

Software Requirements Specification

Version 1.0



Category: Mobile Application

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1.1

Background and Need for the Mobile App

Health is one of the most important factors in today's era and should be our first priority. With the increase in sickness and large numbers of urban population, it becomes difficult to book appointments or visit a doctor.

There may be scenarios where a person wants to check his/her BP, Weight, and so on, and for this purpose, they require to keep visiting clinics. Sometimes, even after an appointment is booked, a person may forget about this or may reach at the hospital/doctors clinic and doctor is not available.



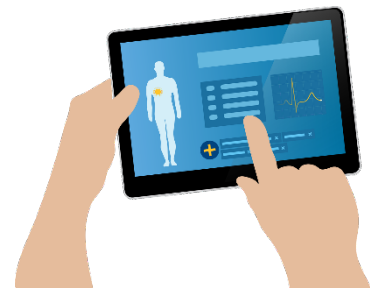
What individuals seek is an easy means to help them monitor and track their health. They should be able to set up reminders for doctor appointments, create daily medicine dosage schedules, and track their weight, BP and glucose levels, and more.

1.2

Proposed Solution

To provide ease of use to individuals to manage their health, a mobile app has to be created.

The proposed mobile application, which will be called 'HealthAlert', should allow users to register and thereafter, view appointments, get reminders of appointments, save regular records regarding their health such as Blood Pressure (BP), Glucose, and so on, track medicine dosage schedules, and more.



1.3 Purpose of this Document

The purpose of this document is to present a detailed description of HealthAlert. This document will explain the purpose and features of the mobile application, the interfaces of the mobile application, what the mobile application will do, and so on.

This document is intended for both stakeholders and developers of the mobile application.



1.4 Scope of Project

This mobile application will be used by individuals who want to track their health. They can set up reminders for doctor appointments, create daily medicine dosage schedules, track weight, BP and glucose levels, and more.



Medicine Dosages



: Appointment Reminders



Personal Health Information

HealthAlert



Real time Data Store

1.5

Functional Requirements

The app will be designed as a set of forms/pages, Navigation, and Fragments with menus representing choice of activities to be performed.



Following are the functional requirements of the mobile app:



Home Page: It will display an attractive visual and menus for various operations, including basic functionality such as Registration and Login. After users are logged in, they will be able to access various menus.



Register:

It will allow new users to get registered with HealthAlert mobile application. Users are individuals who want to use the app. Registration details can include existing email id, full name, address, age, gender, and so on. Users can set a username and choose a password.

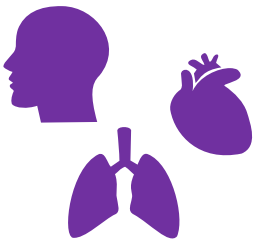
Appropriate error-checking must be done on the fields of the form to ensure correct data. For example, email id can be checked to see if it is of appropriate format. (Hint: Use client-side validation).

Upon successful registration, an email should be sent to the user welcoming the user to the application.



Login:

It will allow successfully registered users to get logged in to HealthAlert and access various features of the mobile app through menus. After a user has logged in, the username should be displayed at the top right corner.



Settings:

Users will be able to manage their accounts by using options such as **Create**, **Update**, and **Delete** Profile. Profile details can include their case history, list of ailments they may have, allergies, and other details. User id given during registration cannot be modified ever.

Appointments:

This menu should enable users to perform these tasks:

Add/Modify/Delete/View Appointments



New appointments booked or scheduled with a doctor or a hospital/clinic (outside of the app) can be entered here through a form. Date and time and venue of appointments can be part of the form data entered. If an existing appointment is to be changed (say, due to doctor unavailability), the same can be done through Modify option. Once an appointment is finished, the details can be deleted if required.



Functionality should be created in the app to send reminders by email or SMS to the user based on the appointments added.

For example, user Peter Howard can receive a notification such as:

Hello, Peter! You have an appointment scheduled for today at 3 pm with Dr. Clara Jones at Cooper Hospital.



Personal Health Vitals:

This menu too should have three options and enable users to perform three tasks:

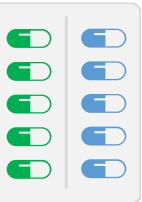
Add/Modify/Delete/View Health Vitals

Health Vitals can include weight, BP values, and glucose levels, and other such aspects of personal health. These should be editable everyday or on regular basis. Once the records are entered, they can be viewed anytime later to monitor health status.

