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

| Date | 18 October 2022 |
|------|-----------------|
| Team ID | PNT2022TMiD11947 |
| Project Name | Inventory Management System for Retailers |

**Technical Architecture:**



User → Web Appplication → Interface → HTML, CSS, React JS etc.

Interface → Application Login → Python-Flask

Application Login → Cloud → IBM Cloud

Cloud → Database → IBM DB2

Database → Container → Docker Co

Container → Send Email → SendGrid
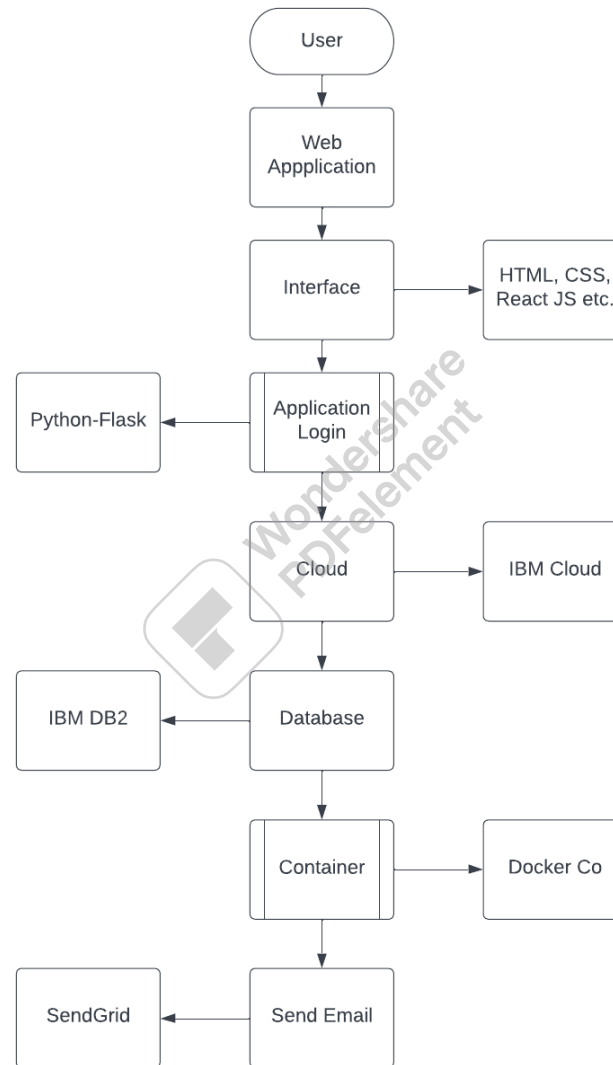
**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|------|-----------|-------------|------------|
| 1. | User Interface | How user interacts with application e.g. Web UI, Mobile App, Chatbot etc. | HTML, CSS, JavaScript / Angular Js / React Js etc. |
| 2. | Application Logic | Logic for a process in the application | Python-Flask |
| 3. | Database | Data Type, Configurations etc. | MySQL, NoSQL, etc. |
| 4. | Cloud Database | Database Service on Cloud | IBM DB2 |
| 5. | File Storage | File storage requirements | IBM Cloud Object Storage |
| 6. | App Container | Contain the whole application in a single container | Docker Container / IBM Container Registry |
| 7. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud<br>Local Server Configuration:<br>Cloud Server Configuration: | Local, Cloud Foundry, Kubernetes, etc. |
| 8. | Send Mails | Sending mails about stocks available in the Inventory to the  Retailer | SendGrid |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|------|-----------------|-------------|------------|
| 1. | Open-Source Frameworks | List the open-source frameworks used | React Js / Flask |
| 2. | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | IBM Cloud Security |
| 3. | Availability | Justify the availability of application (e.g., use of load balancers, distributed servers etc.) | Python-Flask |