THALACARE – MOBILE APPLICATION FOR THALASSEMIA PATIENTS

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Abstract - Thalassemia is an inherited blood complaint in which the body cannot produce hemoglobin typically. Since cases with this condition admit blood transfusion regularly, iron builds up primarily in organs similar as the heart, liver, and endocrine glands. Accumulation of iron in the organs necessitates chelation remedy. These cases must visit the sanitarium constantly to access and follow up on their health condition. Thalassemia will affect the capability of the body to produce hemoglobin and red blood cells. The end of this study is to apply a Mobile Application expert system for thalassemia cases to give diet plan support the lifelong healthcare of cases. The system provides patient-affiliated details, organization camp details, in real-time.

Key Words: **Thalassemia, Computer Science, Android Application, Blood Bank, Blood Disorder.**

1. INTRODUCTION

A large maturity of the cases belongs to financially underprivileged families and an estimated 66,000 units of blood are needed by them every time. Thalassemia is an inherited blood complaint that requires lifelong complaint operation and thus poses a financial challenge in public health operations. Thalassemia will affect the capability of the body to produce haemoglobin and red blood cells. The end of this study is to apply a Mobile Application expert system for thalassemia Cases to give Diet plan support for the lifelong healthcare of cases. The system provides patient-affiliated details, Organization Camp details in real time.

1.1 Scope

By observing the daily life problem related to Thalassemia patients it is difficult to manage for the care worker as well as for the medical worker, to overcome this issue, we have decided to build an application that will help a patient by -

1. Managing diet plans for Thalassemia.
2. Arranging blood bags on time.
3. Arranging blood donors on the spot.
4. Organizing blood camp.
5. Document verification.

1.2 Methodology

Software:

1) General:

   I. Creating the home page.

   II. Connecting all the sections and adding the level up.

   III. Adding Seeker(requester), Donor, Diet plan, Organization user interface

2) User Interface System:

   I. Create Requester, Donor Module user interface.

   II. After login Requester can make a request for donation, once requester finds the donor they can schedule the meet.

   III. Donor will form with all the necessary information; once donor finds the requester they can schedule the meet.

   IV. Diet Plan section is the additional module in our application where user can explore the diet plans for good health.

2. LITERATURE SURVEY

This section discusses finding and observation done by some research works on application of Thalassemia patients. The gathered information on these related papers strengthens and supports the research study.

[1]In order to diagnose

This disease, CBC is the primary screening test and now machine learning technique like LDA provides an affordable, less complex, and effective solution to predict the acute disease using the CBC report parameters only. The proposed scheme makes it significant for the diagnosis of thalassemia patient by analyzing the most important parametric values of the CBC report. Various machine learning experiments are executed to identify the

most suitable risk factors for the prognosis of the said disease that selected RBC, HB, and HCT as the most important risk factors.

[2]The sphere of medical decision making process is heavily affected by vagueness and query issues and – for copying with them – different type of Clinical Decision Support System(CDSS) s, bluffing mortal expert clinician logic, have been designed in order to suggest opinions on treatment of cases. In this paper, they exploit fuzzy conclusion machines to ameliorate the knowledge-grounded CDSS actually used in the day- by- day clinical care of β- thalassemia cases.

[3]In this paper they present a prototype mobile health (MHealth) operation that will help cases, care workers and medical interpreters in administering thalassemia complaint operation. The ubiquity and propinquity of smartphones as a particular device will allow it to take up an assistive part in the operation process.

[4]In this paper, we present the knowledge representation developed to represent a frame of the forestallment and control program (PCP) for thalassemia in Southeast Asia. The ontology called PCPThalOnto was developed to represent sphere knowledge of the PCP by sphere experts and following the guidelines for the content of PCP for thalassemia including particularity and pattern opinion, screening system, treatment for symptoms and comforting strategies. The PCPThalOnto consists of two factors class to represent conception and relation to represent logical link among generalities and case.
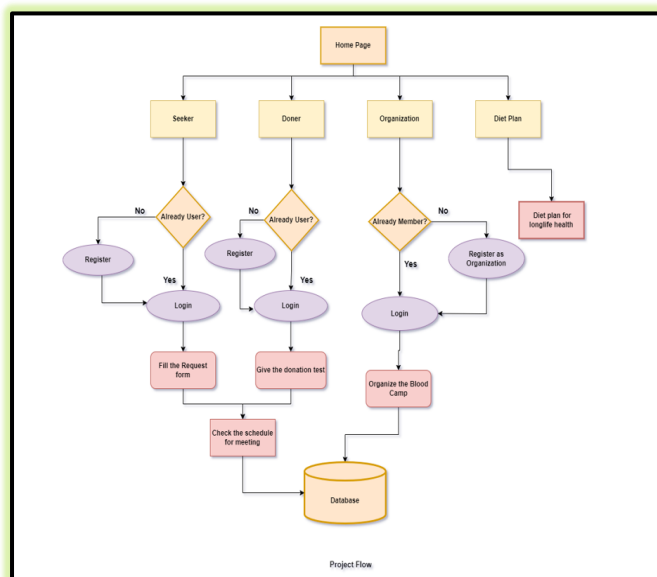
3. PROJECT FLOW

Fig. 1 – Project Flow

I.   We are working on mainly four modules i.e., seeker, donor, organization and diet plan. Each of them will be having a Login and registration system.

