Doctor Advisor by Using Android Studio

R. Radhika[1], D. Sai Koushik[2], CH.Vijay Chandra[3]

[1]Assistant professor,[2,3] Student(B.E),

Department of Computer Science and Engineering,

Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, Kanchipuram, India

ABSTRACT

The main idea behind the developing of this app is to provide the prescriptions for the end users related to their diseases. If the prescriptions not available in the database for that disease in the app, it suggests the end user to visit the hospital, which are nearer to the user by providing locations of nearby Hospitals. The primary goal of this project is to identify the disease according to the symptoms given by the user (Patient).

Keywords: Prescription, Symptoms, Disease.

I. INTRODUCTION

The application runs both in online and offline mode. The offline mode is to predict the disease according the symptoms taken as input from the user and provide some medications to the user and the online mode is to find the nearby Hospitals that patient could visit according to their convenience. Today's people are more likely addicted to internet, but they are not concern about their personal health. They avoid going to hospital for small problems, which may become a major disease in future. The primary goal of this project is to identify the disease according to the symptoms given by the user. During medical emergencies, common people always face problems in deciding which hospital they should visit for required treatment. The wander from one hospital to another in search of medical facility, medicines, blood supply, etc. This application will solve this problem by allowing people to search for nearby hospitals based on medical treatment, specialist doctors, medicine/blood availability, etc. If the disease is not that serious and the disease is the

regular ones the user can directly select the prescriptions, which are already available in the application. The application provides the prescription to the end user based on their symptoms and age also.

Sometimes user may not aware of his/her disease so he/she would submit the symptoms of the disease and the application confirms the disease according to their symptoms and display the records accordingly and suggest the patient to visit Hospital or to follow some medications by providing prescriptions.

The application reduces the time for the user by providing medications and nearby hospitals regarding the disease instead of wandering. The medications provided to the user based on his/her inputs by fetching the information from the database. The end user could find the best hospitals regarding his/her disease.

It has designed over different new technologies such as Android Studio 3.5.2 developed by google and consists better effects and features than the previous

versions of android studio. It has a very interactive interface, attractive background and dark font, which make the user to see all clear options and suggestions. One can find the medications for their disease easily as we have developed the algorithm to find the disease according to the symptoms provided by the user. The algorithm designed by taking the reference of classification algorithm in the category of supervised machine learning. This algorithm takes the symptom line by line entered by the user and identify the disease from the datasets provided to it. The algorithm designed in Python. Python is the most efficient language used for the machine learning and for the data analysis. After analysing the disease, the disease will be displayed to the end user. Then the end user could find the medications in the app itself by entering his/her age. According to the age the medications will be provided. The datasets are maintained in such a way that the medications provided by the application are correct and classified according to the age of the user. If the medications aren't available in the system. The application itself prompts the user to find a hospital through the Hospital finder feature in the application. In this Hospital finder the user could know all the nearby hospitals around him/her. By this feature the user can find closest hospital and visit according to his/her convenience. The hospital finder designed with the help of google map API in the Android Studio. To use all the features that are available in the application we recommend one should have a strong internet connection as the application deals with google APIs and also the datasets are maintained in the firebase so that the algorithm responds very quick when the end user have a strong internet connection.

II. METHODS AND MATERIAL

PROBLEM STATEMENT

A. Problem Description

Today's people are more likely addicted to internet, but they are not concern about their personal health. They avoid going in hospital for small problem, which may become a major disease in future.

During medical emergencies, common people always face problems in deciding which hospital they should visit for required treatment. The wander from one hospital to another in search of medical facility, medicines, blood supply, etc. This application will solve this problem by allowing people to search for nearby hospitals based on medical treatment, specialist doctors, medicine/blood availability, etc. If the disease not that serious and the disease is the regular ones the user can directly select the prescriptions, which are already available in the application. The application provides the prescription to the end user based on their symptoms and age also.

