

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

Date	20 th October 2022
Team ID	PNT2022TMID14136
Project Name	DEMANDEST – AI POWERED FOOD DEMAND FORECASTER
Maximum Marks	4 Marks

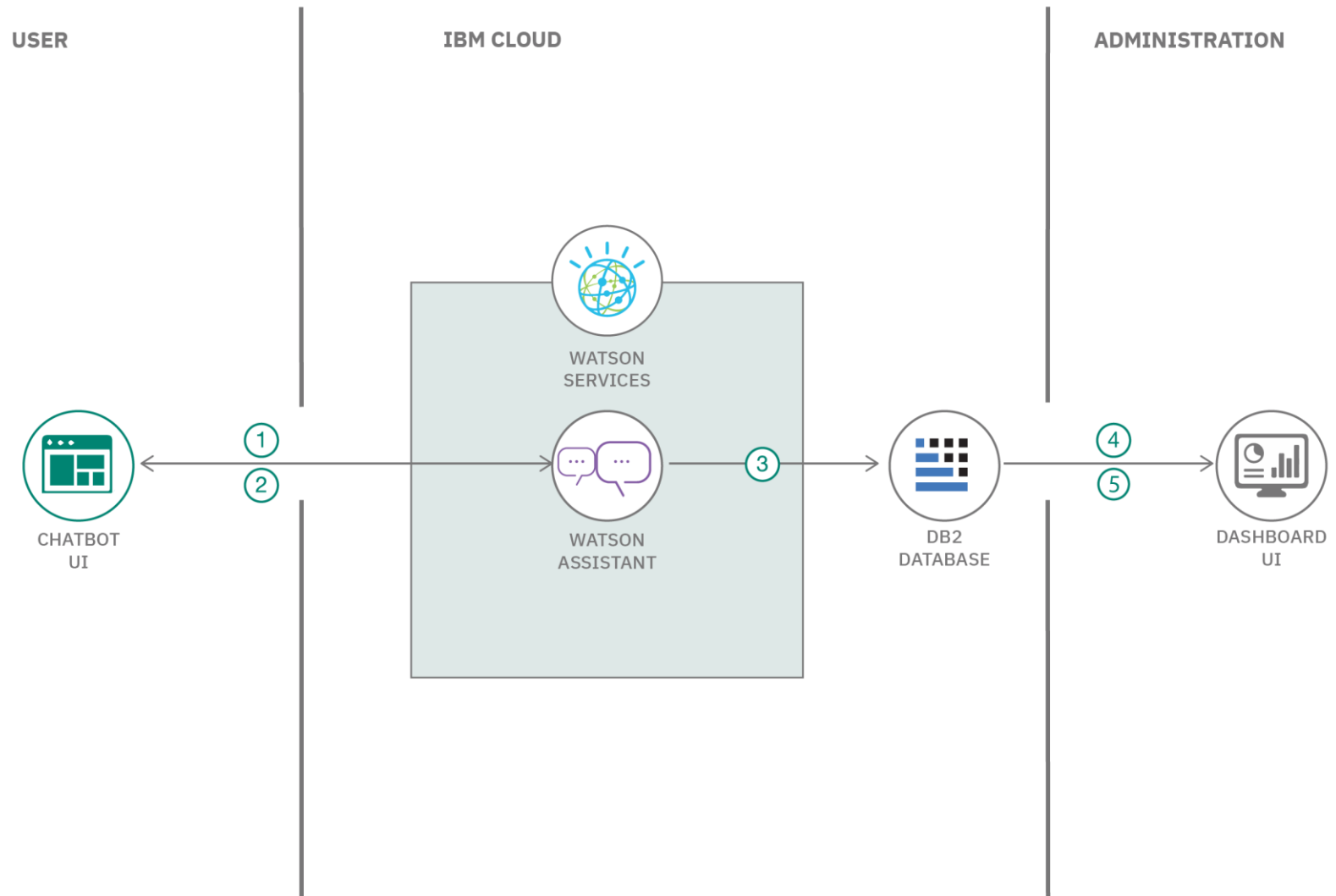
DESCRIPTION:

How can we prevent people from stockpiling necessities in the midst of a pandemic and lockdown? How can people obtain necessities in a digital format?