Medicine Dosage:

This menu too should have three options and enable users to perform three tasks: Add/Modify/Delete Dosage

Based on doctor's advice sometimes the dosage is increased, decreased, or even eliminated (if recovered fully). This menu should facilitate users to update the medicine dosage details accordingly. Dosage can be daily, weekly, or custom.





Search:

Users can search for appointments, personal health vitals, medicine dosages, and so on. Search option should first accept category for search and then, the search keywords.

For example, user Peter Howard can click Medicine Dosage under Category and then, select Pan-D as the medicine. Results will then show up displaying medicine dosage details for that medicine.

Another example, user Kia Lee selects Appointment Details as the Category and then, enters a date. All the appointments scheduled for that date are then displayed.



Sort:

Sort functionality should enable users to sort appointment details by date, personal health vitals by date, and so on.



Sign Out: Using this, logged in users can log out from the app.



Feedback and Contact Us: Feedback menu option should enable users to provide their feedback about this app through a feedback form.



Contact Us menu option should enable users to contact the creators of the app. An email id can be displayed here for contact information.



Help:

Help menu should display end user guidelines or a how-to for end users.

In this project, all key data shown on mobile screens/pages such as the appointment details, medicine dosages, personal health vitals, and so on will come from relevant database tables and will not be hardcoded.

Note: Boilerplate or readymade HTML template can be used, provided it is only for design aspect and not for implementing application functionality.

1.6 Non-Functional Requirements

There are several non-functional requirements that should be fulfilled by the mobile application.

These include:

- **Safe to use:** The mobile application should not result in any malicious downloads or unnecessary file downloads.
- **Accessible:** The mobile application should have clear and legible fonts, user-interface elements, and navigation elements.
- **User-friendly:** The mobile application should be easy to navigate with clear menus and other elements and easy to understand.
- **Operability:** The mobile application should operate in a reliably efficient manner.
- **Performance:** The mobile application should demonstrate high value of performance through speed and throughput. In simple terms, the mobile application should be fast to load and page redirection should be smooth.
- **Security:** The mobile application should implement adequate security measures such as authentication. For example, only registered users can access certain features.
- **Availability:** The mobile application should be available 24/7 with minimum downtime.

These are the bare minimum expectations from the project. Once the functional and non-functional requirements are fulfilled, you can use your own creativity and imagination to add more features.

Database Design

Data Dictionary: Users, Appointment Details, Medicine Dosages, Personal Vitals, and so on.

Based on the given specifications, you will define suitable entities, attributes for these entities, and identify relationships between the entities.

For example, some entities along with their attributes can be identified as follows:

User:
1. User ID
2. Password
3. First Name
4. Last Name
5. Email ID
6. Contact Number
7. Gender
8. Age

Appointment Status:
1. Notification ID
2. Date
3. Time
4. Location
5. Description

Medicine Dosages:
1. UserID
2. MedicineID
3. TimesinaDay
4. TimesPerWeek
5. DosageQuantity

Similarly, you will define relationships between entities and methods representing activities on the entities.

Note: These are just examples, you do not have to adhere to these structures and can design your own table structure with more or less columns.

1.7 Interface Requirements

Hardware

- Intel Core i5 Processor or higher
- 8 GB RAM or above
- Color SVGA
- 500 GB Hard Disk space
- Mouse
- Keyboard
- Android Supported Smartphone

Software

Technologies to be used:

1. **Technology:** Android (Java)
2. **IDE:** Android Studio
3. **Database:** SQLite or Firebase

1.8 Project Deliverables

You will need to design and build the project and submit it along with a complete project report that includes:

- Problem Definition
- Design specifications
- Diagrams such as flowcharts for various activities, Data Flow Diagrams, and so on
- Database Design
- Source Code
- Test Data Used in the Project
- Project Installation Instructions (if any)

Documentation is considered as a very important part of the project. Ensure that documentation is complete and comprehensive. The consolidated project will be submitted as a zip file with a ReadMe.doc file listing assumptions (if any) made at your end and SQL scripts files (.sql) containing database and table definitions.

Over and above the given specifications, you can apply your creativity and logic to improve the mobile app.

~~~End of document~~~