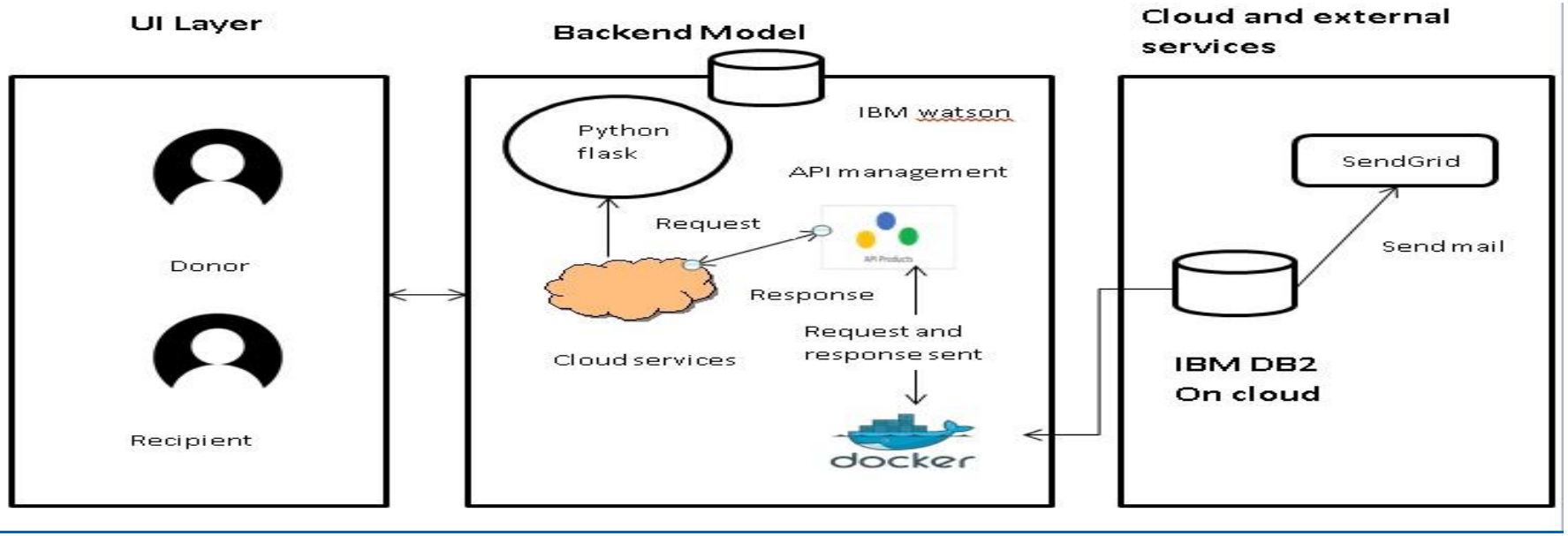
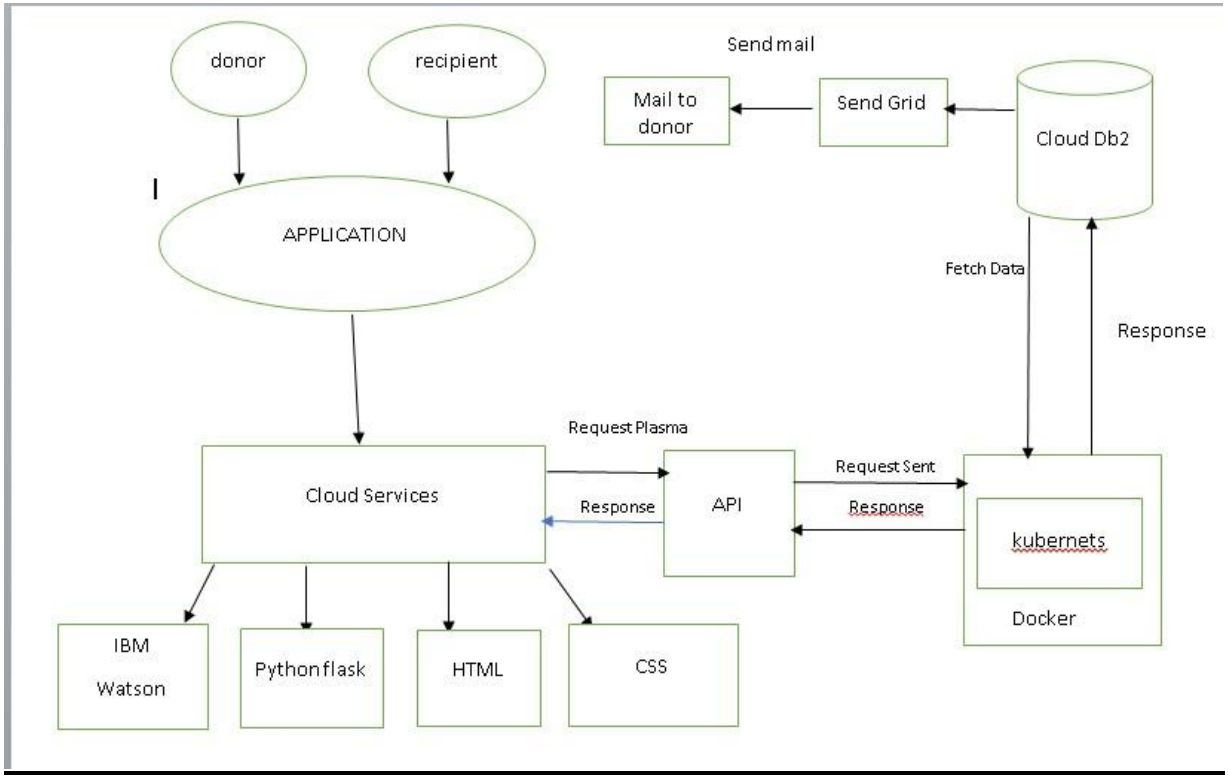
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	04 November 2022
Team ID	PNT2002TMID29020
Project Name	Project – Plasma Donor Application
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	The user register and login. See the UI.	HTML, CSS, Python Flask
2.	Data maintenance	Store, maintain, retrieve the user's details.	MYSQL
3.	Chatbot	Clarify user queries.	IBM Watson service
4.	Confirmation Email	Sending the confirmation email to users they have registered successfully.	SendGrid
5.	Cloud Database	Cloud database to store plasma information and View Plasma information.	IBM DB2

6.	File Storage	File storage requirements	IBM Block Storage
7.	Infrastructure (Server / Cloud)	To deploy the application on Local System	Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python Flask frameworks is used.	Python Flask
2.	Security Implementations	Mandatory Control (MAC) and kubernetes is used.	SHA-256, Encryptions, IAM Controls, OWASP etc.
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	User Friendly UI. Request and Response is faster.	IBM Content Delivery Network