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

Date	29/10/2022
Team ID	PNT2022TMID15840
Project Name	Nutrition Assistant Application
Maximum Marks	4 Marks

Technical Architecture:

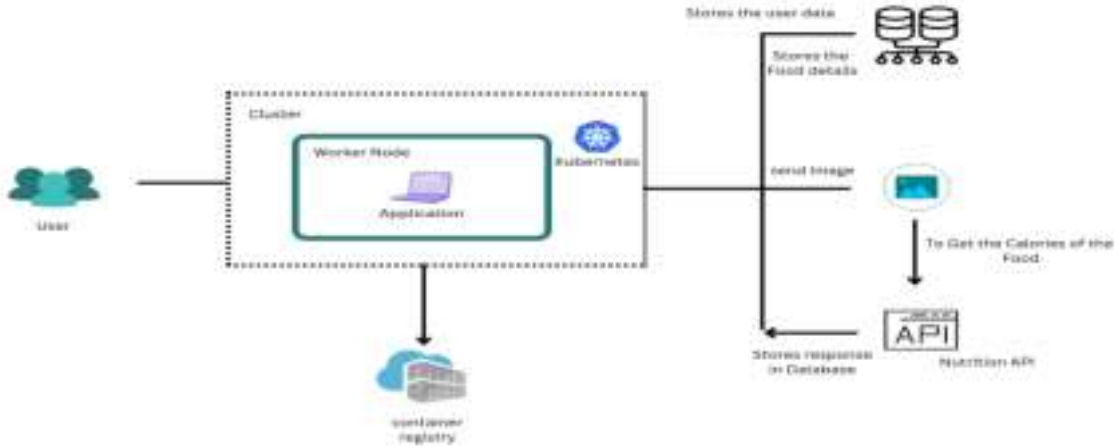

Table-1: Components & Technologies:

S.NO	Component	Description	Technology
1.	User Interface	Web UI	HTML, CSS, JavaScript
2.	Backend	Data transfer and retrieval	Python
3.	Cloud Database	Database Service on Cloud	IBM DB2
4.	Watson ChatBot	Navigates user to necessary pages	IBM Watson Assistant
5.	File Storage	File storage requirements	IBM Object Storage, Container registry
6.	Cloud Deployment	Through is the application Will compose to the internet	Kubernetes, Docker
7.	External API-1	To alert users about various user set reminders.	SendGrid
8.	External API-2	Food API's to identify the nutritional value of the food.	Food API
9.	Infrastructure (Server / Cloud)	Application Deployment on Cloud	IBM Kubernetes Container and Docker Container Image

Table-2: Application Characteristics:

S.NO	Characteristics	Description	Technology
1.	Open-Source Frameworks	We are using flask for backend and connect with external services and databases.	Flask (Microweb framework)
2.	Security Implementations	Encrypting user data and password with strong encryption algorithm and using inbuilt ibm security services.	SHA-256, Encryptions, IAM Controls..
3.	Scalable Architecture	Justify the scalability of architecture (Micro-services)	HTML, CSS, JavaScript,Flask.
4.	Availability	Kubernetes services. Deploying the application with Kubernetes cluster to make applications available across the globe on the internet.	Kubernetes Cluster, IBM DB2, IBM Cloud Object Storage
5.	Performance	Can handle required amount of requests per second	IBM container registery