Sometimes user may not aware of his/her disease so he/she would submit the symptoms of the disease and the application confirms the disease according to their symptoms and display the records accordingly and suggest the patient to visit Hospital or to follow some medications by providing prescriptions.

B. Solution of the Problem

The project has various objects but the focus of most of the objectives is towards the guiding the user how to take care of his/her health. The project mainly consists of two modules, which have different functionalities and objectives.

The first module objective is to find the disease and provide the prescriptions accordingly. One can find the medications for their disease easily as we have developed the algorithm to find the disease according

to the symptoms provided by the user. The algorithm was designed by taking the reference of classification algorithm in the category of supervised machine learning. This algorithm takes the symptom line by line entered by the user and identify the disease from the datasets, which are provided to it. The algorithm is designed in Python. Python is the most efficient language which is used for the machine learning and for the data analysis. After analysing the disease, the disease will be displayed to the end user. Then the end user medications will be provided. The datasets are maintained in such a way that the medications provided by the application are correct and classified according to the age of the user.

The second module objective is to display the near by hospitals to the user. This module is made in Android Studio by the Google Maps API. To use this feature in the application one need to have strong internet so that the location can be found. As the google APIs work only with internet so the application needs the internet to access your location and respond accordingly. i.e., displaying the hospitals nearby the end user so that the user can rush even in the emergency cases. By this feature, the user can visit the nearest hospital according to their convenience.

III. EXISTING SYSTEM
A. Introduction
There are few websites like WebMD and symptom checker, which has the similar idea. In these websites and applications, the user can find the fair results of their disease. These are not that famous are recognized by the people. These applications have many pros and cons related to their functionality.

These sites just predict the disease on their own algorithm, but these do not provide the medications for the diseases. One more drawback is these could not find the nearest hospitals around the person, so that the user can find the hospital to visit.

Our application is made by keeping all these cons and pros of the existing system and we made the application, which overcome all these by providing the medications and by displaying the nearest hospitals as well.

B. Existing Software

There are few websites like WebMD and symptom checker, which has the similar idea. In these websites and applications, the user can find the fair results of their disease. These are not that famous are recognized by the people. These applications have many pros and cons related to their functionality. There is nothing much to discuss about these existing systems as they just have a single module in their systems.

IV. PROBLEM ANALYSIS

A. Product Definition

The application runs both in online and offline mode. The offline mode is to predict the disease according the symptoms that are taken as input from the user and provide some medications to the user and the online mode is used to find the nearby Hospitals that patient could visit according to their convenience. Today's people are more likely addicted to internet, but they are not concern about their personal health. They avoid going in hospital for small problem, which may become a major disease in future. The primary goal of this project is to identify the disease according to the symptoms given by the user. The main idea behind the developing of this app is to provide the prescriptions for the end users related to their diseases.

If the prescriptions not available in the database for that disease in the app, it suggests the end user to visit

the hospital, which are nearby the user by providing locations of nearby Hospitals.

The primary goal of this project is to identify the disease according to the symptoms given by the user.

B. Feasibility Analysis

This application is feasible in all cases like market feasibility, technical feasibility, financial feasibility, organization feasibility. This application is best according to user views and their acceptations.

It is cost effective, attractive, and easy to use as the most challenging factors in the development of a project are its cost effectiveness, look are we can call overview of the
project and most importantly feasibility. In case of the existing systems and software available in the current market, these important factors play a major role in the effectiveness of their product and services, so considering these factors this application has been developed as a solution for the difficulties that are faced by the user while accessing the services currently offered by the software present in the market. This project provides the users with an easy interface to access the services.

V. SYSTEM DESIGN

The project has a very little complex system consisting of different modules with various specific functionalities. The operating environment of the project is over the android application developed by the android studio. The project system has a single interactive entity that is through the application in the mobile. The administrators of the application can manage the modules, modify the functions of the applications, and have the full control over the access to the application and can analyse the activities of the user on the application.

