A Website for Availing Blood and Organs for Hospitals

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ABSTRACT. Many lives could be lost because of the difficulty in obtaining a proper blood bag or an organ. This project aims to help people fulfill their needs for safe and reliable blood and organ. This web facilitates the hospitals and common people to search for the blood and organ in an emergency situations and help to reach them more faster. Hence, we proposed the web-based application that is connected to a cloud and access to gather the data from all blood banks. The website is intended to store, process, retrieve and analyze information concerned with the executive and inventory process within a blood and organ bank. This project aims at maintaining all the data pertaining to donors, different blood groups available in each blood bank and organ to assist them manage in a better way.

Keywords - Web based application, Blood bank, Website, SQL.

1. INTRODUCTION

Blood Bank search Engine System is the browser based computer system which is designed to store, process, retrieve and analyse information concerned with the executive and inventory process within a bank. This project aims at maintaining all the knowledge pertaining to blood and organ donors, different blood groups available in each bank and help them manage in a better way. Aim is to provide transparency during this field, make the method of obtaining blood from a bank hassle free and corruption free and make the system of bank management effective.

Through this application anyone who is fascinated by donating the blood and organ can register himself within the identical way if any organization wants to register itself with this site that will also register. Moreover if any general consumer wants to make request blood online he can even take the help of this site. Admin is that the main authority who can do addition, deletion, and modification if required. The database connectivity is planned by the "SQL Connection" methodology. The standards of security and data protective mechanism are given a giant choice for correct usage. The application takes care of different modules and their associated reports, which are produced as per the applicable strategies and standards that are put forwarded by the executive staff.

2. LITERATURE REVIEW

Lama Abdulwahab Dajim (2019) proposed an organ donation decentralized app using blockchain technology. It would be a web application for patients to register their information most importantly medical ID, blood type, organ type and state. The system would work on a first-in, first-out basis unless a patient is in critical condition. The problem facing organ donation systems around the world is the same, more people on the waiting list than actual donors, and the gap is widening each year. The length of the waiting list may mean patients die before donation takes place. Modern systems responsible for gathering organ donations and handling processes leading up to organ transplantations can lack transparency. These systems are rarely up-to-date with the minimum security requirements, and with improvements in modern computer processing power and algorithms, it is best to take a cautious approach to avoid future complications. Recently there has been an increase in security breaches, compromising user privacy and the integrity of the system. Modern systems handle and manage data via traditional databases, however most hospitals, health ministries and other medical facilities do not have a uniform system for communicating data.

Ida Nurhaida (2020) proposed a web development project for the business organization must be covered not only stakeholder needs but also completed in limited time. This research attempted to present how to use WISDM and RAD methodology as well as supporting by SUS method and rich picture for completing the time intensive project and meeting stakeholder needs. A case study was undertaken by accomplishing web development project named SysIO and Sysbatik. As a result, the methodology phase that is consisted of requirement planning (rick picture, organizational analysis, information analysis), user design (HCI), construction (technical design, SUS method), cut over (work design) can be a guide to complete both of projects.

Fawaz Alharbi (2019) proposed a Current healthcare systems depend upon blood donation to avoid wasting lives. Voluntary blood donation is that the main source of blood supply in many countries. However, blood donors face barriers to donating like time constraints and also the long times required to finish registration and donor health questionnaires. Thus, this paper analyses the donor cycle and proposes information technology solutions. supported the analysis, a Central Blood Donation

