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

Date	03 November 2022
Team ID	PNT2022TMID08074
Project Name	Project – Nutrition Assistant Application
Maximum Marks	4 Marks

TECHNICAL ARCHITECTURE:

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

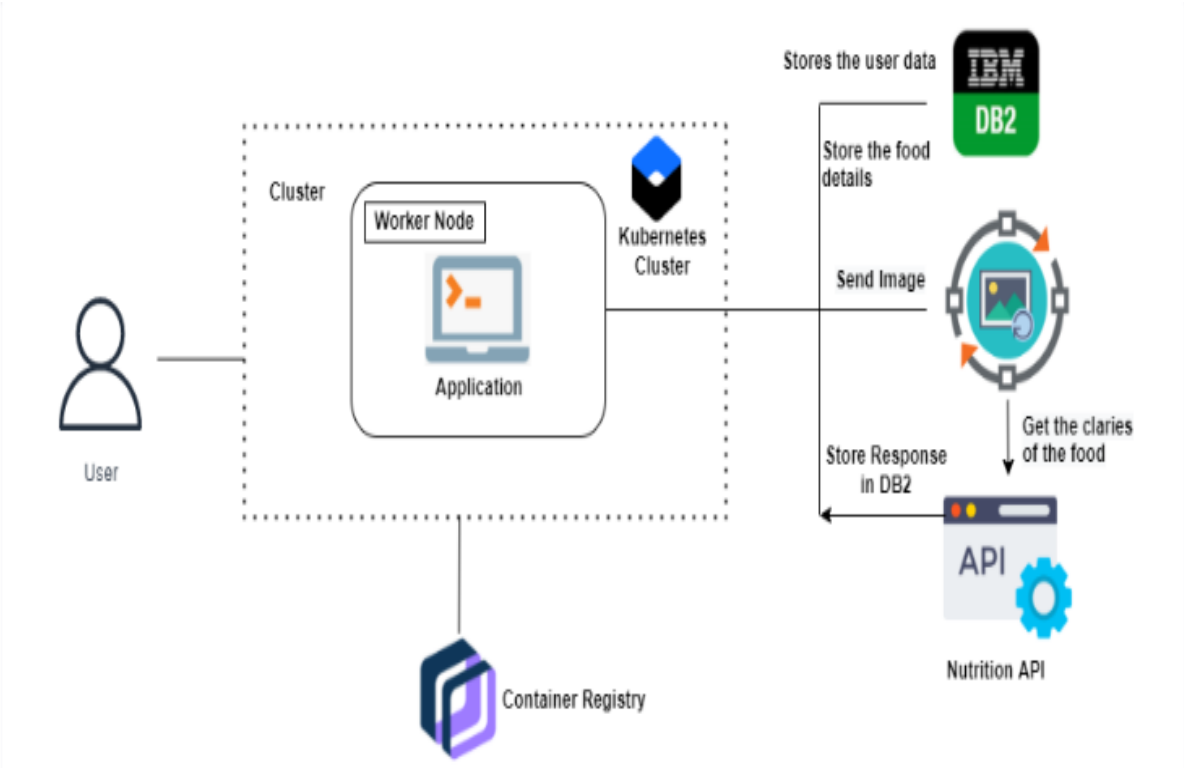

Table-1: Components & Technologies:

S.NO	COMPONENT	DESCRIPTION	TECHNOLOGY
1	User Interface	Web UI	HTML, CSS, JavaScript
2	To get the food nutrition and calorie value	The user needs to upload the food picture. Then the user will see the food nutrition attributes after the processing completed	Python, Flask (Web Framework), HTML, CSS, JavaScript
3	Database	The user credentials and food nutrient values are stored in the MYSQL database	MySQL
4	Cloud Database	With use of database service on cloud, the user data are stored in a well secured manner.	Kubernetes, Docker
5	External API-1	To predict the nutrient values of image that user uploads	Clarifai’s AI-driven Food detection Model API
6	File storage	IBM Block Storage used to store the food nutrients values	Food API

Table-2: Application Characteristics:

S.NO	CHARACTERISTICS	DESCRIPTION	TECHNOLOGY
1	Open-Source Frameworks	We are using both front and back end here to runs the web application	Flask (Microweb framework) Vue.js
2	Security Implementations	This Application Provides high security to the user financial data. It can be done by using the Container Registry in IBM cloud	SHA-256, Encryptions, IAM Controls, OWASP
3	Scalable Architecture	The scalability will be increase when the user demand for the application increases	Presentation tier- HTML/ CSS/ JavaScript Application tier- Python (API) Data tier- MySQL, PostgreSQL
4	Availability	This application will be available to the user at any part of time	Container Registry, Kubernetes Cluster
5	Performance	The performance will be high because there will be no network traffics in the application	Optimize image sizes, use a content delivery network, use website caching and adopt cloud-based website monitoring