

Project Design Phase-II

Technology Stack (Architecture & Stack)

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| Date | 17 th October 2022 |
| Team ID | PNT2022TMID35256 |
| Project Name | Inventory Management System for Retailers |

Technical Architecture:

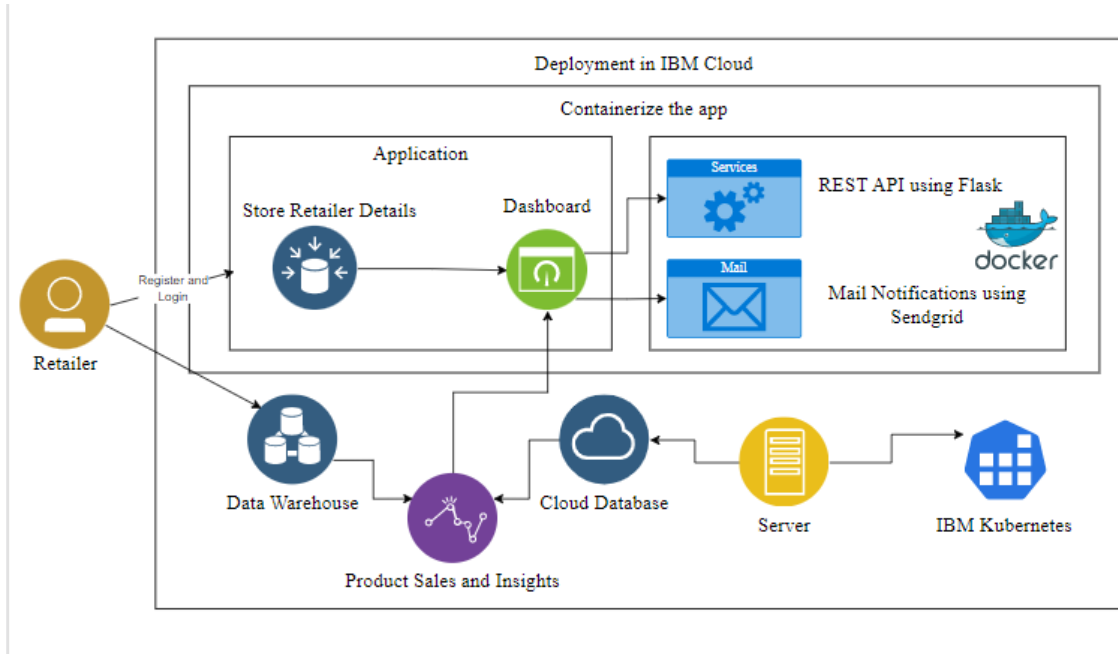


Table-1:**Components & Technologies:**

| S.No. | Component | Description | Technology |
|-------|---------------------------------|---|---|
| 1. | User Interface | How the user interacts with the application e.g. Web UI, Mobile App, Chatbot etc. | HTML, CSS, JavaScript / Angular Js / React Js etc. |
| 2. | Application Logic | The 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 Local Server Configuration: Cloud Server Configuration: | Local, Cloud Foundry, Kubernetes, etc. |
| 8. | Send Mails | Sending emails when the stocks are less in the Inventory | IBM SendGrid |

Table-2:
Application Characteristics:

| S.No | Characteristics | Description | Technology |
|------|--------------------------|--|---------------------------------|
| 1. | Open-Source Frameworks | The web technologies listed are open source | HTML, CSS, JS, Bootstrap, Flask |
| 2. | Security Implementations | User login and authentication are done to provide secure access. The latest updated versions of the tool are used. | IBM Cloud Security, cookies. |
| 3. | Availability | The system availability is high, we make sure the unwanted DB access is minimized through SQL and code optimization. | IBM DB2, IBM Container registry |
| 4. | Scalable Architecture | Scalable cloud architecture is made possible through virtualization. | Docker, Kubernetes |
| 5. | Performance | We provide fast access times and response times. Deployment is easy and fast by containerization | Flask, Docker, DB2 |