Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	26 November 2022
Team ID	PNT2022TMID25179
Project Name	Plasma Donor Application
Maximum Marks	4 Marks

Technical Architecture:

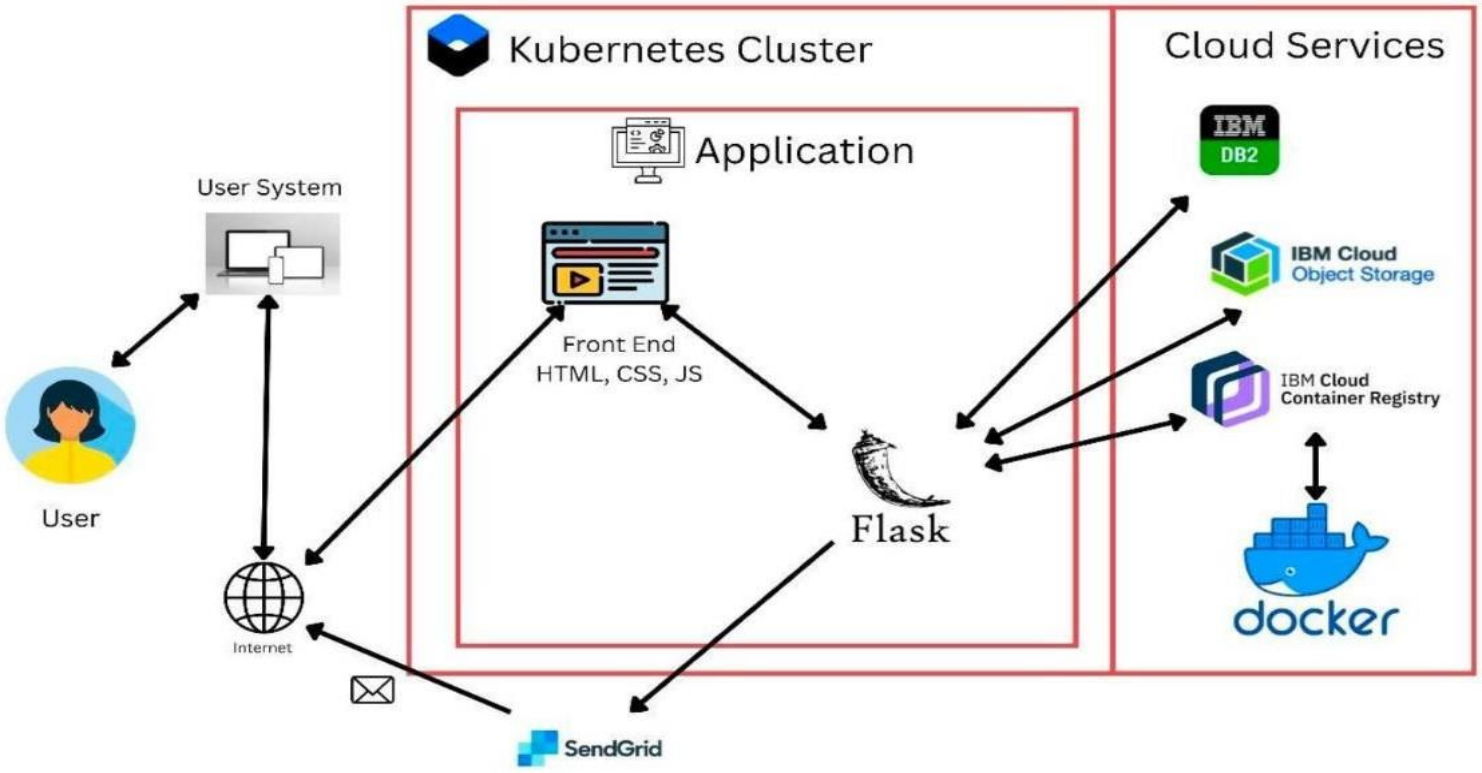

TABLE-1 : COMPONENTS & TECHNOLOGIES:

S.No	Component	Description	Technology
1.	User Interface	For user onboarding such as Login and Dashboard functions	HTML, CSS, JavaScript
2.	Chat Bot	Provide automated responses to user inputs.	Python
3.	Data Maintenance	For storing, maintaining, modifying the donor and recipient details	MySQL
4.	Infrastructure (Server / Cloud)	To deploy the application on local system	Kubernetes
5.	Confirmation Email	Sending a confirmation email to users they have registered for donation and to check the availability of plasma	SendGrid
6.	Cloud Database	Database Service on Cloud	IBM DB2.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem

TABLE-2: APPLICATION CHARACTERISTICS:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python Flask micro framework is used	Python- Flask
2.	Security Implementations	Only registered user should be able to view the details of the donor/recipient. Details of the donor/recipient should be kept secure.	SHA-256, Encryptions, IAM Controls, OWASP
3.	Scalable Architecture	The idea can be scaled for further requirements, by adding google calendar support for checking their date of donation.	Web server-HTML, CSS Application Server- Python Flask Database Server-IBM DB2
4.	Availability	The application should be available for all users at all times, and not be disrupted due to any internal issue or server issues	IBM Load Balancer
5.	Performance	The system should be able to handle a large number of users and should not get disrupted while using the system application.	IBM Content Delivery Network