

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

Technical Architecture:

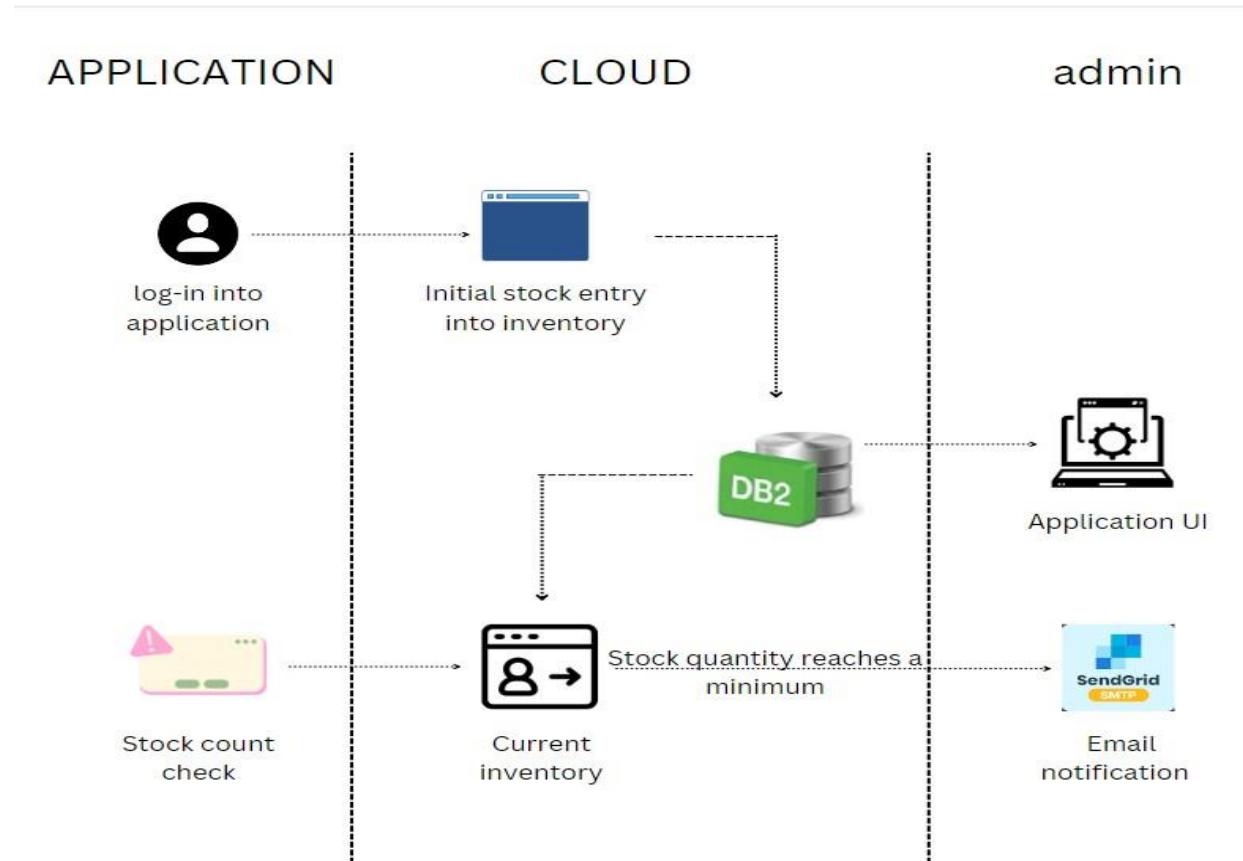


Table-1: Components & Technologies:

| S.No | Component | Description | Technology |
|------|---------------------------------|--|----------------------------------|
| 1. | User Dashboard | Web UI | Python, Flask |
| 2. | Updating Stock count values | Updating the stock count into the database | HTML, CSS, JavaScript, Bootstrap |
| 3. | Alert and Notification | Email notification when the stock count gets a minimum | SendGrid |
| 4. | Web chat | Chatbot assistant | IBM Watson Assistant |
| 5. | Database | Data Type, Configurations etc. | MySQL/SQLite |
| 6. | Cloud Database | Database Service on Cloud | IBM DB2 |
| 7. | File Storage | Storing all the necessary data in the file system | IBM Block Storage |
| 8. | Infrastructure (Server / Cloud) | Cloud Server Configuration: | Local, Cloud Foundry, Kubernetes |

Table 2: Application Characteristics:

| S.No | Characteristics | Description | Technology |
|-------------|--------------------------|---|---------------------------------------|
| 1. | Open-Source Frameworks | Server, Query Engine, Styling frameworks, Runtime environments | Python, Flask, HTML, CSS, Javascript, |
| 2. | Security Implementations | For data privacy and security | IAM controls, SSL Certificates |
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | 3-tier |
| 4. | Availability | Justify the availability of application (e.g. use of load balancers, distributed servers etc.) | Load Balancers |
| 5. | Performance | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc. | 200 Request Per Second |