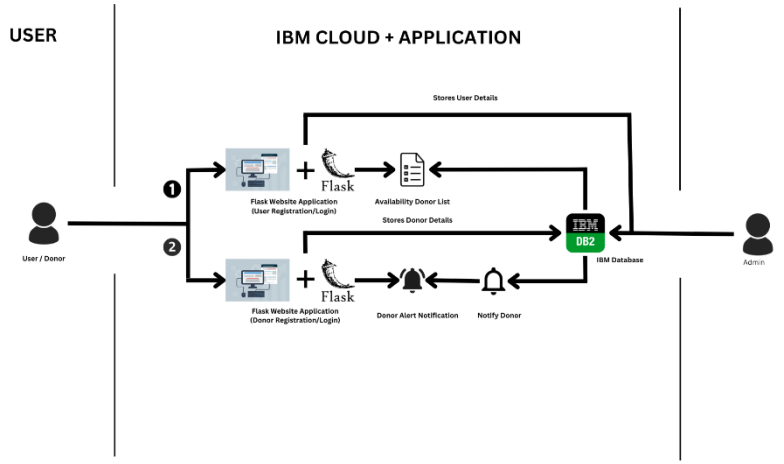
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	15 October 2022
Team ID	PNT2022TMID10840
Project Name	Project – Plasma Donor Applications
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	By Web UI, the user interacts with the web application and fulfil the user requirements with good user experience	HTML, CSS, JavaScript / React Js etc.
2.	Application Logic-1	Customer and Donor register themselves and once logged in, given with various features.	UsePython
3.	Application Logic-2	Once the plasma is in need by customer, they ask the donors to help, by contacting using the web.	IBM Watson STT service
4.	Application Logic-3	The donor will get the notification and help the customer.	IBM Watson Assistant
5.	Database	SQL Data Type	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2
7.	File Storage	-	-
8.	External API-1	To validate the customer and Donor	Aadhar API,.
9.	External API-2	-	-
10.	Machine Learning Model	-	-
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used REACT JS EXPRESS JS	Technology of Opensource framework JAVASCRIPT and PYTHON

S.No	Characteristics	Description	Technology
		NODE JS FLASK	
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc. SHA-256 to protect user details.	SHA-256
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier) This improves scalability, because application servers can be deployed on many machines. The database does not make longer connections with every client – it only requires connections from a smaller number of application servers	Presentation Layer – React JS (HTML, CSS , JS) Application Layer – Flask (Python) Data Layer – IBM DB2
4.	Availability	Justify the availability of application (use of load balancers, lets you evenly distribute network traffic to prevent failure caused by overloading a particular resource. This strategy improves the performance and availability of applications, websites, databases, and other computing resources)	-
5.	Performance	Design the application carefully to be component-based and encapsulated. This can help in creating a scalable application providing flexibility in deployment and making it possible to partition the application and substitute other component implementations during deployment..	-