

PLASMA DONOR APPLICATION IN CLOUD COMPUTING

Introduction:

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 Cloud. 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 were 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. It is very difficult to find the respective blood group donors when anyone is in need. In regard to the problem faced, an application is to be built which would take the donor details store it and inform them upon a request. 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.

Literature Survey:

[1] In this paper, the author has carried out analysis based on the opportunities presented by serverless computing. They emphasise that serverless services are more affordable approach for many network services and it is more user friendly as serverless approach will relieve the customers from the intricacies of deployment. These services will help to improve the new business opportunities.

[2] Author conducted a survey of existing serverless platform in this paper from source projects, industry, academia, use cases, and key characteristics and has described the challenges and the open problems associated with it. Authors work presented a hands on experience of serverless technologies using different services from different cloud provides such as Amazon, Google, IBM, Microsoft Azure.

[3] In this paper three demonstrators for IBM Bluemix Open Whisk was presented. They exhibit event-based programming triggered by weather forecast data, speech utterances and Apple WatchOS2 application data. And also demonstrated a chatbot using IBM Bluemix Open Whisk that calls on the IBM Watson services which include dates, weather, alarm services, news and music tutor.

[4] In this paper serverless OS was designed. It comprises of components such as 1. desegregation model that leverages desegregation for abstraction but it will enable resources to move fluidly between servers for the performance. 2. The second key component is cloud orchestration layer which helps to manage fine-grained resource placement and allocation throughout the application lifetime with the help of global and local decision making 3. And the third component is an isolation capability which enforces data and resource isolation.

[5] In this paper an efficient resource management system for serverless computing framework was proposed which aims to

enhance resource with a focus on memory allocation among the containers and the design which was added on top of an open-source serverless platform, open Lambda and it is based on allocation workloads and serverless functions memory needs events are triggered.

References:

- 1]Javed Akhtar Khan and M. R. Alony, "A New Concept of Blood Bank Management System using Cloud Computing for Rural Area", International Journal of Electrical Electronics, vol. 4, no. 1, pp. 20-26, 2015
- 2]T. Hilda Jenipha and R. Backiyalakshmi, "Android Blood Donor Life Saving Application in Cloud Computing" in American Journal of Engineering Research (AJER), 2014.
- 3]Sagar Shrinivas, Vasaikar Vijay and Suresh Yennam, "Online Blood Bank Using Cloud Computing", International Journal of Advanced Research Ideas and Innovation In Technology, vol. 3, no. 1.
- 4]P. Priya, V. Saranya, S. Shabana and Kavitha Subramani, "The Optimization of Blood Donor Information and Management System by Technopedia", International Journal of Innovative Research in Science Engineering and Technology An ISO 3297: 2007 Certified Organization, vol. 3, no. 1, 2014.
- 5]Silva Shanmuga and N. Ch. S. N. Iyengar, "A Smart Application on Cloud-Based Blood Bank", Journal of Computer and Mathematical Sciences, vol. 7, no. 11, pp. 576-583, November 2016.
- 6]Almetwally M. Mostafa and Ahmed E. Youssef, . A Framework for a Smart Social Blood Donation System based on Mobile Cloud Computing.

7]Deepak Pandey, Achal Umare and R. S. Mangrulkar, "Requirement Based Blood Storage and Distribution System", International Journal of Research In Science & Engineering, vol. 3, no. 2, March-April 2017