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

Date	16 October 2022
Team ID	PNT2022TMID35650
Project Name	Project - Nutrition Assistant Application
Maximum Marks	4 Marks

Technical Architecture:

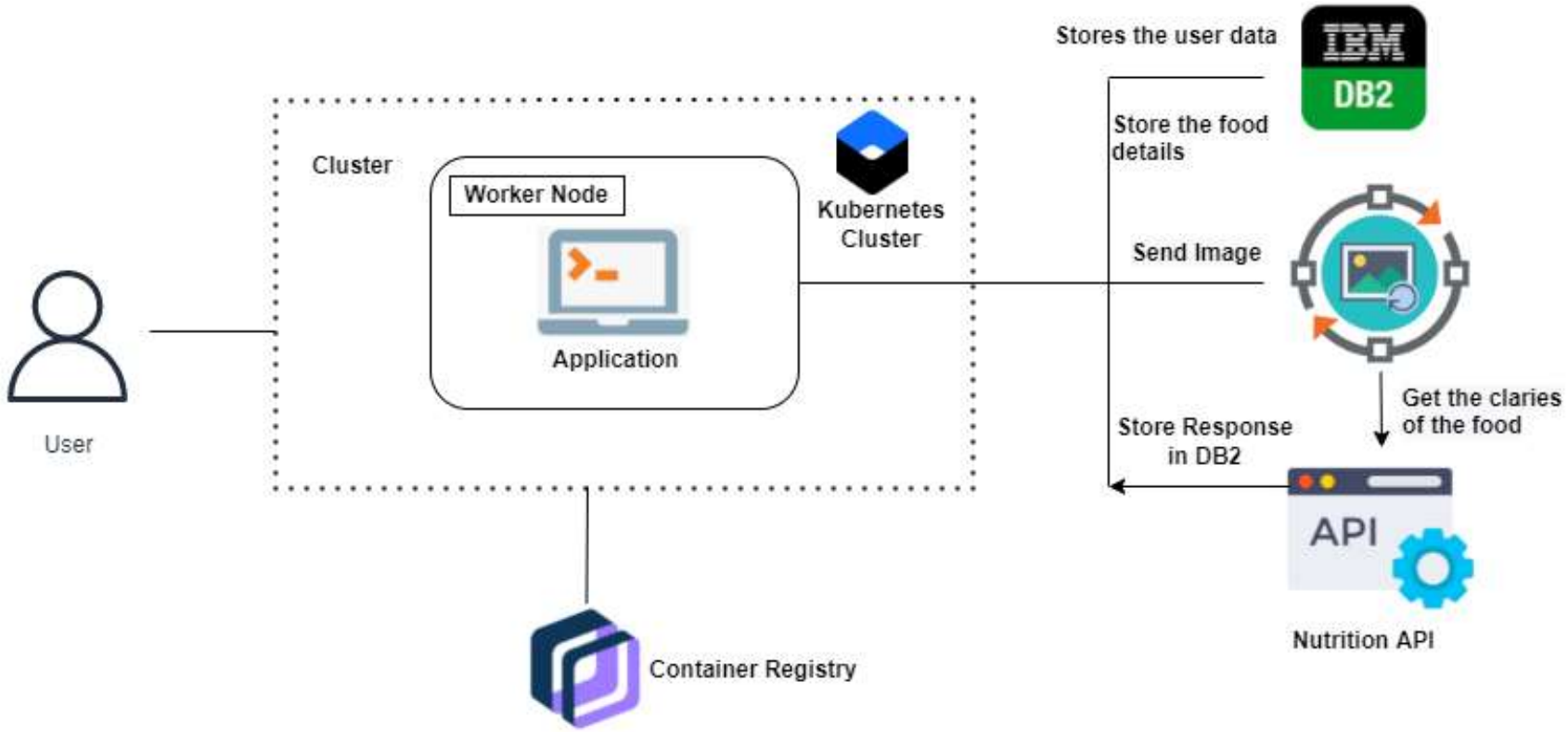

Table -1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	Web UI	HTML, CSS, JavaScript
2.	Nutritional Analyzer	The user will upload the food picture. The food nutrition value is outputted and displayed clearly	Python, Flask (web Framework), HTML,CSS, JavaScript.
3.	Database	Store the user's name, mail and stores the food calories value. Data types: integer, string, Float Number and etc.,	MySQL, PostgreSQL
4.	Cloud Deployment	Application is hosted in this platform and the tool for platform building	IBM DB2, Kubernetes, Docker
5.	External API-1	To predict the image that user will upload in the upload image function	Clarifai's AI-driven Food detection Model API
6.	External API-2	Food API's for to the nutritional value for theidentified food	Food API
7.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Cloud Foundry, Kubernetes,Docker, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Both front and back end are used to run the web application.	Flask (Microweb framework), Vue.js
2.	Security Implementations	Unique ID and password provided. Assures all thedata inside the system will be protected from unauthorized access	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	The application must be scalable enough to support 10,000 visits at the same time while maintaining optimal performance	Python (API) Data tier- MySQL, PostgreSQL
4.	Availability	The application and data are to be made available 24*7	Constant monitoring of applications and infrastructure and automating recovering mechanisms and regular testing
5.	Performance	It supports 1,000 users per hour and must provide 6 second or less response time in a desktop browser, with rendering output	Use a content delivery network, use website caching, and adopt cloud-based website monitoring.