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

Date	03 October 2022
Team ID	PNT2022TMID37106
Project Name	Inventory management system for retailers
Maximum Marks	4 Marks

Technical Architecture:

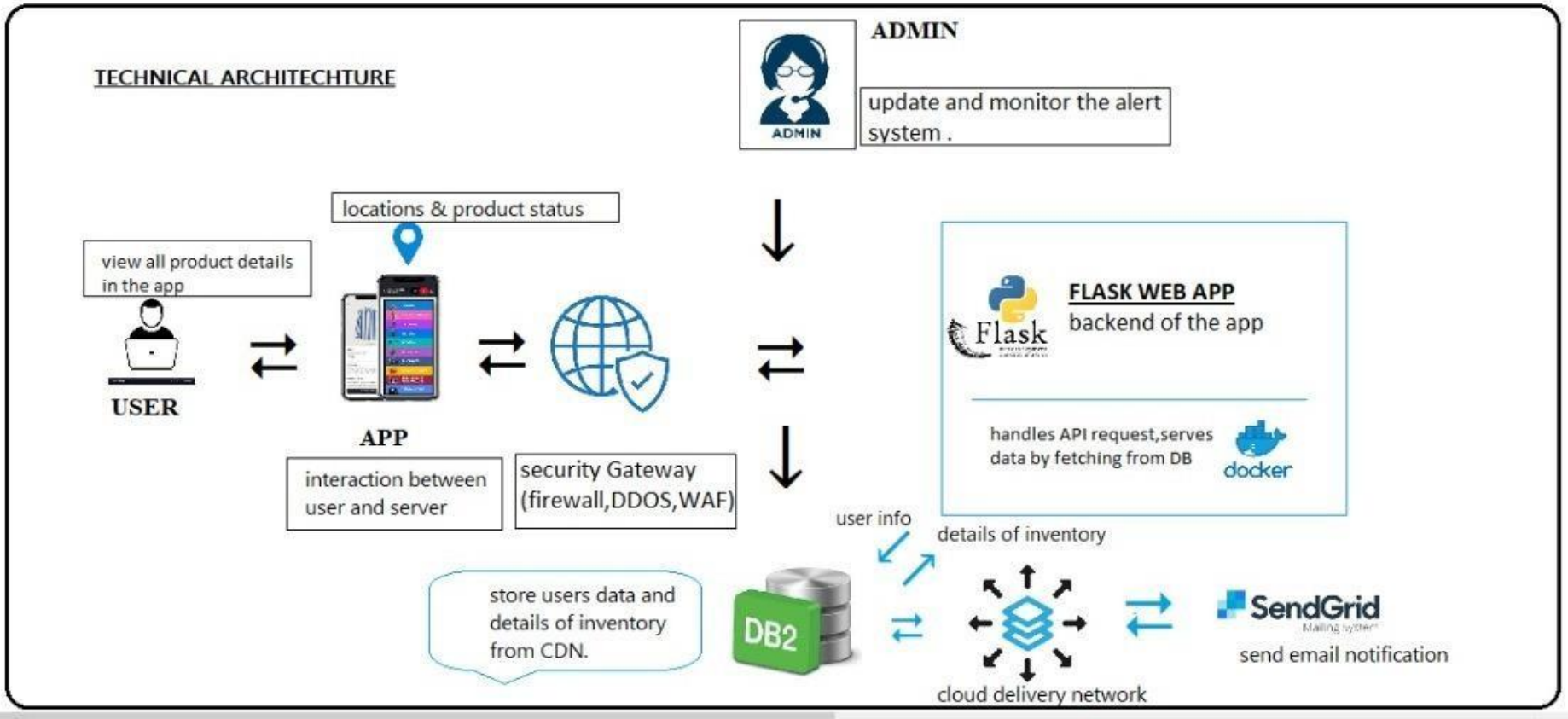

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, IBM Cloud,IBM Watson
2.	Application Logic-1	Logic for a process in the application	Flask,Docker
3.	Application Logic-2	Logic for a process in the application	IBM Watson,IBM Cluster
4.	Application Logic-3	Logic for a process in the application	IBM DB2
5.	Database	Data Type, Configurations etc.	IBM Cloud Container,IBM DB2
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloud
7.	File Storage	Information storage requirements	IBM Block Storage,IBM DB2,Docker Container
8.	External API-1	SendGrid is used in application will send the mail alert to the user about Containent zones	SendGrid
9.	External API-2	Docker handles the API request and serves data by fetching the Data	Docker
10.	Cloud Storage Model	To store database	IBM Cloud
11.	Infrastructure (Server / Cloud)	Application Deployment on Cloud Local Server Configuration:NILL Cloud Server Configuration : IBM DB2,IBM Cloud	IBM Kubernetes Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask which providesthe framework for the total API structure,Docker which is used handle the API request and acts as container to store the Database,SendGrid used to send E-mail alerts to the user abiut Containment zone	Docker,Flask,SendGrid
2.	Security Implementations	The Firewall is used Between the Clous Cluster and the User API server to secure the SSID of the server,The Users Login credentials are hashed.	SHA-256 Encryptions, Advanced Encryption Standard(API),Blowfish(E-mail encryption),Elliptic curve cryptography.
3.	Scalable Architecture	This API is scalable because the dtas are to be stored in the cloud storage ,So there will be no hassle in Users mobile to handle and processing the data.	Flask.Docker,IBM DB2,Kubernetes cloud storage.
4.	Availability	The availability of the API is wider in range.As in India 54% of people uses smart phones there is no hassle in it,rest of the peoples are using Feature phones Those peoples are provided with the options of Downloading the API via internet.	Java,HTML,Javascript,CSS,IBM Watson assistant.
5.	Performance	Here it takes less processing power in the mobile phones As the datas are processed by the cloud technology,As well as the Storage taken for an individual is also less.	Flask.Docker,IBM DB2,Kubernetes cloud cluster,IBM cloud Storage.

References:

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