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

Date	19 October 2022
Team ID	PNT2022TMID10203
Project Name	Nutrition Assistant Application
Maximum Marks	4 Marks

Technical Architecture:

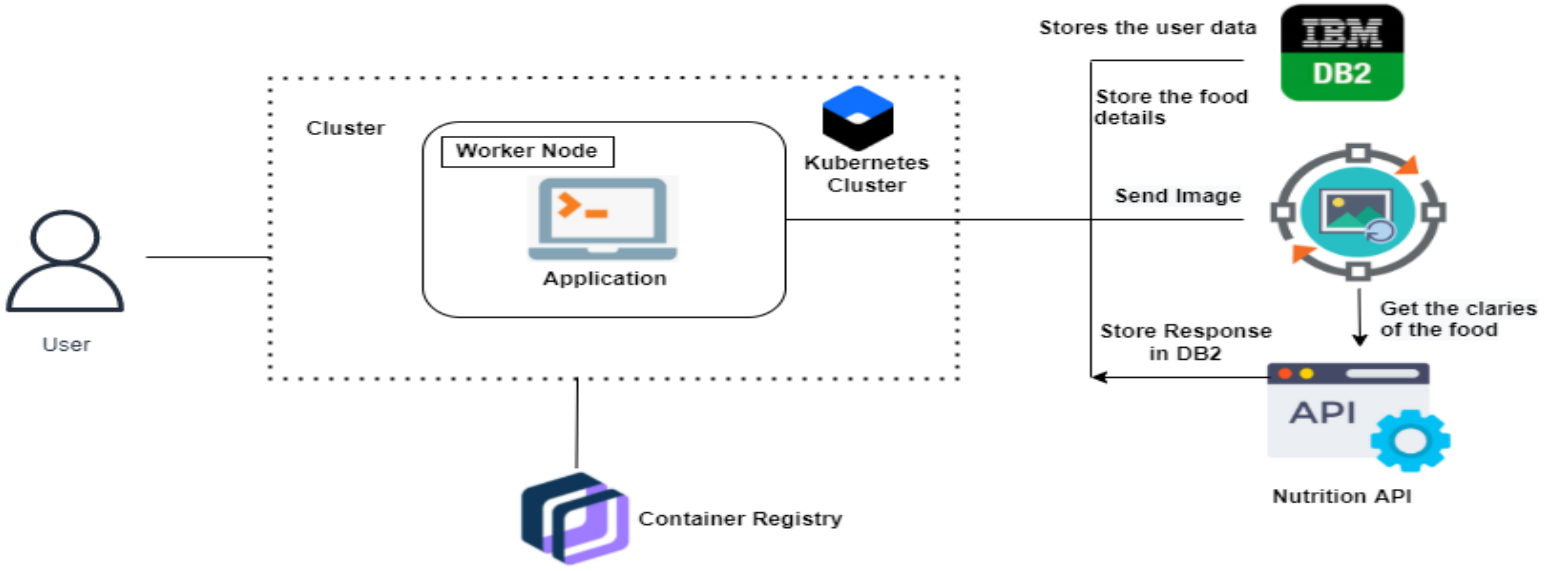

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	user interacts with application	HTML, CSS, JavaScript, React Js etc.
2.	Database	Data Type, Configurations etc.	MySQL,javascript,python ,flask
3.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
4.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
5.	External API-1	To predict the image that user will upload in the upload image page	Clarifai's AI-driven Food detection Model API
6	External API-2	Food API's for to the nutritional value for the identified food	Food API
7	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Cloud Foundry, Kubernetes, Docker..

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	open-source frameworks used	SendGrid, Python
2.	Security Implementations	Request authentication using encryption	.Encryptions
3.	Scalable Architecture	The scalability of architecture consists of 3 tiers	Web Server – HTML, CSS, JavaScript Application Server – Python Flask Database Server – IBM Cloud
4.	Availability	Availability is increased by loads balancers in cloud VPS	working to reduce the severity and likelihood of problems, closely monitoring applications and infrastructure, keeping technical debt in check, automating recovering mechanisms, and regularly putting those recovery mechanisms to the test.
5.	Performance	The application is expected to handle up to 4000 predictions per second	Optimize image sizes, use a content delivery network, use website caching and adopt cloud based website monitoring