

One Care – All your health needs in one place

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Abstract

OneCare is an innovative all-in-one healthcare app designed to streamline and enhance the healthcare experience for users. This technical paper provides an in-depth overview of the app's architecture, features, and technologies employed in its development.

Keywords: symptoms, healthcare, labtest, meditation, doctor

I. INTRODUCTION

In today's fast-paced world, managing healthcare can often be a complex and overwhelming task for both patients and doctors. The OneCare application addresses this challenge by providing a user-friendly and efficient platform that empowers users to take control of their health and well-being. By offering a wide range of features such as communication tools,

appointment scheduling, medical record organization, medication prediction, and stress management resources, OneCare strives to simplify healthcare management and promote healthier lifestyles.

II. PROBLEM STATEMENT

For patients and doctors seeking a convenient and efficient way to manage healthcare, the OneCare application offers a unified solution. By providing tools for communication, appointment scheduling, medical record organization, medication prediction, medication reminders, and stress management, OneCare aims to address the complexities of healthcare management and empower users to lead healthier, happier lives.

III. PROJECT REQUIREMENTS

Mentioned below are the product requirements for making sure the project runs at optimal performance and fulfills its defined functional requirements

A. Software Requirements

- Browser: Mozilla Firefox 65+, Microsoft Edge, Google Chrome, Safari, and Opera
- IDE: Visual Studio
- Design: Figma
- Assets/Diagrams: Lucid Chart
- Database: Firebase Cloud storage

- Version Control: Source Code Hosted on GitHub
- Project Management: Github Projects, JIRA,
- Documentation: Microsoft Word, PDF Expert, Excel, Google Docs ,OneDrive

B. Functional Requirements

- Users can create accounts with secure registration processes.
- Login functionality to access personalized featureUsers can view a list of available healthcare services.

- Book services as needed through an intuitive booking interface.
- Users can schedule appointments for healthcare services.
- Time slots for scheduling are clearly mentioned for user convenience.
- Access to a detailed history of previously utilized healthcare services.
- Users receive timely notifications regarding upcoming appointments and relevant information.

- Leveraging Deep Learning Neural Network (LSTM), OneCare predicts diseases based on user-entered symptoms.
- Users can set custom reminders for medication doses to ensure adherence to prescribed regimens

D. Technical Requirements

- This is a web application and will support any iOS, Android based devices.
- This web application is developed using React, NodeJS and utilizes firebase cloud storage and EmailJS service

IV. SYSTEM DIAGRAM

A. Sequence Diagram

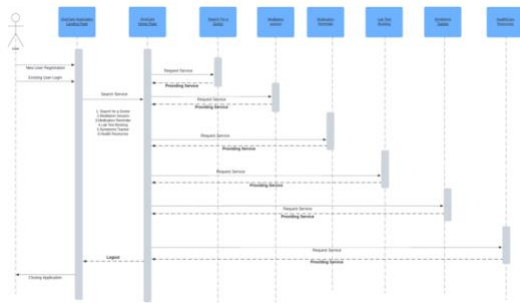


Figure 4.1(a) Sequence Diagram

The image shown in figure 4.1(a) and figure 4.1(b) is the Sequence diagram which is an interaction diagram that shows how objects operate with one another and in what order.

B. Control Flow Diagram



Figure 4.2 Control Flow Diagram

The image shown in figure 4.1(a) and figure 4.1(b) is the Control Flow Diagram (CFD) which is a visual representation showcasing the sequence of operations within a system or process.

C. Data Flow Diagram Level-0

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system, modeling its process aspects. In this Data Flow Diagram, we can see how the interactions works with the app. Flow diagrams, in general, are usually designed using simple symbols and is way of representing a flow of data of a process or a system. A data-flow diagram has no control flow, there are no decision rules and no loops. Here, we have 2-levels to represent the data flow.

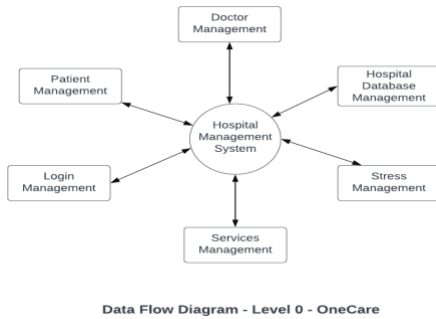


Figure 4.3 Data Flow Diagram Level 0

The image shown in figure 4.3 is a Data flow Diagram 0-level is also referred as a context diagram. It's designed to be an abstraction view, showing the app as a single process with its relationship to external entities.

D. Data Flow Diagram Level-1

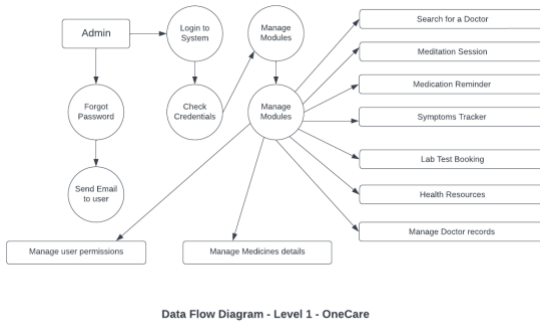


Figure 4.3 Data Flow Diagram Level 1

The image shown in figure 4.3 is the Data flow Diagram level 1, a context diagram composed of process.

E. Modular Design Representation

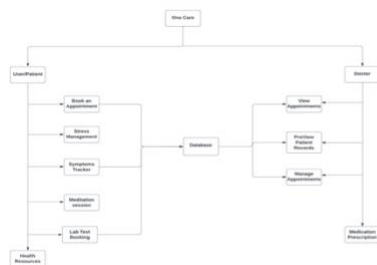


Figure 4.4 Modular Design Representation

The modular diagram (shown in figure 4.4) is a design approach that subdivides a system into smaller parts called modules that can be independently created and then used in different systems.

F. Architecture Design

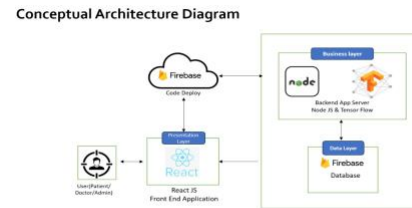


Figure 4.5 Architecture Diagram

V. DATABASE SCHEMA

A. USE CASE



Figure 4.6 Use Case Diagram

B. ER Diagram

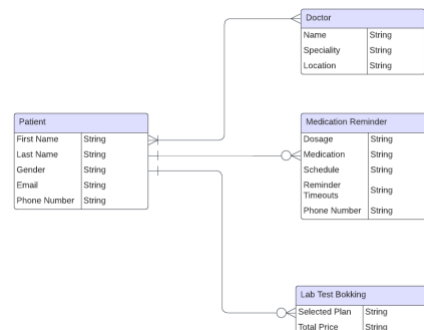


Figure 4.6 Entity Relationship Diagram

VI. CONCLUSION

OneCare is a revolutionary healthcare management application that aims to simplify the complexities of healthcare management for both patients and doctors. By offering a wide range of features including communication tools, appointment scheduling, medical record organization, medication prediction, medication reminders, and stress management resources, OneCare empowers users to take control of their health and well-being. With its intuitive interface, scalable architecture, and robust security measures, OneCare is poised to transform the healthcare experience and promote healthier lifestyles.

VII. SUMMARY

In the whole phase of planning, we will follow an agile approach towards building this application. Bring together an enthusiastic team and plan on the sprint sessions and the respective timelines. After preparing, we develop the project paperwork.