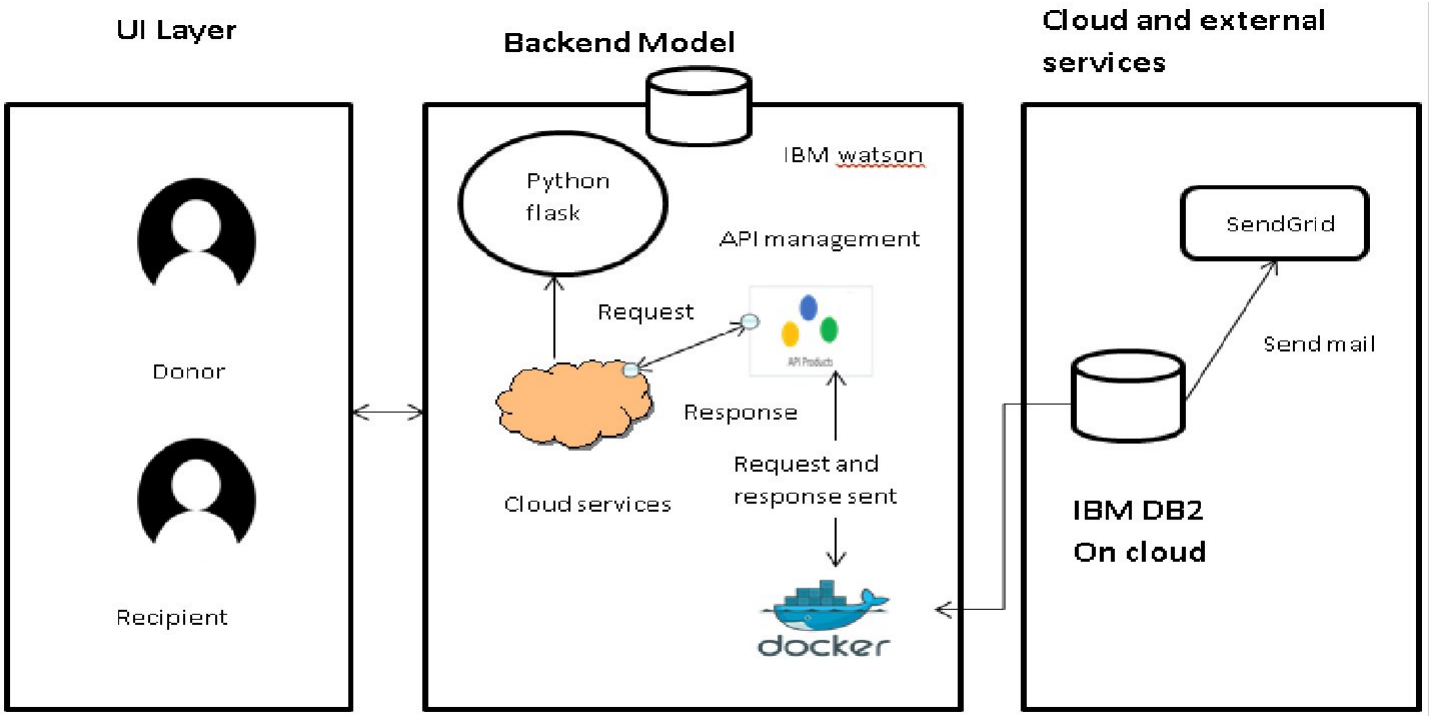
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	20 October 2022
Team ID	PNT2022TMID48288
Project Name	Project – Plasma Donor Application
Maximum Marks	4 Marks

Technical Architecture:

1



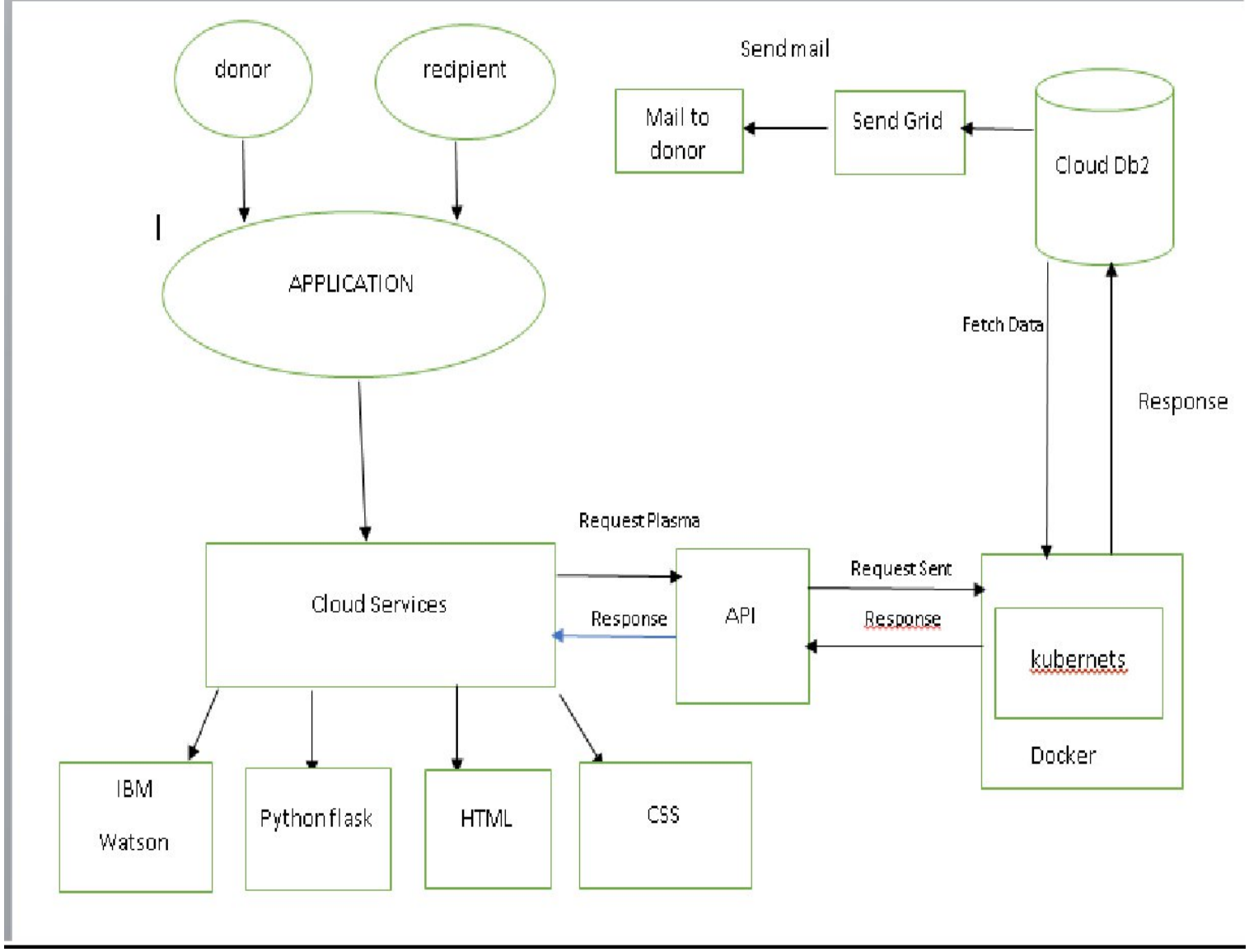

donor
recipient
Send mail
Mail to donor
Send Grid
Cloud Db2
APPLICATION
Fetch Data
Response
Request Plasma
Cloud Services
Response
API
Request Sent
Response
kubernets
Docker
IBM Watson
Python flask
HTML
CSS

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