LITERATURE SURVEY ON PLASMA DONOR APPLICATIONS USING CLOUD COMPUTING AND INFORMATION GATHERING

In healthcare systems, resources are usually sensitive and scarce, so these resources must be managed effectively, accurately, and transparently. One of the most important of these resources is blood units (whole blood, red blood cells, double red, plasma, and platelet separation),here the process of managing blood units is one of the most sensitive and difficult challenges in health care systems and the responsibility for this process rests with the blood bank systems, where banks must provide appropriate blood units to patients in a timely manner, and in the event of any delay or error in the process of providing the blood unit, this will lead to catastrophic results that may cause the loss of the patient's life. This process is also more important in emergency situations, disasters, and the spread of epidemics; as happens these days in light of the coronavirus disease (Covid-19) epidemic. The main problems in the operations of managing blood units are that most of the current traditional health care systems such as the health care system of the city, may contain many blood banks, donation camps, and blood allocation centers that operate independently and isolated.

The main objective of this cloud computing based web application is to help satisfy a plasma request made from anywhere and anytime, by maintaining all information pertaining to the plasma donors and different plasma types available in each blood bank. This system provides transparency in this field, makes the process of obtaining plasma from a blood bank, corruption free and makes blood bank management effective. The system intends to make the plasma search process much more efficient and quick. Therefore, no permanent registration to the website is needed for the client, they are only required to provide their basic details and contact information for verification. The search result is filtered and ordered in such a way that donors nearest to the client are listed first. This system also keeps records of patient details and blood booking history. Need for certain plasma types is posted on the website to find available donors for an emergency. This web application, along with all the services it provides, also helps to eradicate certain spam messages and mails circulating around regarding fake or already satisfied blood emergency situations. A single platform for maintaining all genuine plasma related activities and information increases the trust of the public to get involved in these activities, and to participate in blood and plasma donations.

There are some sources that provide an online platform for blood donation:

- **American Red Cross Blood Services**

The website is owned by American National Red Cross Society which is a well renowned organization for health services. This website can be used by individuals who are willing to donate blood. They conduct blood drives to collect blood from donors and distribute it to the needed blood banks. They collaborate with various events like Superbowl to avail offers to the people donating blood. This website also gives provision to the user to conduct blood drives and we can also register to be part of their activities as a volunteer. But they do not provide

the option to perform an emergency blood request even though that is a vital part of the whole process.

- **Blood Bank India**

The website provides various facilities like searching availability of blood, donor registration, and requesting blood. Latest requests are shown when one opens the website, the recent donors are also referred. The website does not provide accurate location based search results and hence, it will not be a reliable source in every scenario. There is no integration with blood banks. Any random user can obtain the contact details of donors without any steps of verification, and legitimacy of donors are not verified.

- **e-RaktKosh**

e-RaktKosh is a Centralized Blood Bank Management System. It is an initiative of the Ministry of Health and Family Welfare. It provides details about blood banks all across the nation. The details include the availability of each blood group. But the information provided is not accurate. They also provide contact details and location information about blood banks.

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