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

Date	7 November2022
Team ID	PNT2022TMID12975
Project Name	PLASMA DONOR APPLICATION
Maximum Marks	4 Marks

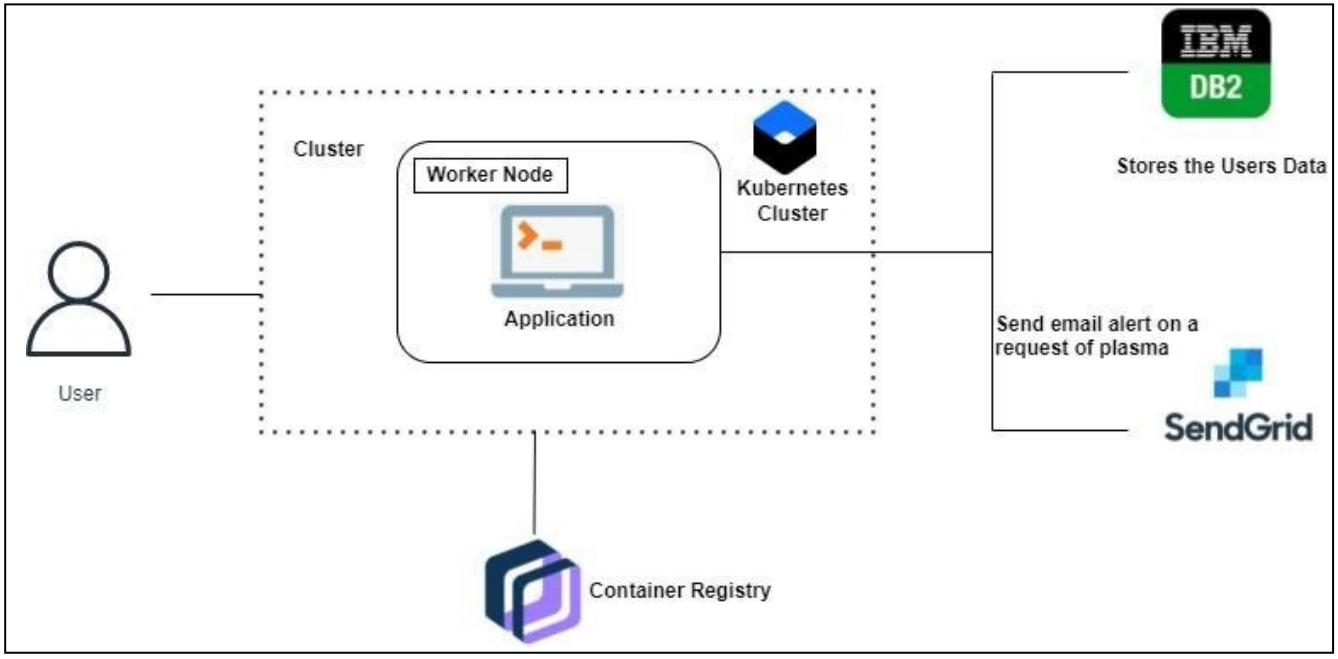

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interacts with the application eg. website UI	HTML, CSS, JavaScript, Angular Js , React Js.
2.	Application Logic-1	New user registers for the application by providing the email account	Java / Python, Flask, HTML, CSS
3.	Application Logic-2	Registered Users login into the application by providing the username and password.	IBM DB2, Flask, HTML, CSS
4.	Application Logic-3	Stats page displays the number of donors available for each blood group and the count available	IBM Watson Assistant
5.	Application Logic-4	A request page that collects the recipients information such as name, contact number, mail ID and the blood group needed which the request is sent to a donor whose blood group matches with the recipients.	SendGrid, HTML, CSS
6.	Database	String for name ,characters for mail ID, integers forcontact number.	MySQL.
7.	Cloud Database	Database Service on Cloud	IBM DB2
8.	External API-1	Sending request to the donors.	Sendgrid
9.	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.	Transport Layer Security (TLS),Doctor Content Trust(DCT),.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Docker
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	kubernetes
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Docker and kubernetes