1.Literature Survey

Abstract

A plasma is a liquid portion of the blood, over 55% of human blood is plasma. Plasma is used to treat various infectious diseases and it is one of the oldest methods known as plasma therapy. Plasma therapy is a process where blood is donated by recovered patients in order to establish antibodies that fights the infection. In this project plasma donor application is being developed by using AWS services. The services used are AWS Lambda, API gateway, DynamoDB, AWS Elastic Compute Cloud with the help of these AWS services, it eliminates the need of configuring the servers and reduces the infrastructural costs associated with it and helps to achieve serverless computing. For instance, during COVID 19 crisis the requirement for plasma increased drastically as there were no vaccination found in order to treat the infected patients, with plasma therapy the recovery rates where high but the donor count was very low and in such situations it was very important to get the information about the plasma donors. Saving the donor information and notifying about the current donors would be a helping hand as it can save time and help the users to track down the necessary information about the donors.

Existing System

A donor has to register to the website providing his details such as name, contact information (phone number and email id) along with donor’s blood group and donor’s plasma count. In this project the services used are AWS Lambda which will allow the users to run the code without managing or provisioning the servers, AWS API gateway is a fully managed service which makes it easy for a developer to create, publish monitor, secure, maintain APIs at any scale. It handles all the tasks which is involved in accepting and processing hundreds of Concurrent API calls along with traffic management, authentication, authorization and API version management. DynamoDB is a multi-master database used for storing the data, Amazon SNS is a messaging service form system to-system and app-to-person communication

Proposed System

The proposed method helps the users to check the availability of donors. A donor has to register to the website providing their details. The registered users can get the information about the donor count of each blood group. The database will have all the details such as name, email, phone number, infected status. Whenever a user requests for a particular blood group then the concerned blood group donors will receive the notification regarding the requirement. A Json code is written to store the information, to fetch the requested information in lambda.

Conclusion

The efficient way of finding plasma donor for the infected people is implemented using the plasma donor website that is hosted on Aws platform. To ensure the smooth functioning of the website operations. I have hosted the website in aws platform to make sure the operations are running successfully Aws lambda function is used and to deploy the application AWS EC2 service is used.

Future Enhancement

Upgrading the UI that is more user-friendly which will help many users to access the website and also ensures that many plasma donors can be added into the community. Using elastic load balancer, it helps to handle multiple requests at the same time which will maintain the uptime of time

2.Literature Survey

Abstract

The world is suffering from the COVID 19 crisis and no vaccine has been found yet.. But there is another scientific way in which we can help reduce mortality or help people affected by COVID19 by donating plasma from recovered patients. In the absence of an approved antiviral treatment plan for a fatal COVID19 infection, plasma therapy is an experimental approach to treat COVID19-positive patients and help them faster recovery. Therapy is considered competent. In the recommendation system, the donor who wants to donate plasma can donate by uploading their COVID19 certificate and the blood bank can see the donors who have uploaded the certificate and they can make a request to the donor and the hospital can register/login and search for the necessary things. plasma from a blood bank and they can request a blood bank and obtain plasma from the blood bank.

Existing System

The traditional methods of finding plasma, one has to find out for oneself by looking at hospital records and contacting donors have been recovered, sometimes may not be available at home and move to other places. In this type of scenario, the health of those who are sick becomes disastrous. Therefore, it is not considered a rapid process to findplasma. The main purpose of the proposed system, the donor who wants to donate plasma can simply upload their covid19 traced certificate and can donate the plasma to the blood bank, the blood bank can apply for the donor and once the donor has accepted the request, the blood bank can add the units they need and the hospital can also send the request to the blood bank that urgently needs the plasma for the patient and can take the plasma from the blood bank

Proposed System

In this proposed system, a donor who wants to donate plasma can simply upload their recovered covid19 certificate and can donate the plasma to a blood bank. The blood bank after checking the donor certificate can make a request to the donor when the donor accepts the request, they can add the required number of units they need. The hospital can send a request to the blood bank that needs the patient's emergency plasma and to get the plasma from the blood bank.

Conclusion

Plasma is a liquid portion of blood; it is a mixture of water, proteins and salts. Antibodies are proteins made by the body in response to an infection. People fully rescued from COVID19 are encouraged to donate plasma, which can help to increase the lifespan of other patients becausetheir plasma contains antigens which helps the affected person to recover faster. These immunoglobulin give your immune system a way to fight the virus when you are sick, so your plasma can be used to help others fight off illness. Individuals must fully resolve symptoms for at least 14 days prior are eligible to donate.

