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

| Date | 15 October 2022 |
|---|---|
| Project Name | Project – Plasma Donor Application |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

## ARCHITECTURE
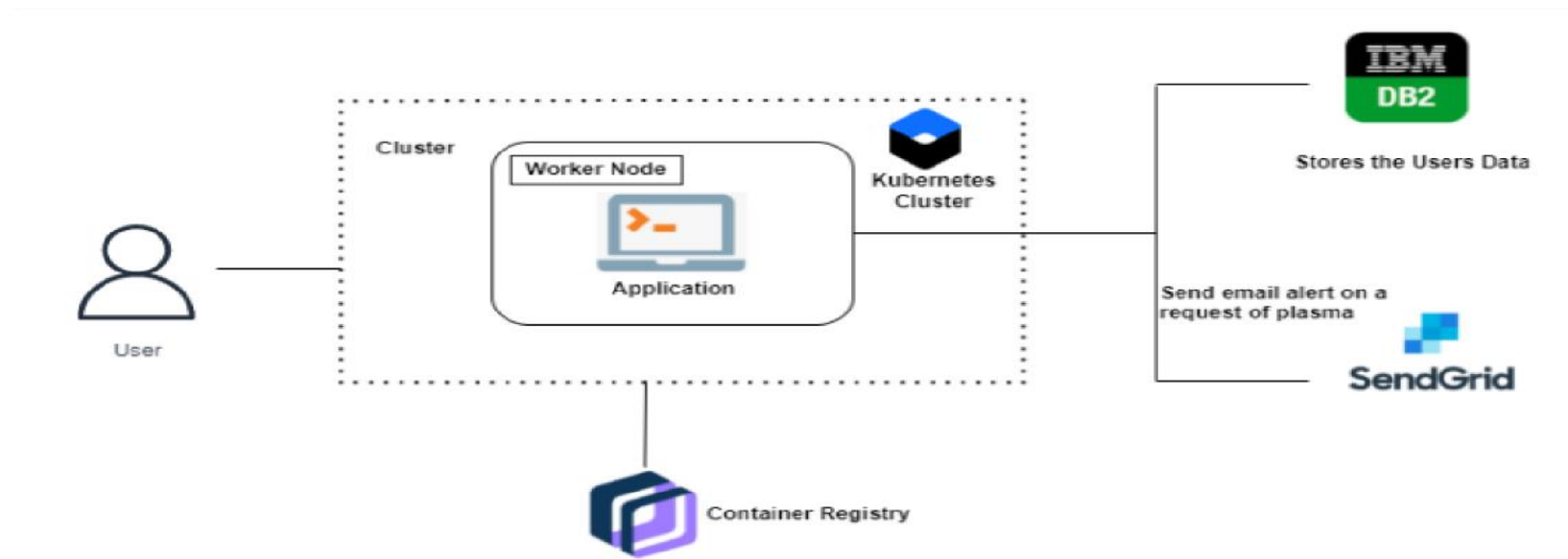
**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|------|-----------|-------------|------------|
| 1. | User Interface | How user interacts with application e.g. Web UI, Mobile App, Chatbot etc. | HTML, CSS, JavaScript , Flask etc. |
| 2. | Donor Registration | How donor registers himself/herself | HTML, CSS, JavaScript |
| 3. | Recipient Registration | How recipient registers himself/herself | HTML, CSS, JavaScript |
| 4. | Finding a match | Find if any donor and receiver have same blood group. | Python |
| 5. | Database | Data Type, Configurations etc. | MySQL |
| 6. | Cloud Database | Database Service on Cloud | IBM DB2 |
| 7. | File Storage | File storage requirements | IBM Block Storage or Other Storage Service or Local Filesystem |
| 8. | Email API | Automate Sending Email | Send Grid etc. |
| 9. | Infrastructure (Server / Cloud) | Application Deployment on Docker. | Docker, Kubernetes, etc. |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|------|-----------------|-------------|------------|
| 1. | Open-Source Frameworks | Docker, Kubernetes | Namespaces for containers |
| 2. | Security Implementations | SendGrid Security | TLS-Encryption, Operational Security Standards. |
| 3. | Scalable Architecture | To scale one or more replicated services | Docker |
| 4. | Availability | IBM Cloud is available almost all the time. | IBM Cloud |
| 5. | Performance | Send Grid can send 100 mails per day. | Send Grid |