Bluetooth and GPS location services. The data acquired from the application is not disclosed publicly and is only used by the government for tracing, tracking, and management of COVID-19.

Description

2.1 Product Overview

The product to be developed is mostly self-contained and requires minimal external components apart from the database management system which maintains all the information. It is a prototype that requires further development in order to be fully deployed. To that extent, the integration of the application with an actual Internet connection is left out, however providing enough modifiability to add this feature later as described in subsection 2.3. Users will nevertheless require a web browser to access the application. To validate the registration of users, an external SMS service is used to send OTPs to users.

2.2 Product Functionality

- ★ Visitors and Staff shall be able to register on the application and log into it.
- ★ Visitors shall be able to book tests
- ★ The application shall display the quarantine status of users
- ★ The application shall assign a Doctor to Visitors that test positive
- ★ The application shall assign shifts to Staff
- ★ Staff shall be able to request PPE
- ★ Doctors and Nurses shall be able to record test samples taken
- ★ Technicians shall be able to record the results of processed test samples

2.3 Design and Implementation Constraints

The product to be developed, being a rudimentary version of the envisioned software, the hosting of the application on the Internet is left unimplemented. As such, in the current version, the user accesses the application hosted on the localhost of the user's machine. To practically realize its deployment, this functionality must be added to the software in future versions. The user interface for the application is in English and options for other languages may be added later in the SDLC.

Functional Requirements:

- Build an application that Public can access and view the COVID19 status.
- The application should have signup, login, profile, dashboard page and individual records.
 - ✓ State Name
 - ✓ Confirmed
 - ✓ Deaths
 - ✓ Fatality Rate
 - ✓ Latitude
 - ✓ Longitude
 - ✓ Last Update

- This application should have a provision to maintain a database for individual
- Information, public information and COVID19 portfolio.
- Also, an integrated platform required for government and public.
- Filters like Low to High or showcasing COVID19 affected area should be highlighted.
- Aadhar integration for intimating individual reports to the public.
- Clarified that all contact tracing and COVID-19 status apps, including ones that merely store an individual's vaccination or test records, need to complete COVID-19 contact tracing and status Pasquets; section in the App content page.
- Additional requirements are introduced for apps that plan to remove contact tracing or COVID-19 status functionalities.
- Apps that provide medical, treatment, vaccine, testing, or other related information for COVID-19.
- Apps that support COVID-19-related response, containment, research, or education/training efforts.
- Apps that support services used to respond specifically to COVID-19, for example, apps that provide social support (food stamps, payment), healthcare, loans, etc. specifically in response to COVID-19.

Output/ Post Condition

- Records Persisted in Success & Failure Collections
- Standalone application / Deployed in an app Container

Other Non-functional Requirements

4.1 Performance Requirements

The product to be developed does not involve much real time processing nor does it require data heavy transactions to be made. As such, the performance requirements from the application are minimal. Reliability is the most important factor in this application

4.2 Safety and Security Requirements

The application stores moderately sensitive data about its users and hence a certain level of security is expected. The product primarily relies on the security of the machine that it runs on. The database files that store the data must be encrypted. A significant portion of the application will be developed in PHP. There are inherent security concerns associated with the use of PHP, mainly code injection vulnerabilities. To mitigate these risks, input received from the user must be sanitized thoroughly before passing to the database.

4.3 Software Quality Attributes

4.3.1 Reliability

The aim of the product is to facilitate record maintenance and thereby efficiently manage the crowding at the centre, essential for curbing the spread of COVID-19. Consequently, reliability is the primary concern in terms of software quality, i.e., the performance expected of the application would be its ability to run throughout the working hours of the testing centre without crashing.

4.3.2 Adaptability

The application to be developed, due to constraints on the implementation, is most definitely expected to undergo changes in the future. Hence, the design of the application must be adaptable to such changes.