Technical Architecture

Team ID	PNT2022TMID17680
Project Title	Plasma Donor Application
Maximum Marks	4 Marks

Technical Architecture:
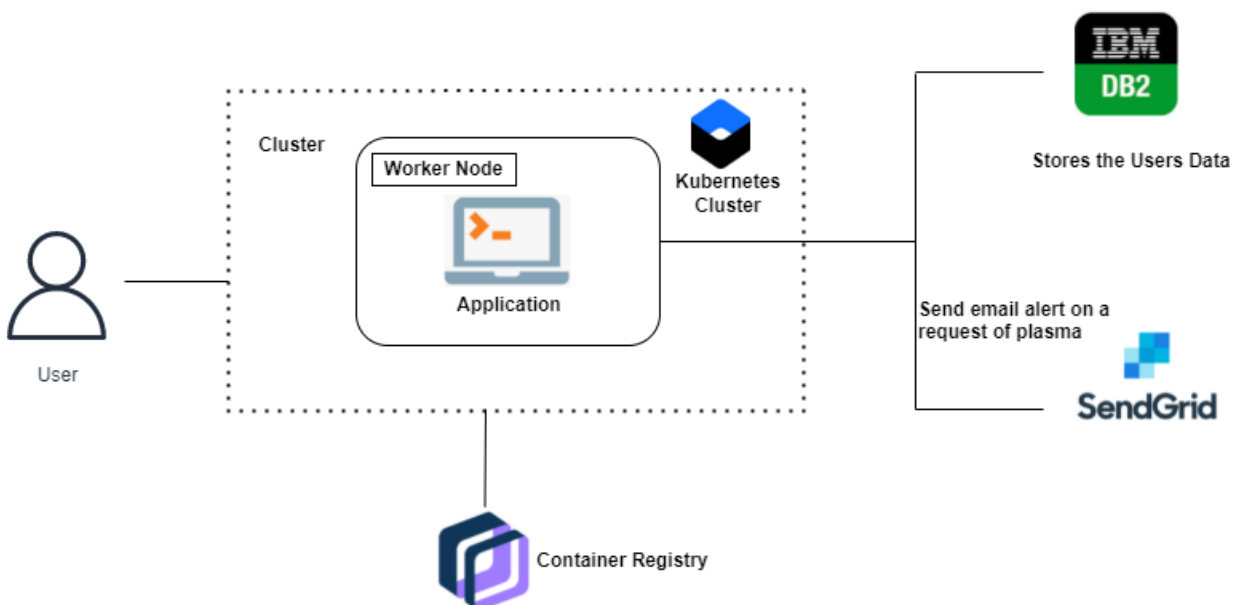
Table-2: Component and Technologies :

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Materializes css
2.	Application Logic-1	The open source Framework used to create web applications.	Python , Flask Application.
3.	Application Logic-2	Storing the data into cloud services and give authentication features to it.	IBM DB2 and Flask login Manager.

4.	Application Logic-3	Integrating the AI based Chat bot in the application so that users can ask their query.	IBM Watson Assistant
5.	Database	User Table , Admin Table , Blood request Table.	MySQL.
6.	Cloud Database	Databases can be stored in cloud services which increases the efficiency of the Web application.	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage
8.	External API-1 (**Send Grid**)	This API is used to send mail for the users who are gonna donate.	Send Grid
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Docker, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python-Flask is an open source framework used to create web applications.	Technology of Open Source framework
2.	Security Implementations	● Storing the data in a separate service(IBM DB2) increases the security. ● Creating an authentication system for users and admin.	**Bcrypt** python module. Flask login manager IBM DB2. .
3.	Scalable Architecture	Docker provides Scalable Architecture as many containers can be placed in a single host.	Docker.
4.	Availability	The IBM Cloud makes the application High available throughout the region.	Kubernetes , IBM Cloud.
5.	Performance	Kubernetes a container s an open-source container orchestration tool Which make the improves the performance of our web application drastically.	Kubernetes.