

‘SADHYATI’: An Integrated Platform for Medical Assistance

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Abstract— In matters which involves life and death there is God and there are doctors. Doctors indeed are God to many of us. But looking at the other side of the coin many a time we see cases wherein a life is lost due to wrong diagnosis, which is too much a cost paid at the altar of human error. Then again we have cases where in a life is lost owing to the lack of awareness about certain fatal symptoms. Our approach here is to design a platform which caters to facilitate the aforesaid deficits. ‘Sadhyati’ shall serve as an E-community, which serves these deficits particularly in places where they lack. An easy to access and user friendly system that shall serve as the first step in terms of medical assistance. A platform for doctors as well as patients to interact irrespective of the socio-economic barriers that tends to exist.

Keywords— Symptom Checker, , E-community, Dynamic Database

I INTRODUCTION

In a developing country like ours many people still remain devoid of certain basic amenities. Medical facilities being prime among them. ‘Sadhyati’ shall aim to better this deficit and serve as a platform for doctors all around to corroborate their views. ‘Sadhyati’ shall have a multi-partite model each model will look into the various intricacies that we face in our socio-economic system.

Most of us turn a blind eye to certain physical anomaly that we face, because of our busy schedule, which might result into an enterprising consequences.

‘Sadhyati’ shall be equipped with a symptom checker through which one might be aware of the reason of his physical anomaly. It shall further help in adopting some home remedies (if any), also make easy arrangements to book an appointment with a specialist.(Fig 1.a)[1]

‘Sadhyati’ shall boost the medical infrastructure in rural areas in many no. of ways. In our country medical help in rural areas is mostly comprised of fresh interns, with little experience. Through ‘Sadhyati’ experienced help shall be at the very disposal of these interns through its Experience Corner. (Fig 1.b)

‘Sadhyati’ shall come to help in dealing with the very rare occurrences of certain physical anomaly, by virtue of its e-community which shall have all such case studies of rare

physical anomalies so that diagnosis delay may be minimized. (Fig 1.c)

These three features take care of the major deficits we face in our medical infrastructure. The basic idea behind these has been depicted through descriptive diagrams in Fig.1.

The purpose of the study is to minimize the various intricacies existing in our medical infrastructure owing to the existing socio-economic barriers.