The administrator roles are provided to all group members of the project team, the administrators have different primary roles divided between them such as data analysis, security and recovery, maintenance, modifications and adjustments and other administrative roles.
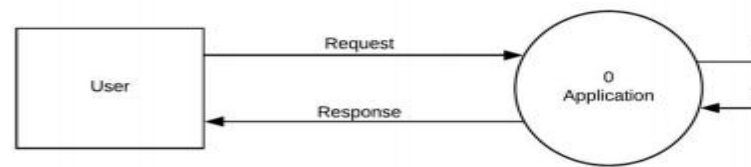
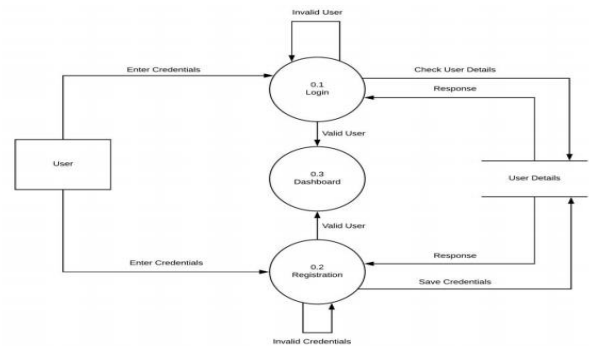DFD for present system:

Figure 1: Level 0 DFD
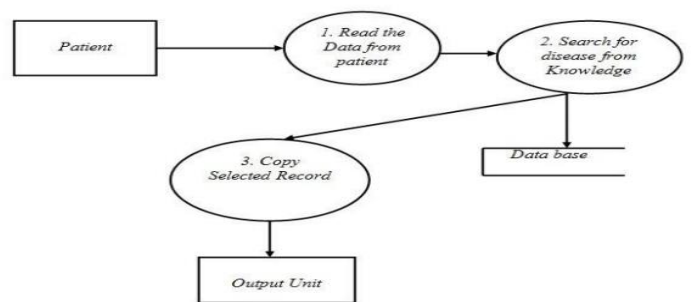

Figure 2: Level 1 DFD

Figure 3: Level 2 DFD

VI. IMPLEMENTATION

A. Implementation of project

We have implemented our project keeping in mind that it will satisfy all our customer need.

While implementing this project there had been a lot of issues in design and coding phase, to resolve this issue we had to prepare number prototypes such that there will be no further problem in later phases.

We performed various feedback based on different sexuality and different age group of people.
We asked them for what can be included and what can be omitted from the software to make it more responsive and user friendly.

As par the feedback, we worked to develop our product and make it available to customers.

B. Post- Implementation and software maintenance

Before implementation, we have designed different prototypes of the required software. Based
on the user requirement we also designed different test cases that might be required during the
testing phase. Software maintenance strategy and tactic were developed before the implementation
of the project.

VII.CONCLUSION

The main purpose and focus of developing the Doctor Advisor application is to help people to maintain their health. This application provides the prescriptions for the end-users related to their diseases. It suggests the end user to visit the hospital, which are nearby the user by providing locations of nearby hospitals if the prescriptions are not available in the database for that disease in the app. It also identifies the disease according to the symptoms given by the user.

VIII. REFERENCES

[1]. https://symptoms.webmd.com/#/info
https://www.youtube.com/watch?v=jXtof6OUtcE

[2]. https://developers.google.com/maps/documentation/android-sdk/start
https://www.youtube.com/watch?v=qK0QNA0sMGc

[3]. https://www.youtube.com/watch?v=EknEIzswvC0&list=PLS1QulWo1RIbb1cYyzZpLFCKvdYV_yJ-E

[4]. https://www.w3schools.com/python/

[5]. https://www.tutorialspoint.com/pyspark/index.htm
https://www.udacity.com/wiki/cs101/%3A-python-reference
https://healthdata.gov/search/type/dataset

Cite this article as :