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

Date	14 October 2022
Team ID	PNT2022TMID32587
Project Name	Nutrition Assistant Application
Maximum Marks	4 Marks

Technical Architecture:

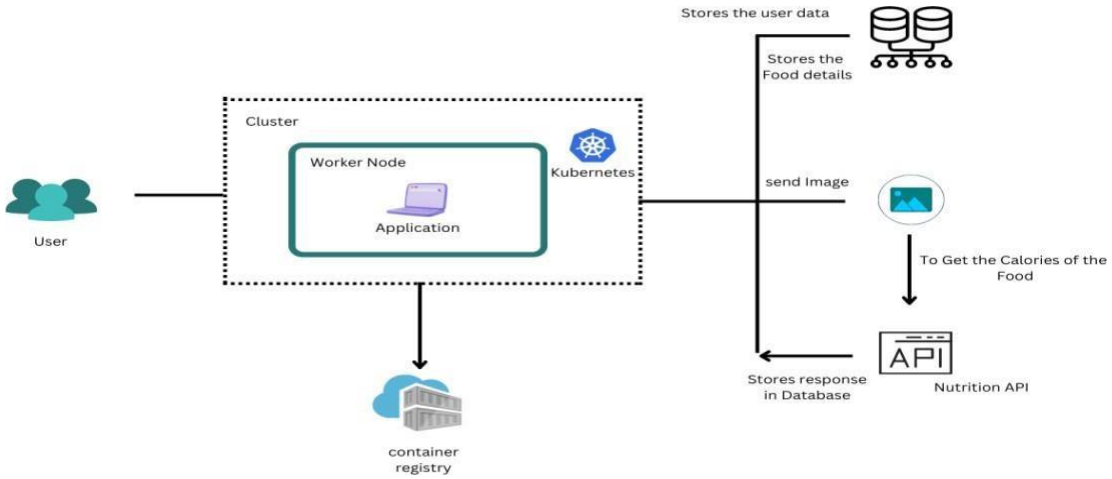

Table-1: Components & Technologies:

S.NO	Component	Description	Technology
1.	User Interface	Web UI	HTML, CSS, JavaScript
2.	To get the food nutrition and calorie value	The user will upload the food picture. Then the user will see the food nutrition value the process will compute	Python, Flask (web Framework), HTML, CSS, JavaScript.
3.	Cloud Database	Database Service Cloud	IBM DB2
4.	Database	Get the user's name, and mail, and store the food calorie value. Data types, Configurations, etc.,	MySQL/ PostgreSQL
5.	External API-1	To predict the image that the user will upload to the upload image page	Clarifai's AI-driven Food detection Model API
6.	External API-2	Food APIs for the nutritional value of the identified food	Food API
7.	File Storage	File Storage Requirements	IBM Block Storage or Other Storage Services.
8.	Infrastructure	Application deployment to provide good performance and scalability	Local, Cloud Foundry, Kubernetes, etc. Docker.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	We are using both the front and back end here to run the web application	Python Flask
2	Security	List all the Security/access controls implemented, use of firewalls etc.	SHA-256, Encryptions, IBM Controls.
3	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Presentation tier- HTML/ CSS/ JavaScript Application tier- Python (API) Data tier- MySQL, PostgreSQL
4	Availability	Justify the availability of the application.	IBM Cloud
5	Performance	Design consideration for the performance of the application.	IBM Cloud