3.Literature Survey

Abstract

In health care systems, blood management services are essential to saving lives. In such systems, when a unit of blood is required, if the system is not able to provide it on time, sometimes this may lead to patient death,especially in critical cases. Unfortunately, even if the required blood unit is available within the system, contradictions may occur and the required blood unit may not be allocated to critical cases on time, due to the allocation of these units to lower priority cases or due to the isolated operate of blood banks within these systems. So, to overcome these obstacles, we proposed a real-time system on a cloud, to managing blood units within the whole health care system. This system will allocate blood units depends on the deadline and the severity of the case that needs blood, in addition to the types,quantities, and position of available blood units. Where, this system eliminated the need for human intervention in managing blood units, in addition to offering the ability to easily develop the system to deal with new urgent requirements, which need new methods of managing blood units; as is happening today with the COVID-19 epidemic. This system increases the the performance, transparency, reliability, and accuracy of blood unit management operations while reducing the required cost and effort.

Proposes System

In this paper, we propose a cloud-based, real-time system that centrally manages blood units within a range of blood banks, hospitals, and donation centers. This system has the ability to make decisions to manage blood units without any human intervention while providing the ability to add and develop the services it provides in a flexible and easy way. This is what distinguishes this system from the rest of the current traditional systems. The design of this system takes into account the great impact of its work on human life in most cases, as it can be classified as a hard real-time system in general . The main part of this system is the main management server, which is responsible for making management decisions, which will depend on a hybrid of real-time algorithms. This hybrid of algorithms is divided into two main parts, the first part uses the polling server algorithm, and it is responsible for organizing the work of periodic tasks and responses to the entire system. Among these periodic tasks in the system is to keep track of the connection status of the local backup and support systems, check the expiration date of blood units, analyze the status of blood stocks in the system, run the scheduling process for periodic blood requests (thalassemia, spleen atrophy, and kidney failure), in addition to organizing the work periods of the second part of the system algorithms. The second part will be responsible for responding to aperiodic events, and the most important of these events are the processes of requesting the allocation of blood units.The second part uses the earliest deadline first (EDF) algorithm, in addition to the priority principle to distinguish between the different types of blood unit requests based on the severity of the case. Where, the search for blood units appropriate for the requests will be done at the local and then on global levels. Where the system will start searching for the appropriate unit in the current blood bank stock, otherwise it will move to search for the appropriate unit within the stocks of the rest blood banks from closest to farther away.Moreover, these algorithms will use the time between allocating a unit of blood and it is actual consumed by the patient, in the reallocation of the blood units to allocation requests in a better manner. This gives the allocation requests of the critical cases the possibility of extracting the allocated blood units from other lower priority cases, in the absence of appropriate unallocated units in the system. Here, the algorithms of the second part will use the data and information in the main data store as determinants to make decisions related to the allocation of blood units.Also, the proposed system contains the main data store located in the cloud environment, in addition to a set of local data stores distributed to blood banks and hospitals, which act as local backup databases.Therefore, we relied on building databases on SQL database, due to their ability to create and organize large and complex databases with precision, ease, and flexibility. On the one hand, using SQL to build databases in the system made it easier to link and overlap the master database and backup databases, making switching and moving between the backup and backup system to the cloud host in an emergency easier. In addition to,provide access to more than one user to the databases at the same time without problems. Whereas, the main store will contain all data and information such as details about the types, quantities, and locations of the blood unit storage in addition to donor data and allocation requests. It will also facilitate the process of entering the information sent by registered users.

4.Literatute Survey

Abstract

The world is suffering from covid 19 crisis and we haven’t found any covid vaccine yet but there is another scientific way from when we can help to lower the depth ratio or help the covid 19 affected person is by donating plasma from recovered patients with no approved antiviral treatment plan for the deadly covid 19 infection,plasma therapy is an experimental approach to treat COVID positive patients and help them recover faster.The therapy consider to be safer and promising.If a particular person is fully recovered from COVID 19,he/she is applicable to donate their plasma.In the proposed system donor who need to donate plasma can donate by uploading COVID-19 certificate and blood bank can view donor and can raise request to donor and the hospital can register/login can search for plasma,they can raise requests to blood blank and can get the plasma

Existing System

People have to find them physically by visiting hospitals register book and reaching out recovered donor’s home and sometimes they will be went on work.In this type of scenerios,diseased person health gets more worsened.This is ana expensive at emergency situations.

Drawback

* Tedious work
* Expensive
* Requires more man power
* Time consuming

Proposed System

In the proposed system a donor who wants to donate plasma can simply upload his/her covid-19 recovered certificate and can donate plasma to blood bank.Blood bank can add the units they need.Hospital can send request to blood bank who need emergency plasm to patience and can collect the pasma from blood bank.

Advantages

* Immediate solution
* Saves time and energy
* Saves money
* Ease of findin