Management System is proposed with interconnected systems. The implementation of can reduce the time required for blood donation by decreasing the data collected from the donors. The system may improve the efficiency of the blood donation management system by linking various systems and importing information from different sites. It may reduce blood donation errors and reduce the amount of deferral blood donors.
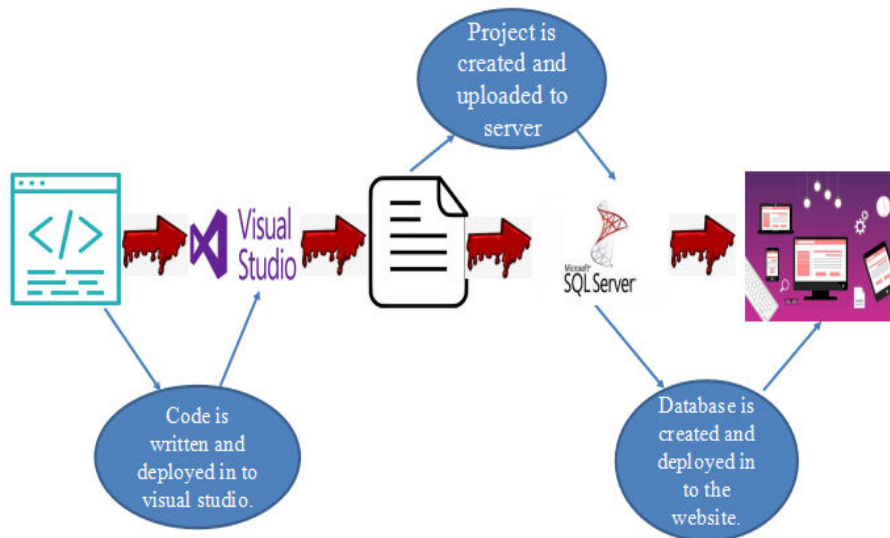
3. METHODOLOGY

Figure 1: Project flow

The Figure 1 is representing the overall working principle of the website

- Front end code is written using HTML,CSS.

- Back end code is written using c#.

- The codes are dumped into Visual Studio.

- The project is created and connected to the server.

- The database is created using SQL Server.

- The data is protected using "SQL Connection" methodology.

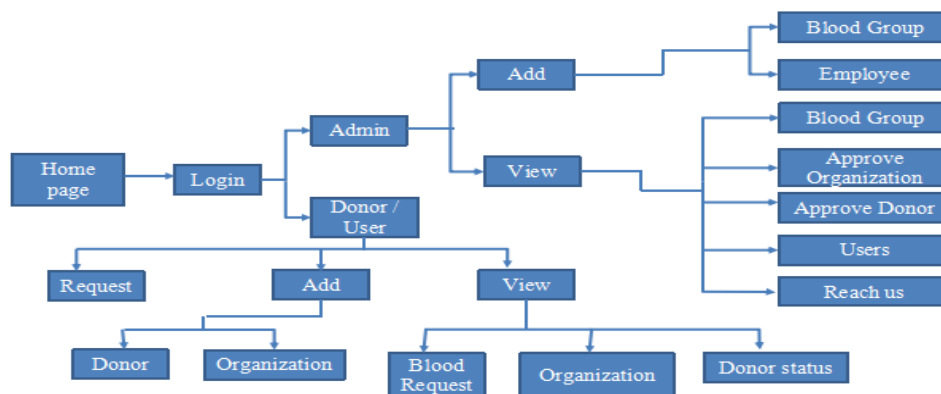- The data is deployed into the website.

Figure 2: Block diagram

- The first page of the website is home page, two login pages have been created in home page admin login and user login.
- In admin login, the admin can add the blood group required and the admin can view the request sent by the donor or organization for approval.
- In user or donor login, the user can search for the blood availability, user can request/ donate for the blood or organ and can view the approval status done by the admin for the blood request and the organization.

4. MODULE DESCRIPTION

i. ADMINISTRATION

In administrator module administrator manages the master data's like database details and public, student details. Accept the application of students, view the application forms, reject the fake applications, view the complaints of the blood group, accept the donors form and donate the blood to the user requirement.

ii. Online Student Registration

In the particular student organization or staff can make online registration on their blood group and personal details. The blood centre's administrators can then manage their details by either to approve or reject for blood donation.

iii. Blood Stock Management

The bank administrators can manage the blood stock ranging from the blood collection, to blood screening, processing, storage, transfer and lastly transfusion through this technique. Moreover, there's also logging function available in order that each process or workflow is traced from the database. The system will give an conscious of the administrator whenever the blood quantity is below its par level.

