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

Date	18 October 2022
Team ID	PNT2022TMID04418
Project Name	Plasma Donor Application
Maximum Marks	4 Marks

Technical Architecture:
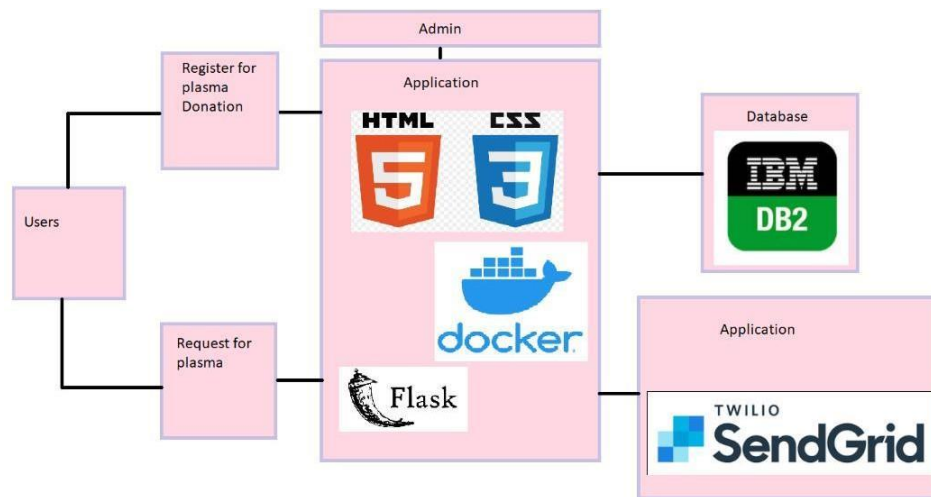
Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Logic for a process in the application	Java / Python
2.	Application Logic-1	Logic for a process in the application	Python - flask
3.	Application Logic-2	Logic for a process in the application	SendGrid
4.	Application Logic-3	Data Type, Configurations etc	Docker
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Purpose of External API used in the application	Container Registry
9.	External API-2	Purpose of External API used in the application	Checking database API
10.	Machine Learning Model	Purpose of Machine Learning Model	Local, Cloud Foundry, Kubernetes, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used.	Technology of Open source framework
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Kubernetes Cluster
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d