Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID25781
Project Name	Plasma Donor Application
Maximum Marks	4 Marks

Technical Architecture:

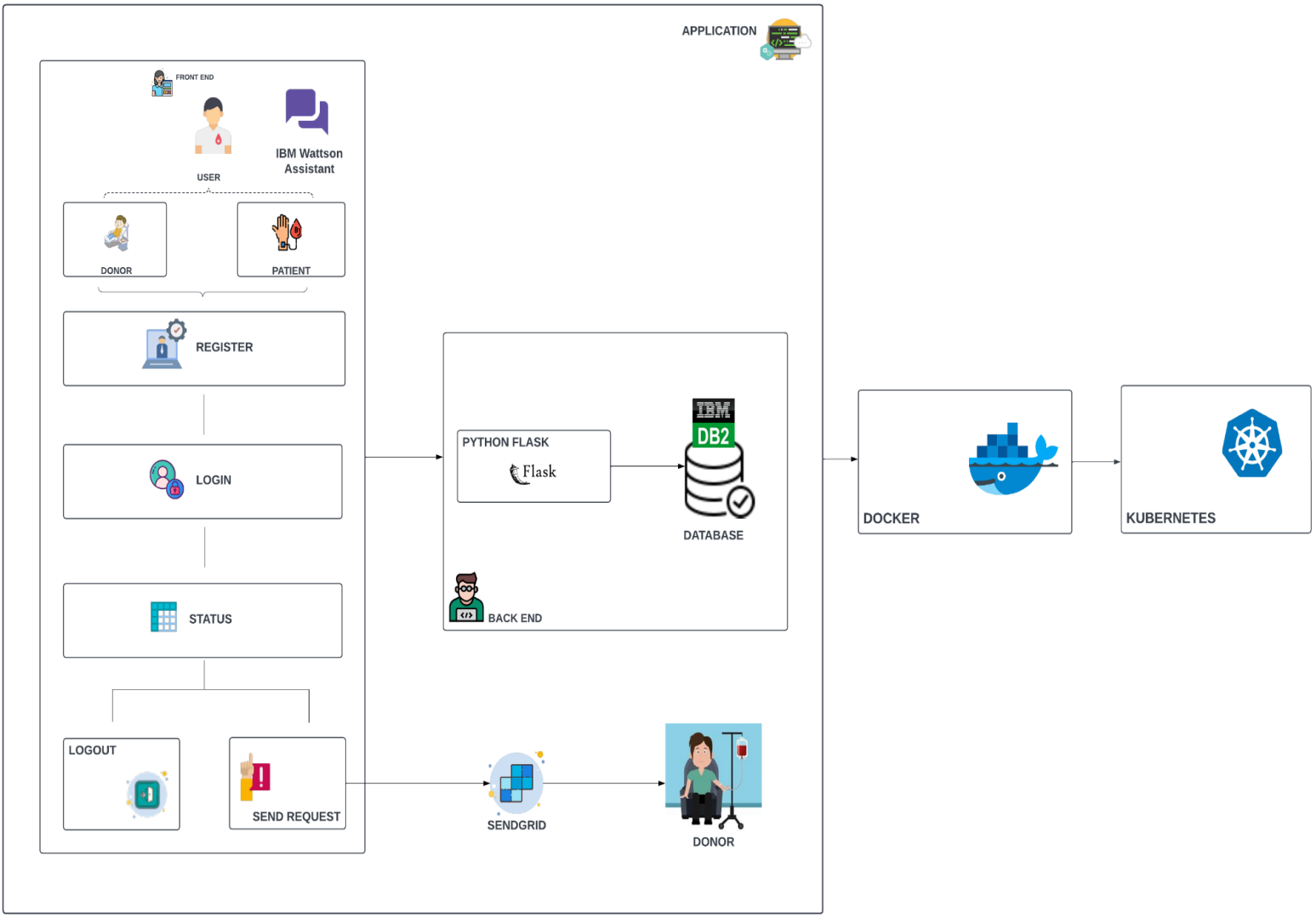

Table-1 : Components & Technologies:

Component	Description	Technology
User Interface	How user interacts with application e.g. Web UI, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
Application Logic-1	New User registers in the application by giving the genuine contact details which will be stored in the database.	Java, Flask,HTML,CSS
Application Logic-2	Users login into the application by providing the username and password.	Flask, IBM DB2
Application Logic-3	Stats page displays the blood unit count available and the number of donors available for each blood group	IBM Watson Assistant
Application Logic-4	A request page that collects the name,contact number,gender and the blood group needed.Finally the request is sent to a donor whose blood group matches with the request.	Sendgrid
Database	String,Integer,Characters,Long.	IBM DB2
Cloud Database	IBM DB2	IBM DB2.
File Storage		IBM Block Storage or Other Storage Service or Local Filesystem
External API-1	Authentication	Flask.
External API-2	Sending request to donor.	Sendgrid
Infrastructure (Server / Cloud)	Application deployment	Kubernetes.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Docker, Kubernetes
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	Doctor Content Trust(DCT),Transport Layer Security (TLS)
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Docker
4.	Availability	use of load balancers	kubernetes
5.	Performance	Since Docker and Kubernetes are used the traffic load will be managed efficiently as a result of which the web application's performance would be much better.	Docker and kubernetes