iv. Online Search

The records of all donors and their history are kept in one centralized database and thus reducing duplicate data in the database and the data's saved more secured. User can search the donor details trough by online. But initially they can get donors basic information only. Getting admin acknowledgment after that they can get donors entire details.

v. Call Centre

In this module all the worker who has been appointed by Admin will come. Admin will add all the knowledge of employee and assign user name and password to them. By using that user name and password they'll enter to their login and may explore for the whole donor, and about the whole blood request which are made by consumer, donor or any organization.

vi. Connect to Hospital

Blood bank has connect to hospital. Blood bank administrator can manage the details about hospital functionalities. After Hospital Registration it gets username and password. Then Hospital request to blood bank management. It is specially meant for hospital Who need blood for their patient regularly or for blood bank who collect blood to be given for different hospital. Here we maintain the information about the donor And blood need in particular hospital. It helps the doctors to seek out the donor at right time.

5. DATABASE

Previous data-access technology gave continuously connected data access by default. In such a model, an application creates a connection to a database and keeps the connection open for the lifetime of the appliance, or a minimum of for the quantity of your time that data is required. However, as applications become more complex and databases serve more and more clients, connected data access is impractical for a spread of reasons, including the following:

1. Open database connections is expensive in terms of system resources. More the open connections, the less efficient system performance becomes.

2. Applications with connected data access is difficult to scale. An application which will comfortably maintain connections with two clients might do poorly with 10 and be completely unusable with 100.

3. Open database connections can quickly consume all available database licenses, which may be a major expense. so as to figure within a limited set of client licenses, connections must be reused whenever possible.
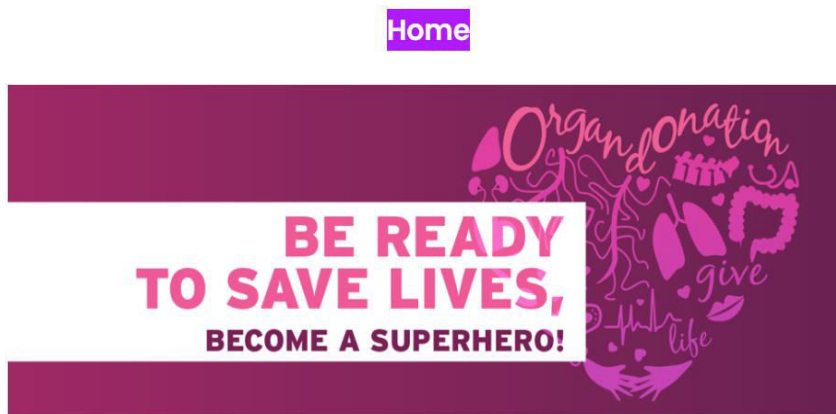
6. RESULTS

Figure 3: Home page

The above figure is the homepage of the website. This page includes the options for admin and donor/user login.

Figure 4: Admin Login

In figure 4, the admin can login to his account and update the blood required and approve the blood request and new organization.

Figure 5: Add New Blood Group

In figure 5, The admin can add the blood group required so donor willing to donate will donate the blood.

Approve Donor Status

First Name	Middle Name	Last Name	Email	DOB	Weight	Gender	Blood Group	Home Contactno	Office Contactno	MobileNo	Approvestatus	
1011	Deva	D	deva@gmail.com	1880-05-05	55	female	b+	7019827346	9012345678	9988776655	Requested	Update
1012	Karthick	A	karu@gmail.com	1992-04-24	44	male	ab	8975623444	9080765437	9080844730	Requested	Update
1013	Iniya	M	iniya@gmail.com	1992-06-18	48	female	o	9123456780	9012345678	989654340	Requested	Update
1014	Kumar	K	kumar@gmail.com	1965-08-25	65	male	o-	90808776542	8901234567	908765678	Requested	Update
1015	Hari	K	hari@gmail.com	1880-06-06	55	male	ob+	987766544323	9080765437	9988776655	Requested	Update
12												

Figure 6: Approve Donor Status

In figure 6, the admin will approve the blood request sent by the donor.

