Literature Survey

Name of the paper:

Developing a plasma donor application using Function-as-a-service in AWS

Author:

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Topic:

Plasma Donor Application

Theme:

In recent days, it is noticed the increase in blood request posts on social media such as Facebook, Twitter, and Instagram. Interestingly there are many people across the world interested in donating blood when there is a need, but those donors don't have access to know about the blood donation requests in their local area. This is because there is no platform to connect local blood donors with patients. BLOODY solves the problem and creates a communication channel through authorized clinics whenever a patient needs blood donation. It is a useful tool to find compatible blood donors who can receive blood request posts in their local area. Clinics can use this web application to maintain the blood donation activity.

Overall inference:

Cloud computing helps in on-demand delivery of IT resources over the internet with a pay-as-you-go pricing model where users have to pay only for the resource that they use. This helps to reduce the additional infrastructural cost and users can access technology services such as power, storage, compute, database, networking, analytics and also intelligence over the internet in order to offer flexibility, innovation, and economies of scale.

Plasma is that the clear, straw-coloured liquid part of blood that is still once crimson blood cells, white blood cells, platelets and alternative cellular elements rectangular measure removed. It's the single largest element of human blood, comprising fifty-five p.c, and carries water, salts, enzymes, antibodies and alternative proteins. A plasma

donor has to pass health screening prior to each donation. Plasma is collected through a process known as plasmapheresis.

During this process an automated device is used to separate the plasma from the blood. Once the plasma is collected red blood cells and other components will be returned to the donor. After plasma is collected it is tested for suitability for future manufacture, frozen and then held for 60 days prior to pooling.During COVID 19 crisis the requirement for plasma increased drastically as there were no vaccinations found in order to treat the infected patients.

Conventionally, when a patient needs blood, he/she has to contact a blood bank or a compatible blood group of a donor in their circle, family, and friends. However, it is difficult to find a suitable donor within a limited group of people in a given time. In addition, there is no guarantee that blood banks will have compatible blood groups in stock. There is also a steady increase in blood donation requests posted in social networking sites (like Facebook, twitter, Instagram, etc.) requesting for donation.

In such a situation it was very difficult to find the plasma donor, check whether the donor was infected previously and was recovered, and which donor is eligible to donate plasma was a challenging task. As the plasma therapy was one of the ways to treat the infected patients, getting the donor details played a major role.When a patient needs a blood, the clinic where he/she is admitted would request registered volunteers in the same or nearby city/state to donate using the “Send Request” of the app.

For example, assuming that a patient is admitted in a clinic in XXX, those donors in nearby areas may be notified too.