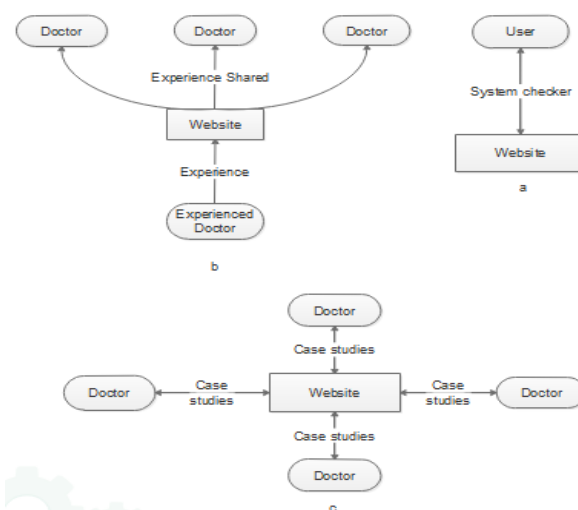
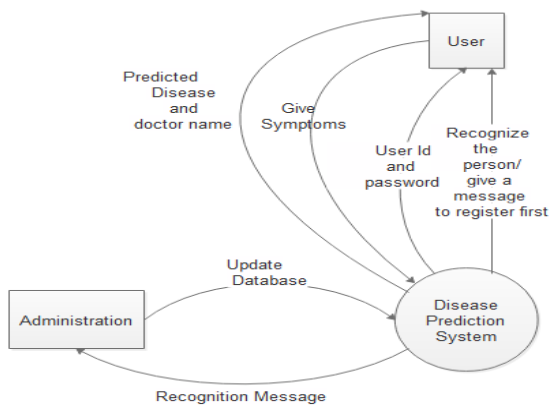
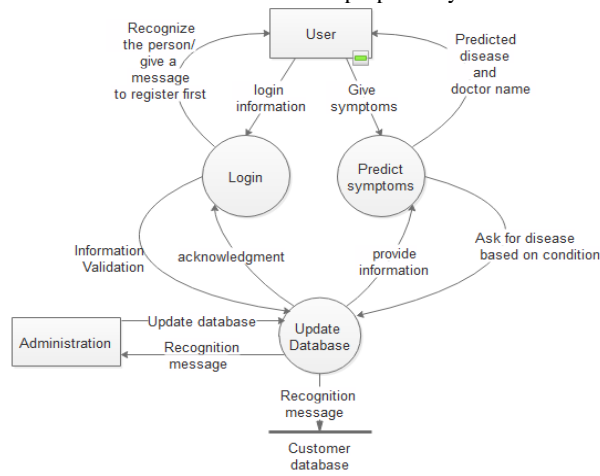
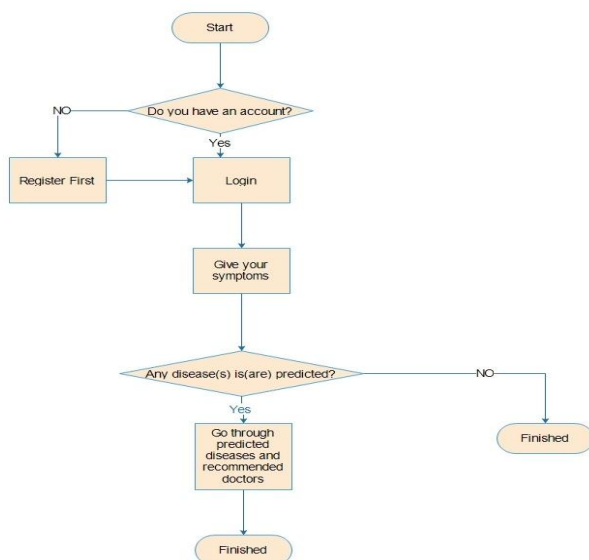


Fig no: 1 “Multi-partite Structure of Sadhyati”



Context Level DFD of the proposed system

Level 1 DFD of the proposed system
Level 1 DFD of the proposed system

Flowchart of the proposed System

II TECHNOLOGICAL ASPECTS

The technology underlying ‘Sadhyati’ has been kept very simple. An easy to use website builds on, which shall be able to handle each user separately.

The basis of ‘Sadhyati’ lies in a very strong dynamic database which shall with time be potent of incrementally increasing. Third party GPS backing shall be incorporated. Services shall also be accessible through an Android app. The system proposed shall be using the concepts of Artificial Intelligence, Fuzzy Logics, Soft Computing; incorporation of these shall boost the accuracy of the system beyond any scope of error. [2][3][4]

III CHALLENGES

One of the biggest challenge for ‘Sadhyati’ would be the Proper and efficient working of it owing to the need of special skills that is required to make use of it. This may be handled by appointing operators at the medical facilities, also a very easy to use interface will take care of this challenge to an appreciable extent .

The proposed system is highly dependent on network connectivity, every aspect of the system works only if there is proper connectivity, which might not be available in all places particularly the remote ones.

IV BENEFITS

Since ‘Sadhyati’ has been designed keeping in view the socio-economic condition of our country, with efficient implementation it’s potent to provide a plethora of socio-economic advantages.

‘Sadhyati’ shall serve as a tool of general medical awareness among the mass. The potent of ‘Sadhyati’ may massively boost the rural medical infrastructure, through its features like experience corner, which shall make available a specialist available in more than one place at a time. A national community wherein all doctors share their cases shall do a great deal in minimizing diagnosis time, which has its own advantages. Rare and baffling anomalies shall be diagnosed efficiently.

