

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

Date	03 October 2022
Team ID	PNT2022TMID27239
Project Name	Inventory Management for Retail
Maximum Marks	4 Marks

Technical Architecture:

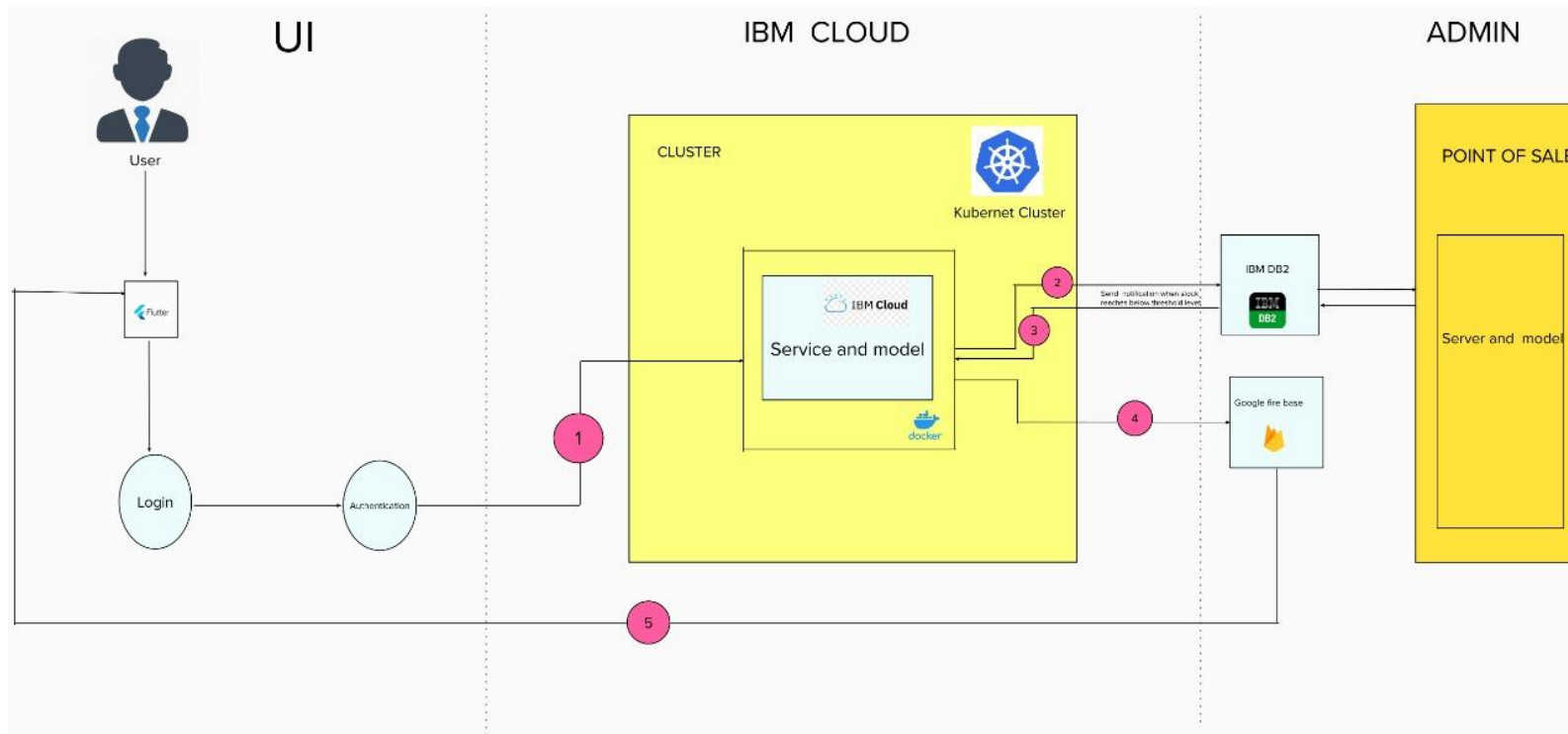


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application	Flutter
2.	Application Logic-1	User registration through form and information will be sent through mail and otp.	Flutter, Flask, Firebase.
3.	Application Logic-2	A dashboard where the user can get information about stock and validity	Flask
4.	Application Logic-3	Notification will be sent to user	Google firebase
5.	Database	Data is stored in the database and the user can retrieve or modify the data	IBM DB2
6.	Cloud Database	Information about the stock will be hosted and stored in cloud	IBM DB2
7.	File Storage	File storage requirements	IBM Block Storage or other service storage or local file system
8.	External API-1	Google firebase is used to send notifications for alerts and email.	Google Firebase
9.	External API-2	IBM container registry stores and distributes docker registry in a managed private registry	IBM Container Registry
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration:localhost:5001(flask) Cloud Server Configuration : Kubernetes	Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Google Firebase will send a notification alert and email alert when the stock falls below a particular threshold value. It also sends alerts when the expiry date of a product is nearing. Kubernetes for manipulating api objects, IBM DB2 is used for storing and retrieving data.	Flask, IBM DB2, Google Firebase, Kubernetes.
2.	Security Implementations	We use login for the user and the user is authenticated through phone number or email.	IBM Container registry
3.	Scalable Architecture	Data is stored in kb and so it is quite scalable	flask
4.	Availability	It is the same for all users	flask
5.	Performance	fast and secured performance	flask, IBM DB2, IBM container.