Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	22 October 2022
Team ID	PNT2022TMID04545
Project Name	Plasma Donor Application
Maximum Marks	4 Marks

Technical Architecture:

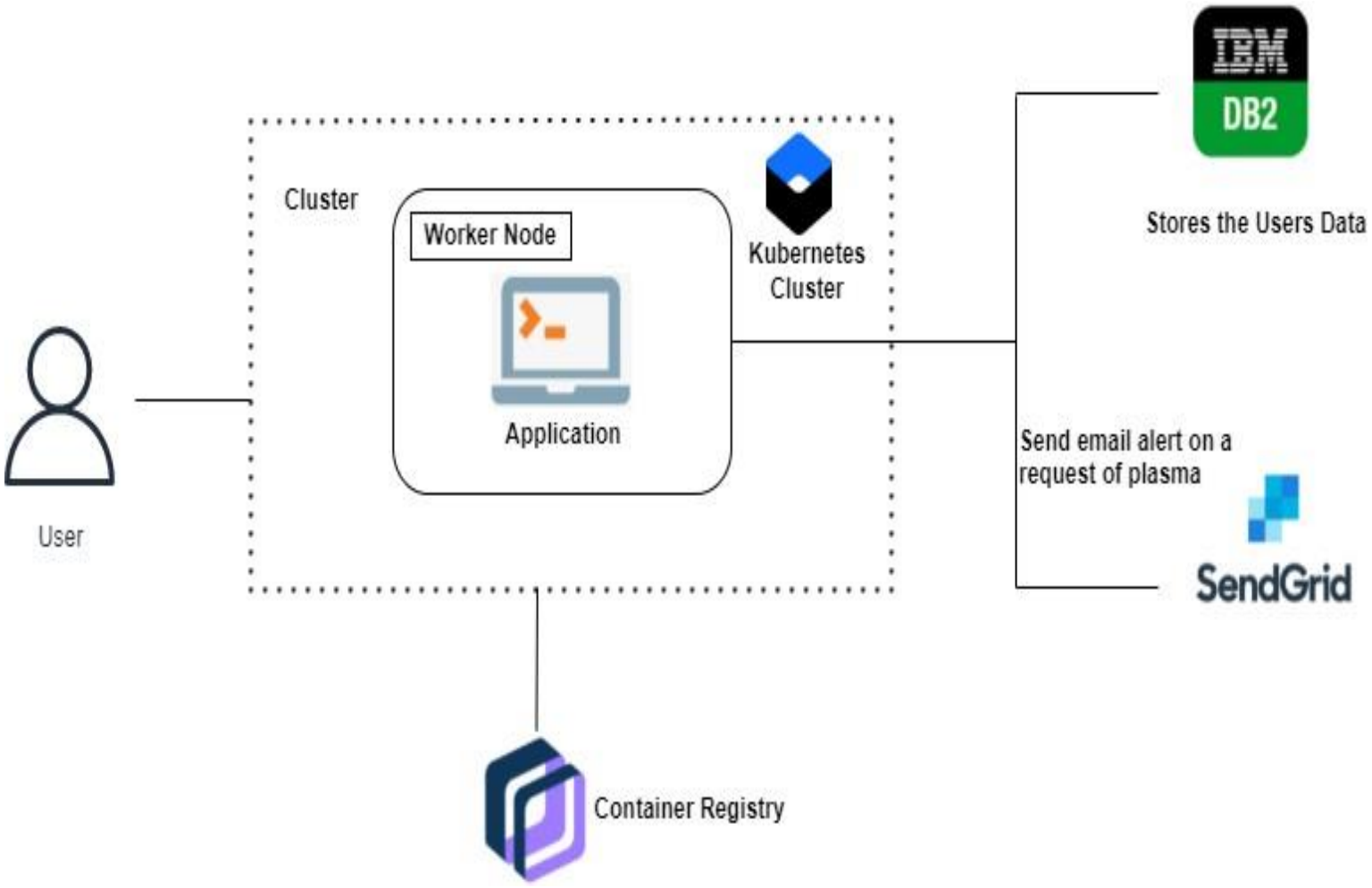

Table-1 : Components & Technologies:

Component	Description	Technology
User Interface	How user interacts with application e.g. Web UI, Chatbot etc.	HTML, CSS, JavaScript / React Js
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
Logic-2	User login into the application by providing the username and password.	Flask, IBM DB2
Logic-3	Stats page displays the blood unit count available and the number of donors available for each blood group for which I need Plasma.	IBM Watson Assistant
Logic-4	A request page that collects the name,contact number,gender and the blood group Plasma needed.	Sendgrid
Database	String,Integer,Characters,Long.	IBM DB2
Cloud Database	IBM DB2	IBM DB2.
External API-1	Authentication	Flask.
External API-2	Sending requests to donors.	Sendgrid
Infrastructure (Server / Cloud)	Application deployment	Kubernetes.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Framework	List the open-source framework used	Docker, Kubernetes
2.	Security Implementation	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