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

Date	15 November 2022
Team ID	PNT2022TMID00767
Project Name	Plasma Donor Application
Maximum Marks	4 Marks

Technical Architecture:

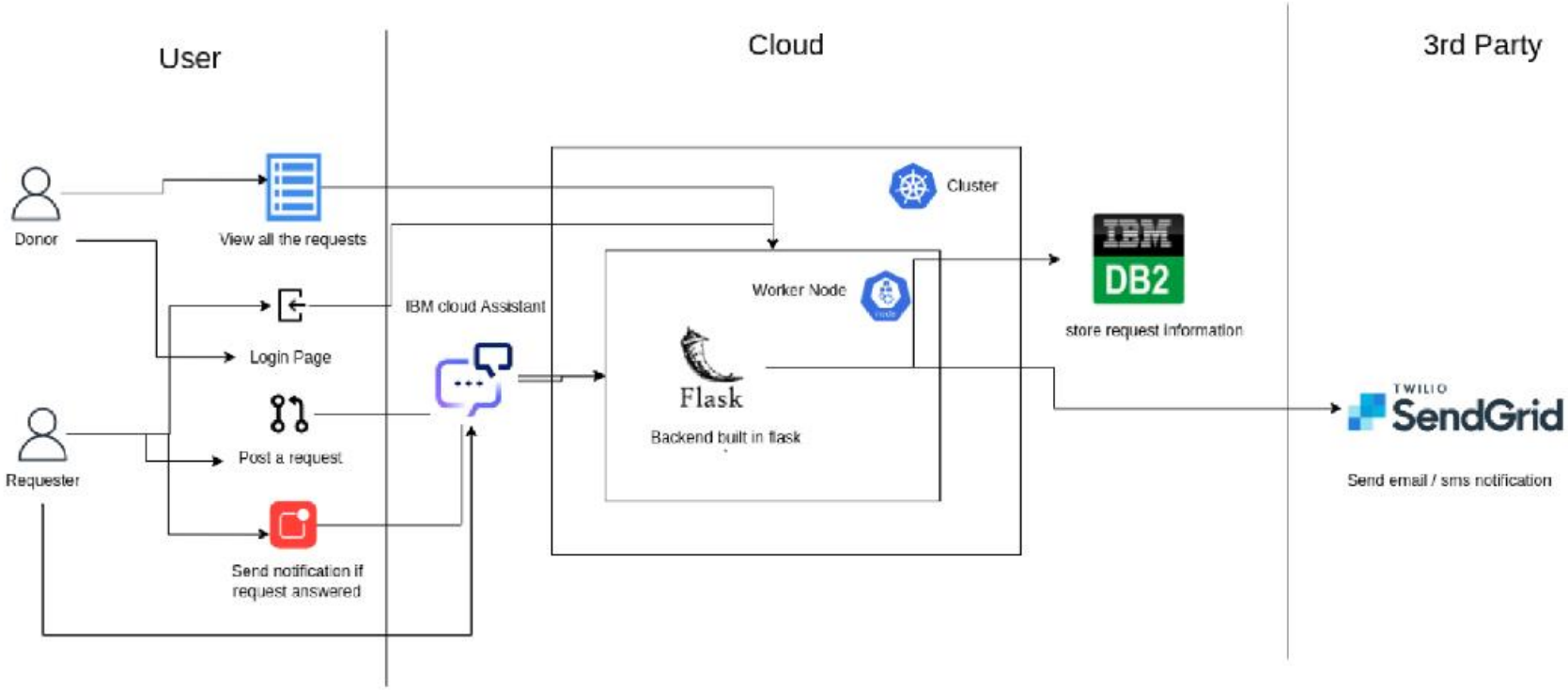

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	• The user creates an account and registers in the UI • Goes through the UI and views details	HTML, CSS, Python, Flask
2.	Chatbot	Used to clarify the user queries	IBM Watson Assistant
3.	Data Maintenance	For storing,maintaining,modifying and retrieving the user details	MySql
4.	Confirmation E-Mail	Sending a confirmation e-mail to users they have registered for donation and to check the availability of plasma.	SendGrid
5.	Cloud Database	For storing the appoinments, donation details and user details.	IBM DB2
6.	File Storage	File Storage Requirements	IBM Block Storage
7.	Infrastructure (Server/Cloud)	To deploy an application on the local system	Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python Flask micro framework is used	Python Flask
2.	Security Implementations	Mandatory Control (MAC) and Kubernetes is used.	SHA-256, Encryptions, IAM Controls, OWASP, Kubernetes
3.	Scalable Architecture	3- Tier Architecture is used	Web Server – HTML, CSS Applicationo Server – Python Flask Database Server – IBM DB2
4.	Availability	Using load balancer to distribute the network traffic across servers.	IBM Loadbalancers
5.	Performance	Request and respond facility within a second	IBM Content Delivery Network