

## Project Design Phase - II

### Functional & Operational Requirements

|               |                          |
|---------------|--------------------------|
| Team - ID     | PNT2022TMID53161         |
| Project Name  | Plasma Donor Application |
| Maximum Marks | 4 Marks                  |

#### Functional Requirements:

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic)         | Sub Requirement (Story / Sub-Task)   |
|--------|---------------------------------------|--|
| FR-1   | <b>Access Website</b>                 | An application browser or something similar should be able to allow software operators to access web applications.   |
| FR-2   | <b>Software operator Registration</b> | The online application should allow the software operator to register. User name, gender, blood/plasma group, location, and contact information are required from the donor software operator. |
| FR-3   | <b>Login/logout/update details</b>    | The database will store the login details for further use.   |
| FR-4   | <b>Search for donor</b>               | You can view the search results as a list. Each item on the list corresponds to a particular donor, complete with donor information.   |
| FR-5   | <b>User plasma request</b>            | Filling out the request form on the page will allow users to submit a request to donate plasma. They will receive an email once the request has been submitted.                                |
| FR-6   | <b>View distribution details</b>      | The plasma bank should have access to the distribution details status.   |

## Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

| FR No. | Non-Functional Requirement | Description  |
|--------|----------------------------|--|
| NFR-1  | Usability                  | The user interface of the plasma donor application needs to be attractive and functional.  |
| NFR-2  | Security                   | Proper user names and passwords must be used to safeguard the plasma donor application.  |
| NFR-3  | Reliability                | Even when errors occur, the plasma donor application should function successfully.   |
| NFR-4  | Performance                | The plasma donor application needs to function well under a variety of circumstances.  |
| NFR-5  | Availability               | The plasma donor application needs to be accessible around-the-clock without any bandwidth problems.   |
| NFR-6  | Scalability                | The performance and cost of the plasma donor application should be able to alter in response to modifications in the requirements for application and system processing. |

## OPERATIONAL REQUIREMENTS:

### 1) OPEN SOURCE FRAMEWORK: **flask**

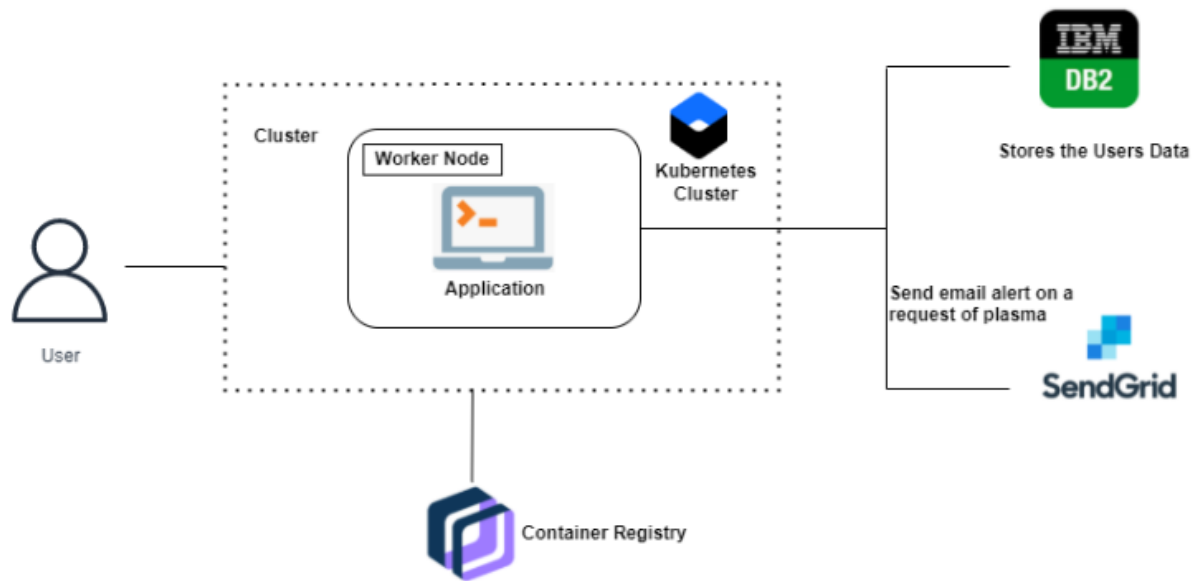
Flask is a lightweight WSGI web application framework. It is designed to make getting started quick and easy, with the ability to scale up to complex applications.

### 2) 3<sup>rd</sup> PARTY API: **sendgrid**

SendGrid is a cloud-based SMTP provider that allows you to send email without having to maintain email servers. SendGrid manages all of the technical details, from scaling the infrastructure to ISP outreach and reputation monitoring to whitelist services and real time analytics.

### 3) Technical architecture: **docker, python, ibm cloud, flask, sendgrid**

Docker: Docker is a software platform that allows you to build, test, and deploy applications quickly. Docker packages software into standardized units called containers that have everything the software needs to run including libraries, system tools, code, and runtime.



Python: Python is commonly used for developing websites and software, task automation, data analysis, and data visualization. Since it's relatively easy to learn, Python has been adopted by many non-programmers such as accountants and scientists, for a variety of everyday tasks, like organizing finances.

#### 4) Cloud deployment: **IBM cloud**

IBM cloud: IBM Cloud provides solutions that enable higher levels of compliance, security, and management, with proven architecture patterns and methods for rapid delivery for running mission-critical workloads.