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# SOFTWARE REQUIREMENTS SPECIFICATIONS

**FOR**

## DigiCare – A Smart Disease Predictor

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# **1.Introduction**

## **1.1 Purpose**

The purpose of this document is to outline the system requirements for “DigiCare - A Smart disease predictor”. It takes the symptoms as input and using ML algorithm it predicts the disease which may be.

## **1.2 Document Convention**

<b>Font Face</b>	Arial
<b>Heading font size</b>	20px
<b>Sub Heading font size</b>	14px
<b>Table / Sub sub-heading font size</b>	13px
<b>Content font size</b>	12px

Apart from this, special highlighting of important keywords have been done to make it differentiable. Every requirement stated in this document has its own unique priority and every functionality is equally important.

## **1.3 Intended Audience and Reading Suggestions**

This document is meant for the **users who will be using** this webpage. The initial requirements are thought of by developers but depending on the users’ feedback of the features, existing requirements can be modified swiftly.

This document shall also serve as the reference document for the Project Management and Development team who will **analyze, design and implement the system.**

The developers will coordinate every activity taking place in the Software Engineering process and will be guided by Prof. Rajesh Bhatia.

## 1.4 Definition and Acronym

Term	Full Description
<b>DigiCare</b>	Disease predicting system
<b>Admin</b>	Person responsible for the upkeep, configuration, and reliable operation of the system
<b>Users</b>	Anyone using the system
<b>DFD</b>	Data Flow Diagram
<b>Django</b>	Backend interface for smooth User experience and storing the necessary data for further use.
<b>JS</b>	Java Script (A programming language whose frameworks will be used to develop the application)
<b>Python</b>	A programming language which will be used for any machine learning aspect of application.
<b>SQL</b>	Standard language for storing, manipulating and retrieving data in databases

## 1.5 Overview

The remaining part of document comprises of **4** sections as follows:

- **Section- 2:** It describes the product perspective, its functional requirements and stakeholders involved in the system.
- **Section- 3:** It describes all the interfaces comprising the user interface specifications, hardware interfaces and software interfaces.

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## 2. Overall Description

### 2.1 Product Perspective

The perspective of the system is understood to give the users a directional approach towards treating their illness. The MVP of our product is the predictor system which by using ml algorithms can predict possible disease to great accuracy and provide patients with the matched doctors according to disease predicted and if the user doesn't want to consult with the doctor he will be provided with the URL of predicted disease. approaches to treat it by means of doctor and providing them with the URL.

### 2.2 Product Functions

The functions of our DigiCare platform are as follows: -

A summary of the major product functions and what the end user may perform on the application include:

- Patient account and profile creation
- The application allows end users to create an account for themselves and manage
- personal information in their profile.
- Input symptoms and view disease prediction
- Users can enter the various symptoms that they are facing and view the possible
- disease predicted by the application.
- Search doctors
- Patients can search for doctors from their locality who can treat their disease.
- Get access to contact information of the doctors
- Book an appointment for online consultation
- Patients can consult a doctor online by booking an appointment and making an initial
- consultation fee payment.
- Consult doctors online by video conferencing

### 2.3 User Requirements

- **Minimum user age:** - The user should be of **a minimum of 10 years old**, and this is set keeping in mind that small children can't express their thoughts precisely through text.
- **Hardware:** -
  1. A computing device i.e., a laptop or a desktop or a mobile.
  2. A good internet connection.

## **2.4 Design and Implementation Constraints**

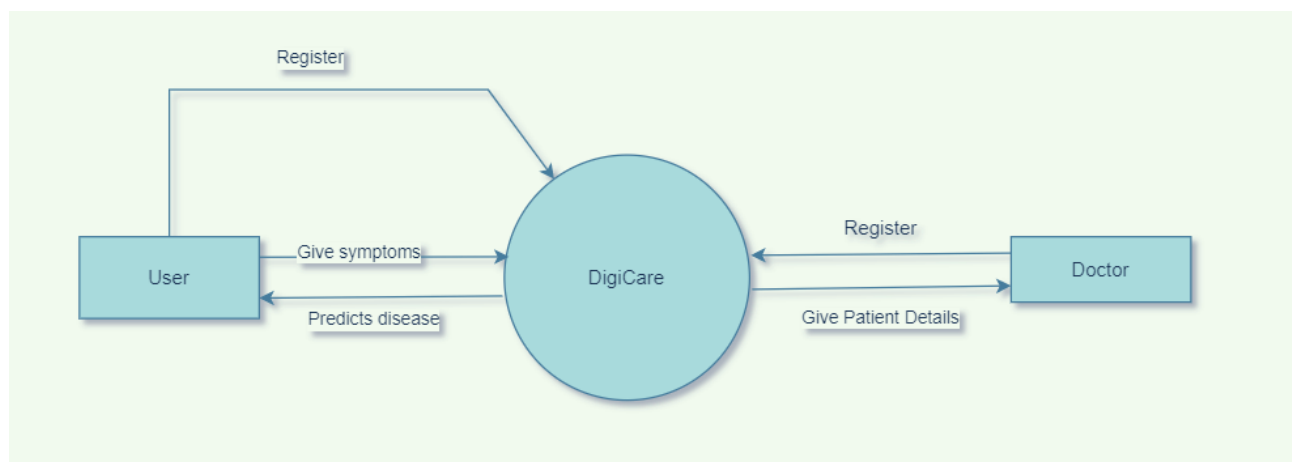
One limitation of this application is that it may fail to predict the disease accurately if the symptoms are not clearly specified or if the symptoms are very rare. Another major issue that users might face while using this application is poor internet connectivity during online consultation with the doctor.