II.   Once the user registers into a system he/she will be able to access the system.

III. If a user registers in the seeker module, then he/she needs to fill a form where the user needs to give some important information i.e., name, contact, Blood Group, any other disease etc. after that he/she will be able to make a request.

IV.   If a user registers as a donor then he/she needs to fill a donation test form with information regarding drinking, smoking habits, any blood disease in the last six months etc.

V.   After that both seeker and donor can schedule the meet.

VI.   In the organization section, blood organizations can organize the blood camp.
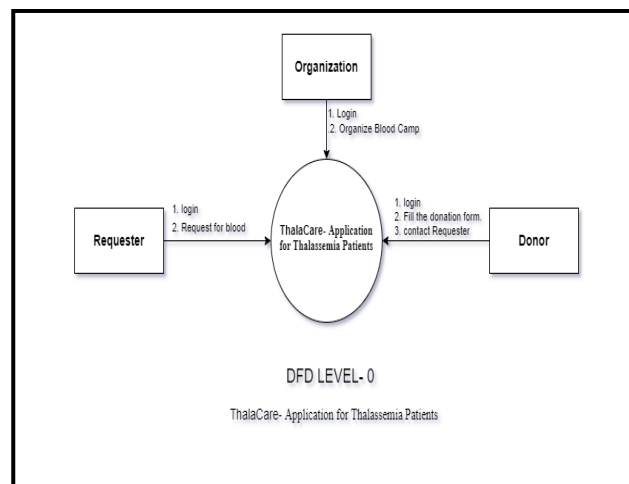
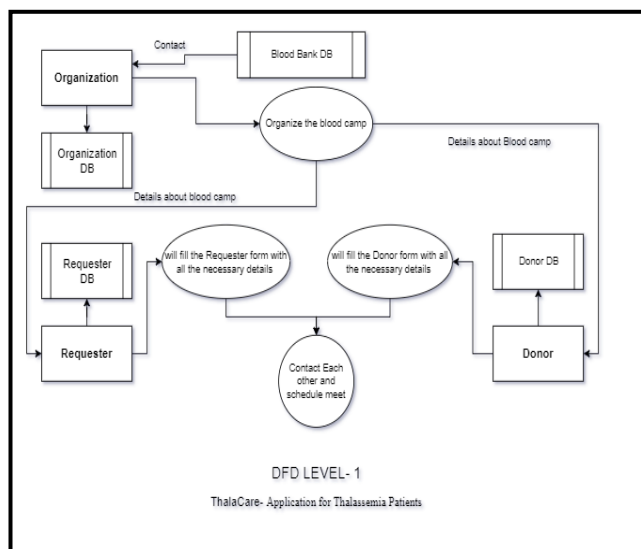**DFD DIAGRAMS –**

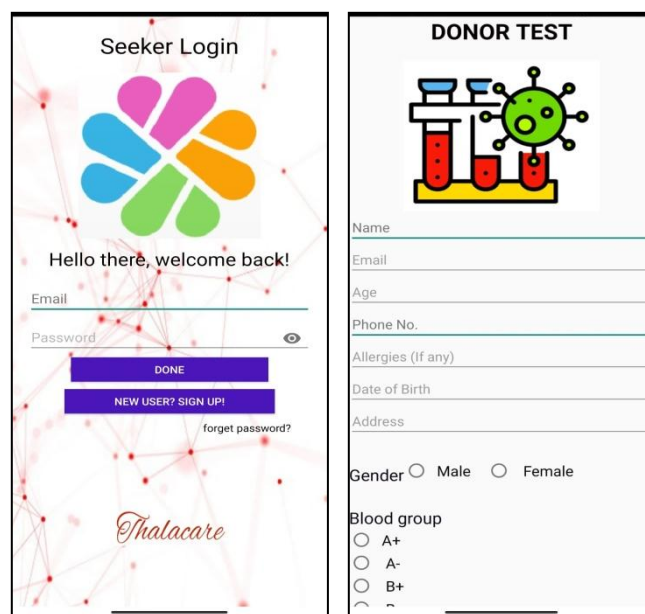**Fig. 2 – DFD Level 0**

Fig. 3 – DFD Level 1

4. RESULTS

Fig. – Admin and Donor Login Page

Fig. - Seeker login and Test page

5. CONCLUSIONS

Technology can enhance the management of thalassemia. The Mobile-based expert system provided the Requested, Donor and organization interface in real-time. Thalassemia is a complicated and hazardous disease that requires proficient treatment and proper involvement of both a patient and his or her family in it. Additionally, the expert system can support Diet plan by recommending the appropriate care. The donor and requester can communicate with each other and schedule the meeting. In future, the system can be upgraded by implementing a map area vies to know the nearest blood bank and the thalassemia hospital.

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