

Project Design Phase-II

Technology Stack (Architecture & Stack)

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| Date | 15 th October 2022 |
| Team ID | PNT2022TMID04798 |
| Project Name | Project – Contaminated zone alerting Application |
| Maximum Marks | 4 Marks |

Technical Architecture:

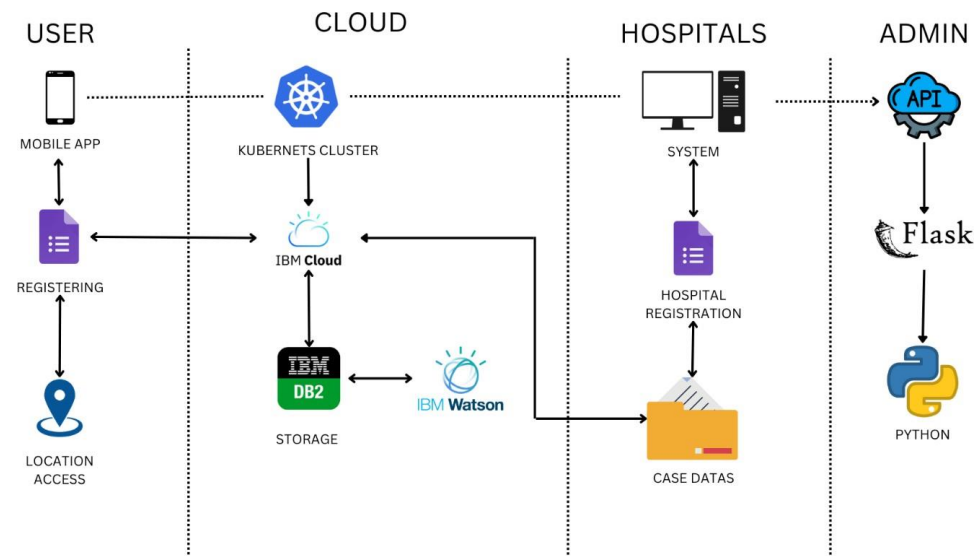


Table-1 : Components & Technologies:

| S No | Component | Description | Technology |
|------|------------------------|---|--|
| 1. | User Interface | User access to the application through the mobile application. | HTML, CSS, JavaScript ,Flask |
| 2. | Application Logic-1 | Creating an application interface | Python & Flask |
| 3. | Application Logic-2 | Creating an AI assistant that gives medical services to the user. | IBM Watson Assistance |
| 4. | Application Logic-3 | Sending notifications to the user when he is in a contaminated zone. | SendGrid services |
| 5. | Cloud Database | DB2 product is extended with the support of Object-Oriented features and non-relational structures with XML | IBM DB2 & Mango DB |
| 6. | File Storage | Files are stored in the local storage and stored in the cloud. | IBM Block Storage or Other Storage Service or Local Filesystem |
| 7. | External API-1 | Use this REST API to manage locations. Get all locations. URI, /admin/resources/locations. Method, GET. | IBM Location REST API |
| 8. | Deep Learning Model | Creating an algorithm to calculate case information provides by the hospitals. | Object Recognition Model, etc. |
| 9. | Infrastructure (Cloud) | IBM Cloud App Configuration is a centralized feature-management and configuration service on IBM Cloud. | IBM Cloud Foundry & Kubernetes |

Table 2: Application Characteristics:

| S No | Characteristics | Description | Technology |
|-------------|--------------------------|---|----------------------|
| 1. | Open-Source Frameworks | There are no open-source frameworks in this application. | Python |
| 2. | Security Implementations | Blockchain technology is used for Security implementation its private framework protects all data. | Blockchain |
| 3. | Scalable Architecture | Users are provided with medical services online and giving awareness to people by giving therapeutic medicines and monitoring user movements in pandemic zones and alerts before they are affected. | IBM Cloud |
| 4. | Availability | Medicinal Recommendations, Test kits, Doctor suggestions, and Updated Contaminated zones are available in applications. | IBM Watson Assistant |
| 5. | Performance | The geo-fencing algorithm is updated daily and shows the day-to-day updates of the contaminated zones. | Geofence |