

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

Date	27 October 2022
Team ID	PNT2022TMID04517
Project Name	Inventory Management System for Retailers
Maximum Marks	4 Marks

Technical Architecture:

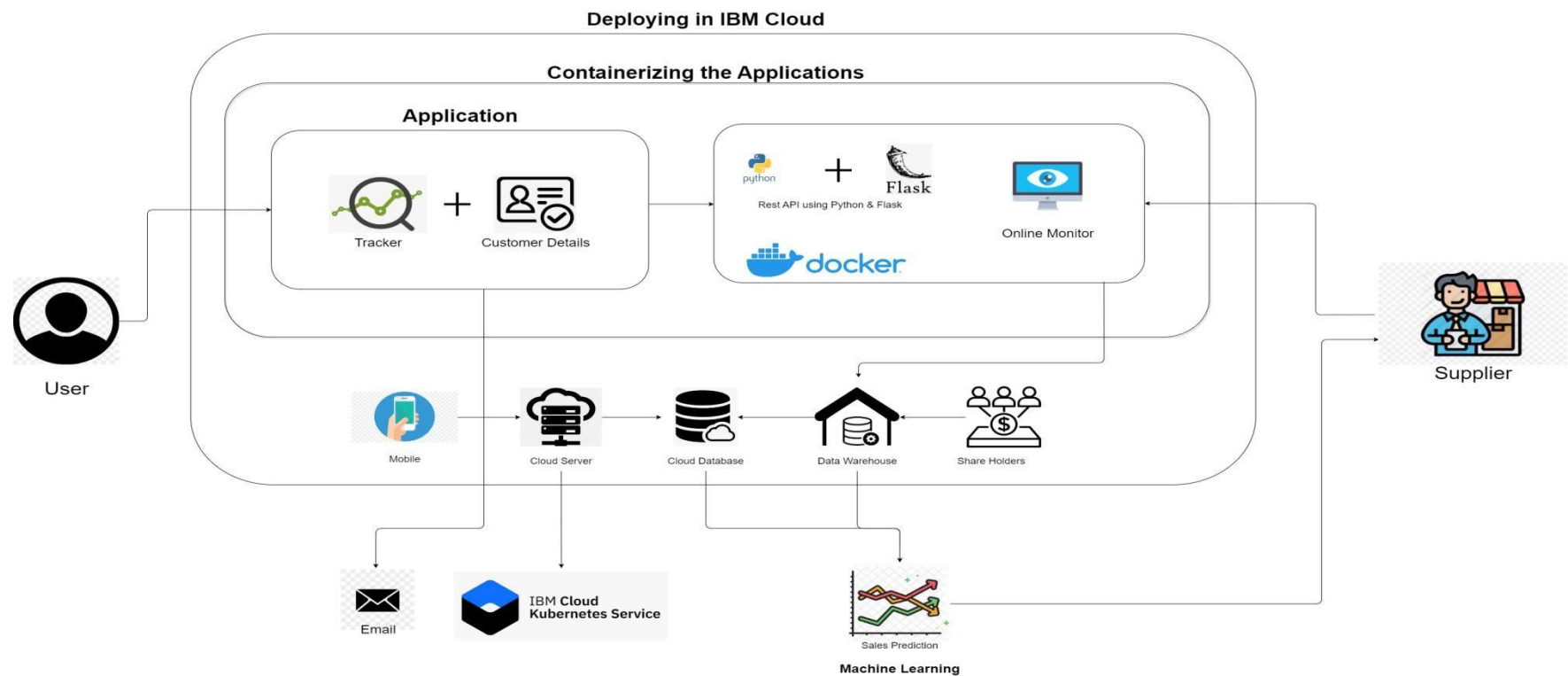


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User interaction methods for applications, such as chatbots, mobile apps, and web user interfaces	HTML, CSS, JavaScript, IBM Cloud Object Storage, Python-Flask, Kubernetes, Docker, IBM DB2, IBM Container Registry.
2.	Application Logic	The application's procedure's logic	Python-Flask.
3.	Database	Configuration of Data Types, etc.	MySQL, etc.
4.	ChatBox	Users can access a chatbox to ask a virtual assistant on the app for assistance.	IBM Watson Assistant
5.	Cloud Database	Cloud database service	IBM DB2
6.	File Storage	File storage requirements	IBM Cloud Object Storage
7.	App Container	Put all of the application's components in one container.	Docker Container, IBM Container Registry
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: port 5000 Cloud Server Configuration	Local, Cloud Foundry, Kubernetes.
9.	Send Mail	to notify retailers through email when there is low stock in the inventory.	IBM SendGrid

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	We use HTML, CSS, Bootstrap and Flask as the open source for our application	HTML, CSS, JavaScript, Bootstrap, Python-Flask.
2.	Security Implementations	To give secure access to their account, users must log in and undergo authentication.	IBM Cloud Security, Cookies..

3.	Scalable Architecture	These technologies make it simple to scale the system so that it may be improved, added new features, have enough bandwidth for more users at once, etc.	Docker, Kubernetes Cluster
4.	Availability	System availability is high because we use SQL and code optimization to reduce unauthorised database access.	IBM Db2, IBM Container Registry
5.	Performance	When an application is containerized, deployment is quick and simple. utilising the cloud to install the application and providing quick access and responsiveness.	Flask, Docker, IBM Db2.