

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

Date	04 October 2022
Team ID	PNT2022TMID02342
Project Name	Plasma donor application
Maximum Marks	4 Marks

Technical Architecture:

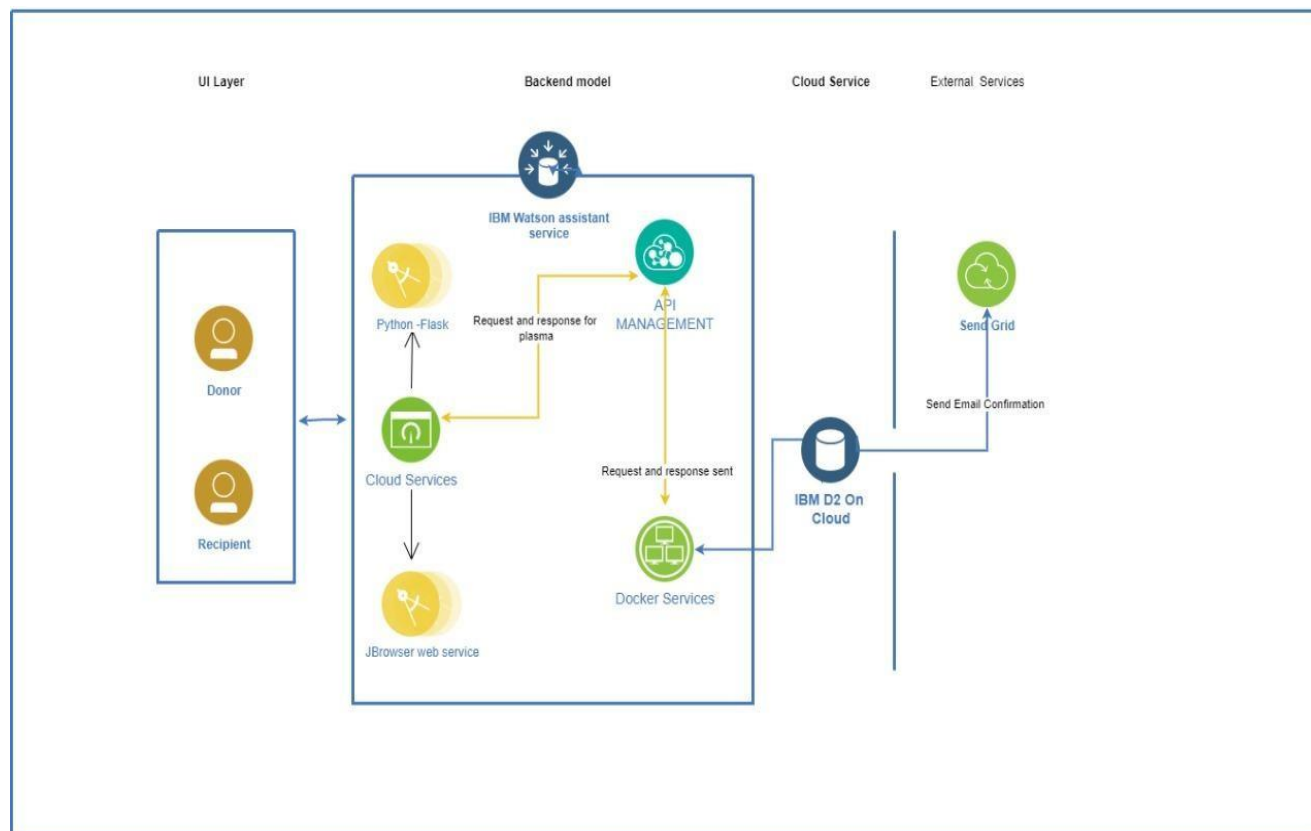


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	<ul style="list-style-type: none">In the UI, the user registers or establishes an account. browses the UI and views the details	HTML, CSS,Python Flask
2.	Chatbot	<ul style="list-style-type: none">Used to clarify user queries	IBM Watson Assistant
3.	Data maintenance	for keeping, updating, changing, and retrieving user information	MySQL
4.	Confirmation Email	sending users a confirmation email to confirm their donation registration and to check on the plasma supply	SendGrid
5.	Cloud Database	For storing the appointment ,donation details and user's details	IBM DB2
6.	File Storage	File storage requirements	IBM Block Storage
7.	Infrastructure (Server / Cloud)	To deploy an Application on 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 Application Server-Python Flask Database Server-IBM DB2
4.	Availability	Using Load Balancer to distribute network traffic across servers.	IBM Load Balancer
5.	Performance	Request and respond facility within a second. User-friendly API	IBM Content Delivery Network