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

Date	03 October 2022
Team ID	PNT2022TMID43307
Project Name	Project – Plasma Donor Application
Maximum Marks	4 Marks

Technical Architecture:

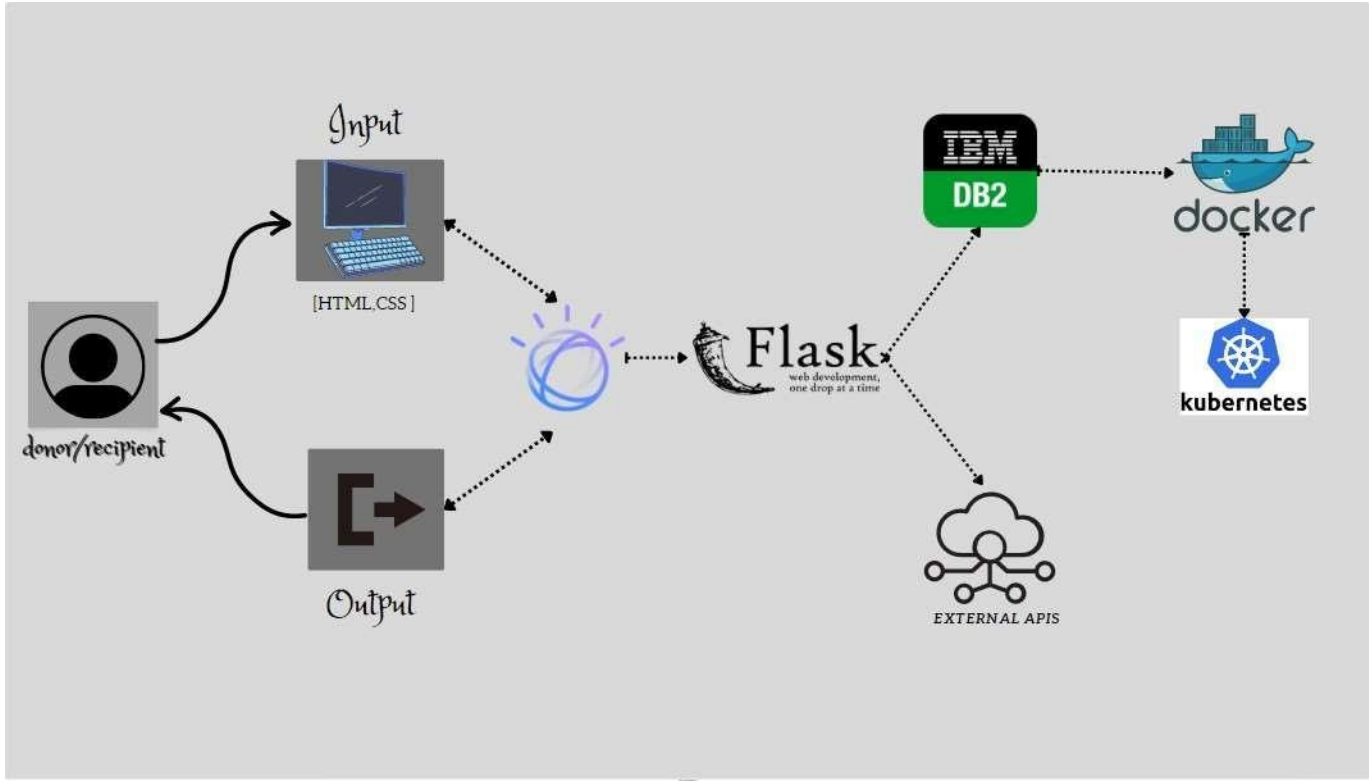

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	How user interacts with application	HTML, CSS, JavaScript / React Js
2.	Application Logic-1	Registration with verification and Login to the app.	Python
3.	Application Logic-2	Dashboard with donors and plasma availability details for recipient and requests for donors	Python-Flask
4.	Application Logic-3	Chatbot for FAQs, raising requests and other services	IBM Watson Assistant
5.	Database	String, integer, long, allowed values	MySQL or PostgreSQL
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloud
7.	External API	Containerize the application	Docker, Container Registry.
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Kubernetes, Cloud Foundry

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open Source Backend Framework to create API Endpoints	Python-Flask
2.	Security Implementations	Prevents data leakage and secures medical records of the users.	Docker content Trust (DCT), Transport Layer Security(TLS), Container registry
3.	Scalable Architecture	Kubernetes Cluster allow containers to run across multiple machines and environments	Kubernetes Cluster, Docker
4.	Availability	Kubernetes and IBM Cloud being run by multinational organizations have a very less chance of going down, hence always available.	Kubernetes Cluster, IBM Cloud
5.	Performance	Kubernetes and Docker are known and used widely, even by fortune 500 companies, for their exceptional performance, all factors considered.	Kubernetes Cluster, IBM Cloud, Docker