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

Date	03 October 2022
Team ID	PNT2022TMID24121
Project Name	Plasma donor application
Maximum Marks	4 Marks

Technical Architecture:

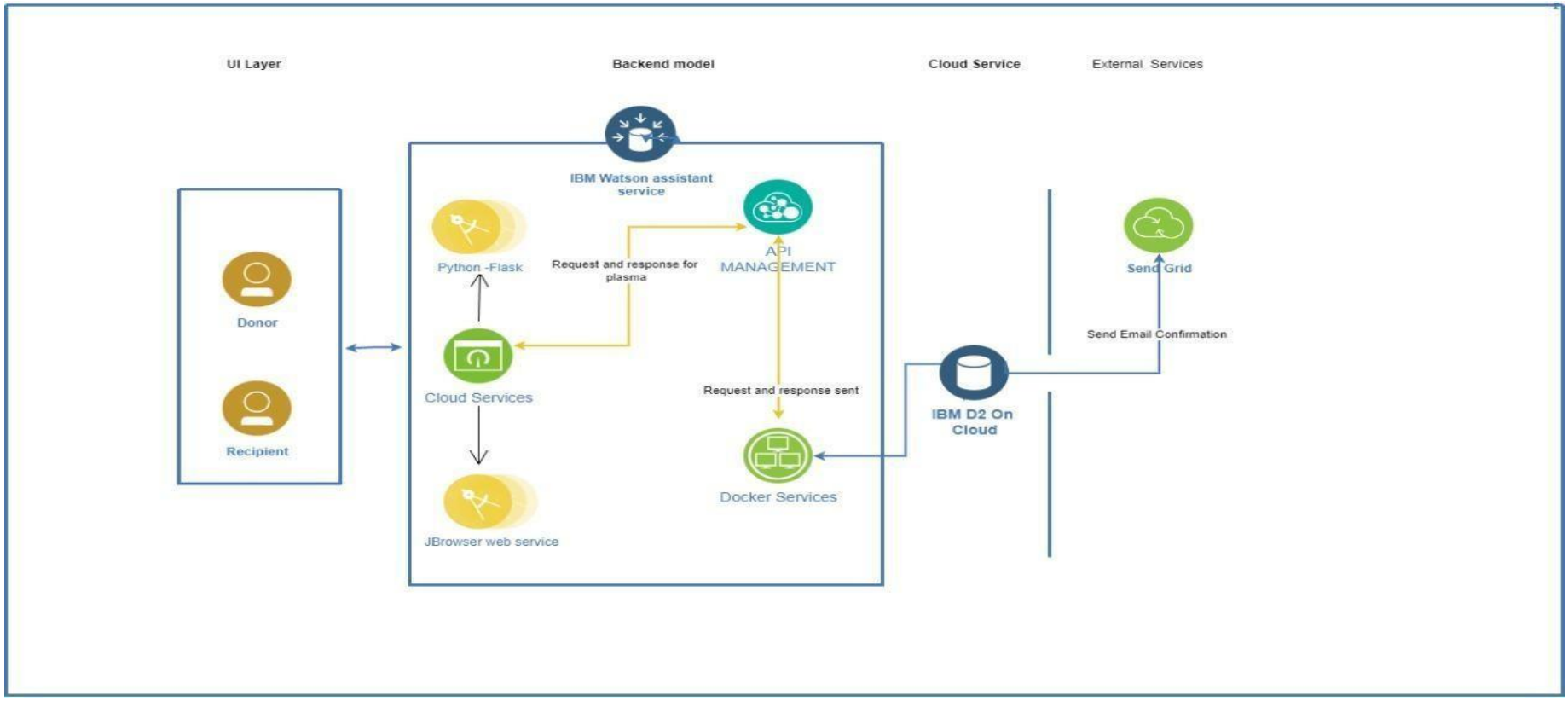

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	• The user creates an account or registers in the UI. • Goes through the UI and view details	HTML, CSS,Python Flask
2.	Chatbot	Used to clarify user queries	IBM Watson Assistant
3.	Data maintenance	For storing,maintaining,modifying and retrieving the user's details	MySQL
4.	Confirmation Email	Sending a confirmation email to users they have registered for donation and to check the availability of plasma	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