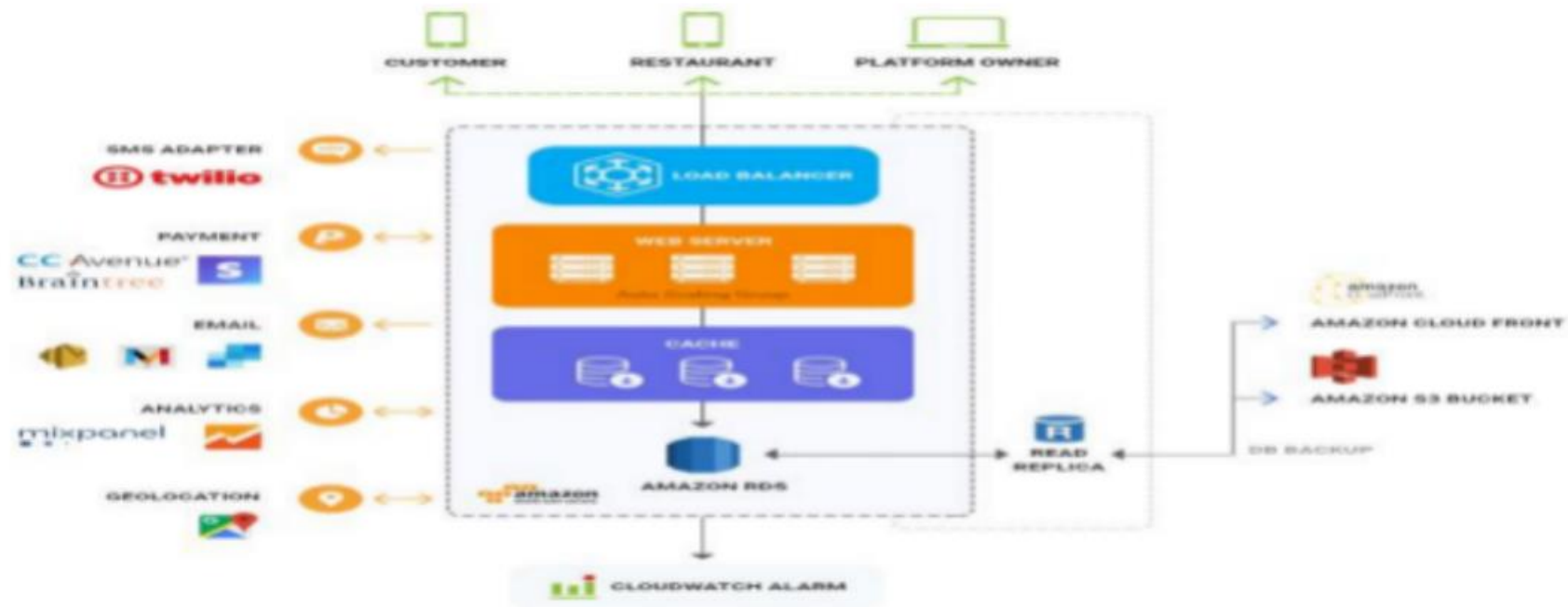
Nowadays, it can be risky for certain people to purchase in person for necessities due to social distance and other concerns. This code pattern offers people an internet option for shopping for necessities, which helps with the problem.

Learn how to create an AI-powered back end system that can accept online orders for daily necessities with the help of this code pattern. The system converts the incoming text requests into formatted order lists before processing them. The inventory database can then be linked to this system to improve supply chain management. Multiple domains can use this solution.

FLOWCHART:



Example: Order processing during pandemics for offline mode



Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

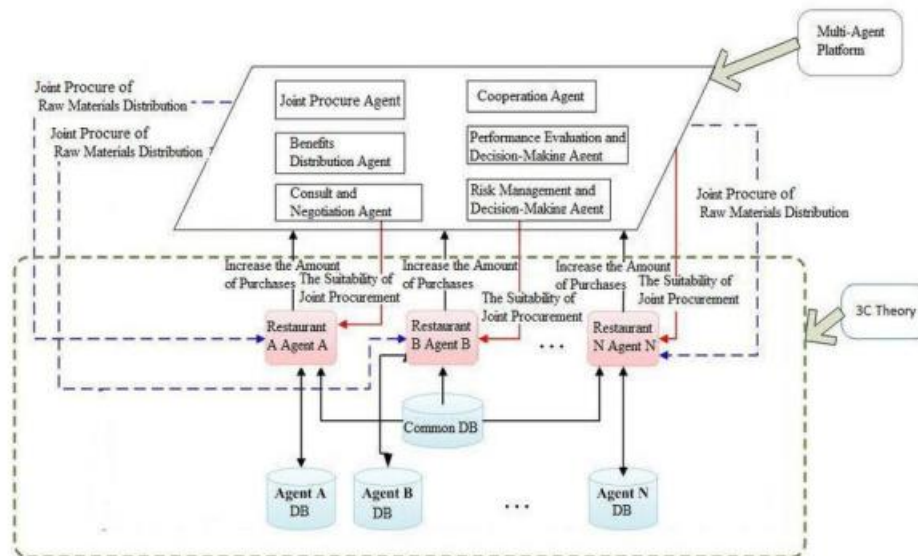
Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Logic for a process in the application	Java / Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Technology of Opensource framework
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used

Technical Diagram :



References:

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture>

<https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>