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

Date	03 October 2022
Team ID	PNT2022TMID02723
Project Name	Project - Plasma Donor Application
Maximum Marks	4 Marks

Technical Architecture:

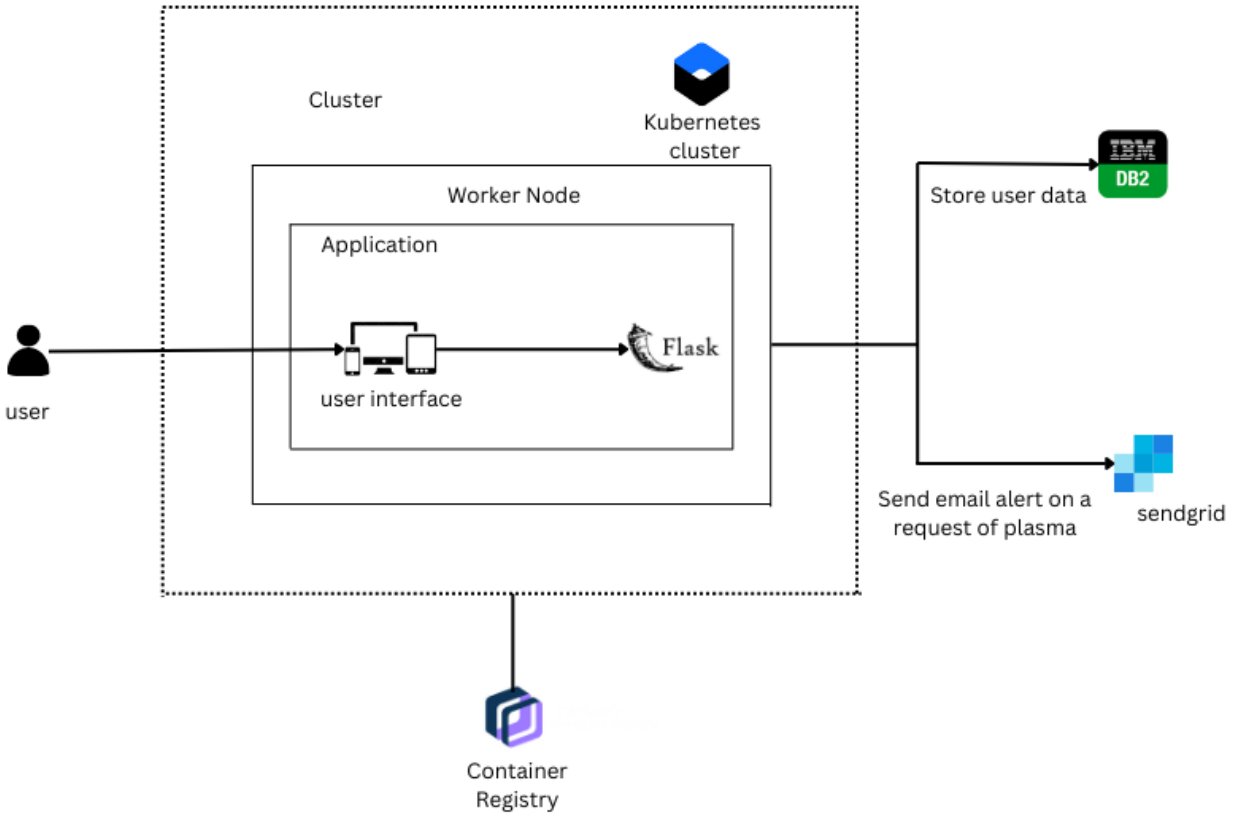

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interacts with the application eg. website UI	HTML, CSS, JavaScript
2.	Application Logic-1	New user registers for the application by providing the email account	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 DB2, Flask, HTML, CSS
5.	Application Logic-4	A request page that collects the recipients information such as name, contact number, mail ID , the blood group needed and the request is sent to a donor whose blood group matcheswith the recipients.	SendGrid, IBM DB2, Flask, HTML, CSS
6.	Cloud Database	Database Service on Cloud	IBM DB2
7.	External API	Sending request to the donors.	Sendgrid
8.	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, Flask
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