

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

Date	27 October 2022
Team ID	PNT2022TMID49745
Project Name	Nutrition Assistant Application
Maximum Marks	4 Marks

Technical Architecture:

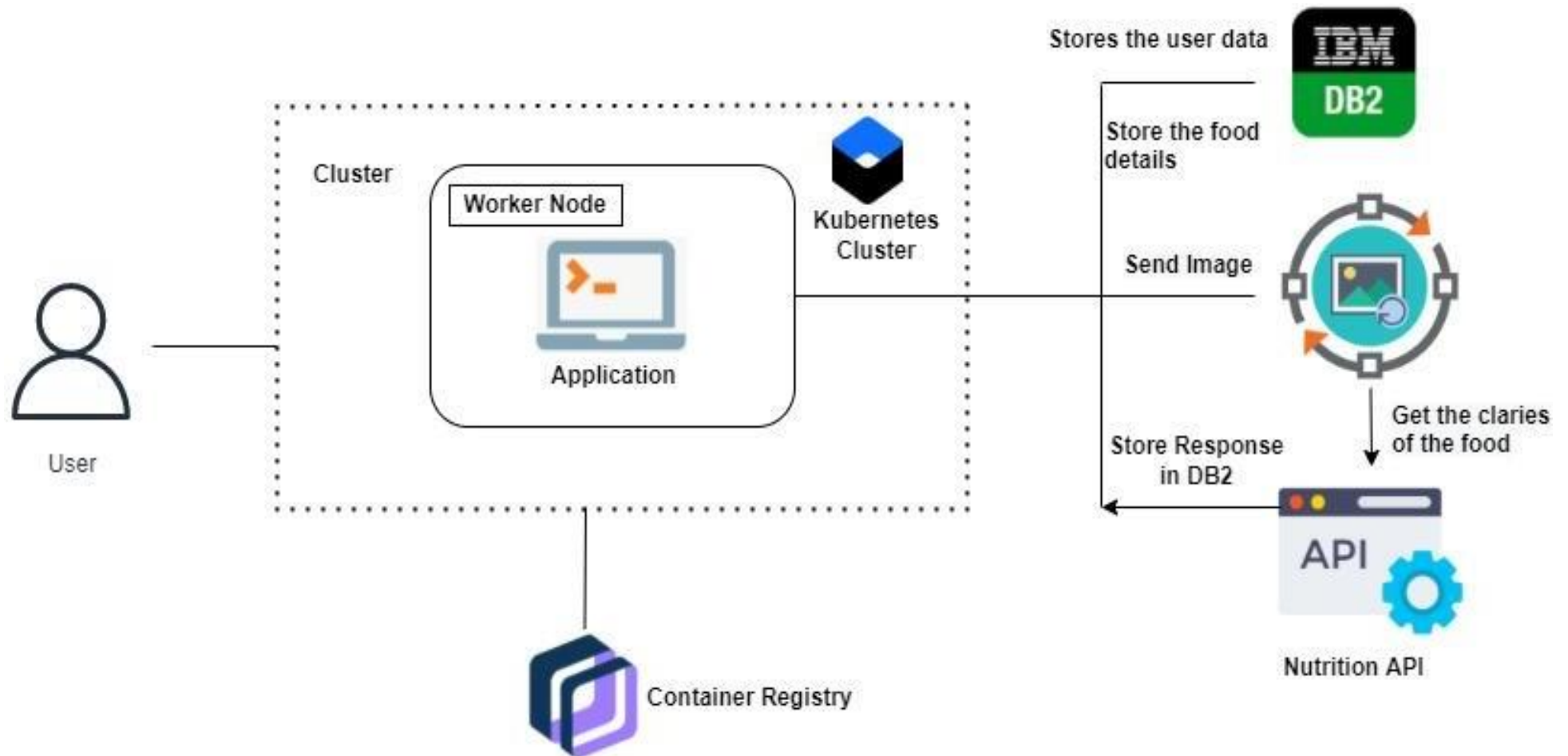


Table-1: Components & Technologies:

S. No.	Component	Description	Technology
1.	User Interface	User interacts with application Web UI	HTML, CSS, JavaScript, Python Flask
2.	Application Logic-1	Connection of external API's and database	Python Flask
3.	Application Logic-2	Integration of Chatbot with the application	IBM Watson Assistant service
4.	Database	Data Type and Configurations	MySQL
5.	Cloud Database	Database Service on Cloud	IBM DB2
6.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
7.	External API-1	The SendGrid service will be used to alert users of various notifications that are defined by the user	SendGrid
8.	External API-2	The service will be used for image recognition	Nutrition API
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	IBM Cloud Object Storage, Kubernetes, Docker

Table-2: Application Characteristics:

S. No.	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source framework used	Python Flask
2.	Security Implementations	Security / access controls implemented, use of firewalls	SHA-256, Encryptions, IAM Controls
3.	Scalable Architecture	Scalability of architecture	Presenting tier: User interface for login and uploading meal. Application tier: SendGrid, Nutrition API Database tier: IBM DB2
4.	Availability	Availability of application	IBM cloud, Kubernetes, Docker
5.	Performance	Performance of the application	IBM DB2, SendGrid, IBM Cloud Object Storage, Kubernetes, Docker