Since mode of consultation is online, doctors cannot check patients physically using various medical equipment such as stethoscopes, thermometers, etc.

### 3. Specific Requirements

#### 3.1 Functional Requirements

Functional Feature	Remarks
<b>Authentication</b>	Authenticate users using their account.
<b>Symptom List</b>	Users can select from the mentioned symptoms.
<b>Disease Prediction</b>	The user shall be able to view the predicted diseases or illnesses associated with the symptoms.
<b>Search for the Doctor</b>	Users can select from the suggested doctors for consultation.
<b>Consultation</b>	User can have conversations with the doctor.



**Fig.-1 Level-0 DFD**



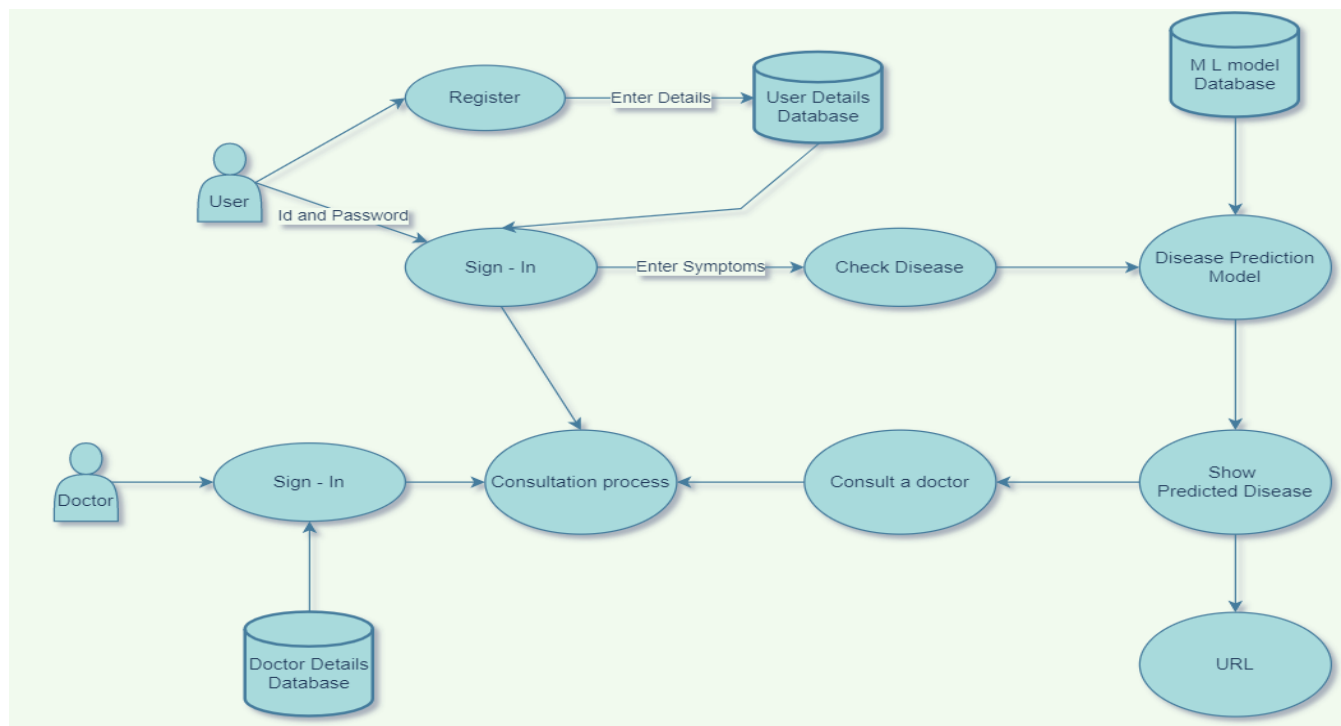


Fig.-2 Level-1 DFD

## 3.2 Non-Functional Requirements

### 3.2.1 Safety Requirements

End users must provide their symptoms accurately or else the system may give a false Prediction.

This system is not intended for emergency medical use. In case of an emergency, users should contact 108 or their primary doctor.

### 3.2.2 Security Requirements

The system is secure enough that personal health data may not be disclosed inappropriately or unauthorized.

System Application will have a secure "passcode" which the user has to enter each time they log in to prevent unauthorized access.