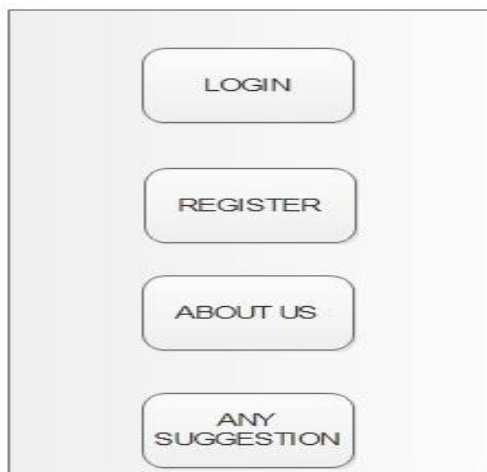
‘Sadhyati’ shall also be able to check the mal-practices led by pimps in rural medical facilities, through automation of token generation.

The book an appointment feature of ‘Sadhyati’ shall bypass the usual hackles to book an appointment with a doctor, with proper design and implementation it may be used to generate substantial revenue, and time complexity may be substantially reduced.

V EVALUATION OF THE PROPOSED SYSTEM:

Homepage

One user must go through the home page when uses this application. In the homepage there exist four options as shown in the figure 2(a).

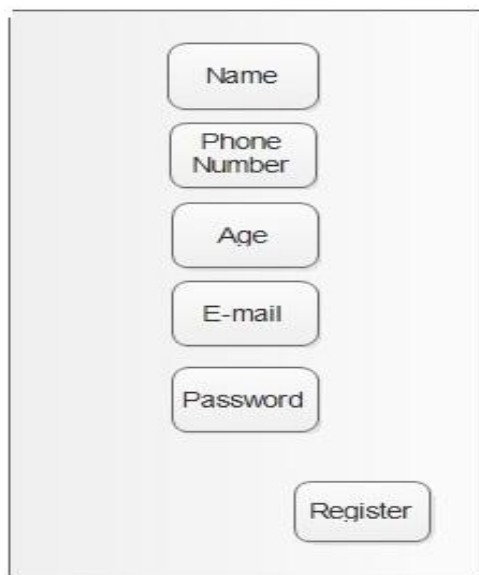


The Home Page interface consists of a light gray rectangular box containing four rounded rectangular buttons stacked vertically. The buttons are labeled 'LOGIN', 'REGISTER', 'ABOUT US', and 'ANY SUGGESTION' from top to bottom.

Fig, 2(a): Home Page

Registration Page:

One must register himself in order to use the facilities. All required information shall be collected in this stage.



The Registration Page interface consists of a light gray rectangular box containing six rounded rectangular input fields stacked vertically, labeled 'Name', 'Phone Number', 'Age', 'E-mail', and 'Password'. A seventh rounded rectangular button labeled 'Register' is positioned at the bottom right of the box.

Fig, 2(b): Registration Page

Login page:

After registering the user have to login through the login page.



The Login Page interface consists of a light gray rectangular box containing three rounded rectangular input fields stacked vertically, labeled 'USER NAME', 'PASSWORD', and 'LOGIN'.

Fig, 2(c): Login Page

Symptom Checker:

In this page according to given symptoms by the user, the system will diagnose the predicted disease.



The Symptom Page interface consists of a light gray rectangular box containing four rounded rectangular input fields stacked vertically, labeled 'Symptom 1', 'Symptom 2', 'Symptom 3', and 'Symptom 4'. A fifth rounded rectangular button labeled 'Diagnose' is positioned at the bottom right of the box.

Fig, 2(d): Symptom Page.

VI FUTURE SCOPE:

‘Sadhyati’ is potent of pushing the medical backlog in our country and keep pace with the International standards. With

motivation like Digital India around the corner there is a bright scope for ‘Sadhyati’; with time ‘Sadhyati’ shall be able to learn from experience (i.e. incorporation of Artificial Intelligence), this would reduce manual dependency and greatly reduce the scope of human error.

VII CONCLUSION:

As a part of a very inspiring idea, ‘Sadhyati’ is made to deal with the various medical backlogs in our socio-economic system. The various features incorporated within Sadhyati are specifically designed keeping in mind the various lags in our socio-economic scenario, this particularization in the design is sure to boost anti-deficits we have, and with motivation like “Make in India”, it shall gain extra momentum.

Thus this idea if put into a model shall reap a multitude of benefits for the many common people in our country.

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