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

Date	19 October 2022
Team ID	PNT2022TMID04548
Project Name	Inventory Management System for Retailers
Maximum Marks	4 Marks

Technical Architecture:

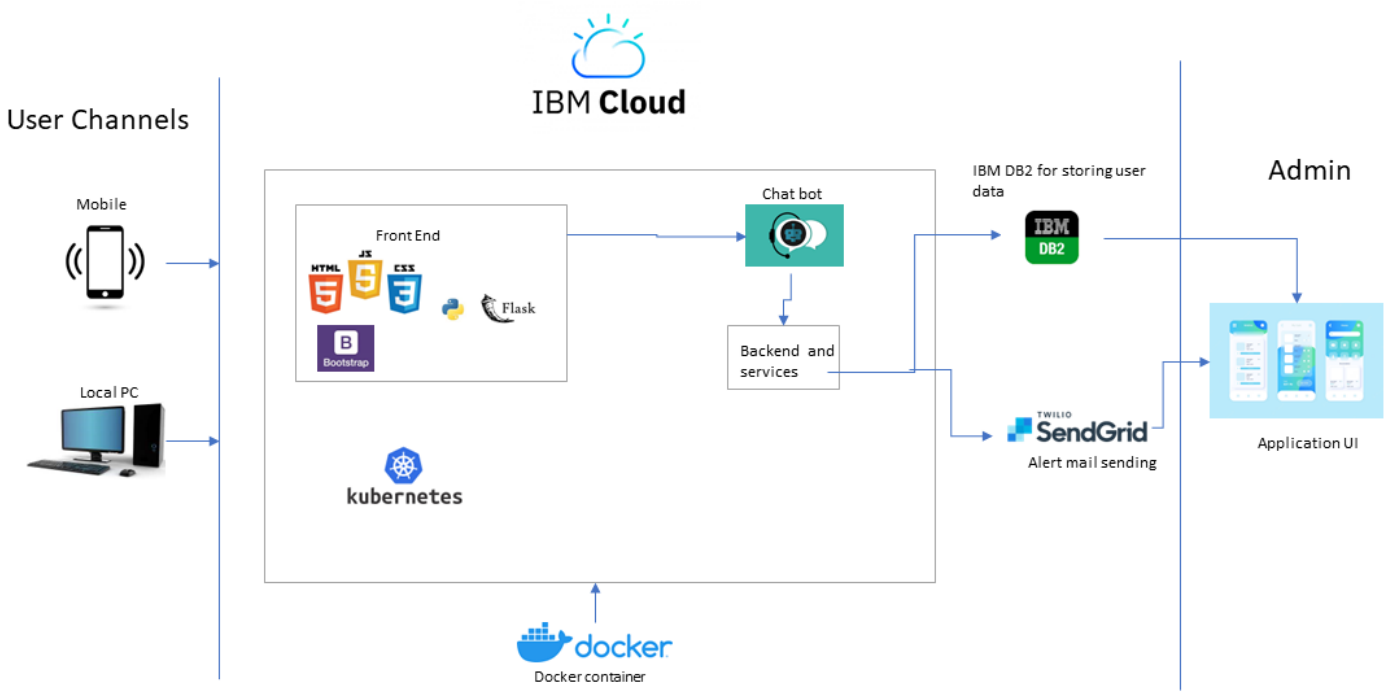

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	It provides an interaction between application and user	HTML, CSS, JavaScript ,python flask
2.	Application Logic-1(Authorization)	getting the necessary details of the user in order to create an account themselves for user authentication	Python
3.	Application Logic-2(Notification)	After successful authentication, the system will email a user ID, user password, and send an alert mail to the user to inform them of product availability.	Sendgrid
4.	Application Logic-3(Interaction)	It is an automated software that is used to provide more interaction and communication. It helps the user to understand the software better	IBM Watson Assistant
5.	Database	The database stores the inventory details	MySQL
6.	Cloud Database	It is the first priority storage location for the goods (inventory) provided as a service in the IBM Cloud.	IBM DB2
7.	File Storage	The software's file storage, high security and high availability	IBM cloud object storage
8.	External API-1(Authentication)	The purpose of the external API used in the application is to provide authentication	authentication API
9.	Infrastructure (Server / Cloud)	Application Deployment on Cloud	Kubernetes,

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	• html provides the basic structure of a web page • CSS is used to describe the colour, size, etc. of a web page • JavaScript is a backend framework • Bootstrap is a built in class in CSS for more and instant style • Python flask makes web developer life easy to build a web-application	Bootstrap, python-,flask, HTML, CSS, JS
2.	Security Implementations	For the authentication purpose	Sendgrid
3.	Scalable Architecture	It breaks the architecture into smaller pieces (micro services) and makes them loosely coupled for improving scalability.	Kubernetes
4.	Availability	Docker packages an application and all its dependencies into a virtual container that can run on anywhere	Docker
5.	Performance	Kubernetes services provide load balancing and simplify container management across multiple hosts.	Kubernetes