Approve Organization Details

Organization Type	Description	Blood Group(Need)	Contactno	Purpose	Approve status	
Hospital	AB+	3	9080866743	Operation	Requested	Update
Blood bank	B+	5	7890123458	Storage	Requested	Update
New Hospital	O-	4	8907652341	Operation	Requested	Update
Blood hub	A-	2	7654321098	Storage	Requested	Update
A1 Hospital	O+	7	9980765432	Operation	Requested	Update
123						

Figure 7: Approve Organization Details

In figure 7, the admin will approve the request sent by the organization.

Donor Login

User Name

Password

Login   New Registration

Figure 8: Donor login

In Figure 8, the donor or user can login and search for blood availability, donate blood, request for blood, request for organ, view the approved status.

Search Blood

Blood request Details

name	Email	phone	country	state	city	location	address	bloodgroup	requestd
keerthi	keerthi@gmail.com	9944149234	indis	tn	cbe	cbe	cbe	o+	2020-07-
Anu	anu@gmail.com	7654329081	India	Tamilnadu	Salem	Salem	Govt hospital	o+	2021-05-
LAVANYA	lavanya@gamil.com	7654329081	india	Tamilnadu	Ooty	Ooty	Sims hospital	o+	2021-03-
Bhavatharini	Bhavatharini2gmail.com	9876567890	India	Tamilnadu	Dharmapuri	Dharmapuri	VG hospital	o+	2021-01-
Aish	aish@gamil.com	9076890342	India	Tamilnadu	Erode	Erode	Apollo hospital	o+	2021-04-

Figure 9: Search Blood

In figure 9, the user can check the availability of the blood.

Request Blood

Figure 10: Request blood

In Figure 10, The user can request for the blood need.

Donor Details

Figure 11: Donation blood

In Figure 11, In donor login the donor can sent request for blood donation.

Add New Organization

Organization Type

Description

Blood Group(Need)

Contactno

Purpose

[Choose File] No file chosen

[Save]   [New]

Figure 12: Add New Organization

In Figure 12, In donor login the organization can sent request to the admin.

Donor Approved Details

First Name	Middle Name	Last Name	DOB	Weight	Blood Group	Home Contactno	Office Contactno	MobileNo	Status
1001	Anu	C	1998–02–02	45	o+	7654321098	9123456780	908765678	Approve
1002	Banu	B	1980–03–30	60	b+	8901234567	9123456780	908765678	Approve
1003	Crishil	D	2000–02–12	40	o	9012345678	7019827346	8709651234	Approve
1004	Arun	A	2000–05–17	55	o-	7654321098	7019827346	9988776655	Approve
1005	Latha	M	1999–08–12	56	ob+	9012345678	9877665443	8709651234	Approve
1 2 3									

Figure 13: Donor Approved Status

In Figure 13, The approved status of the blood donor is viewed here.

Approved Organization

Organization Type	Description	Blood Group(Need)	Contactno	Purpose	Status
test	test	b	9865925894	test	test
test	test	b	9865925894	test	Rejected
Blood bank	a+	2	897065423	operation	Approved
Hospital	AB+	3	9080866743	Operation	Approved
Blood bank	a+	2	897065423	operation	Approved
1 2					

Figure 14: Approved Organization

In Figure 14, The approved status of the organization is viewed here.

7. CONCLUSION

It is concluded that the appliance works well and satisfy the users in creating the account in online. The application is tested very well with security issues and errors are properly debugged. The positioning is simultaneously accessed by quite one system in online. Simultaneous login from quite one place is tested. the placement works per the restrictions provided in their respective browsers. Further enhancements is created to the applying, therefore the online site functions very attractive and useful manner than this one. The speed of the transactions become very high compared with normal. After those process completed successfully a message are visiting be presented the user about the transaction. If the account holder provides the inaccurate user ID or Password it'll provide miscalculation. We mainly specialise in the user satisfaction and reduce the importance .they can create their bank account through online with distributed verification of ensure code data. Using

homographic token improves procedure in terms of trying to find misbehaving servers, on data blocks including security for updating, deleting and modifying data.

8. REFERENCES

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