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

Date	12 October 2022
Team ID	PNT2022TMID48368
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

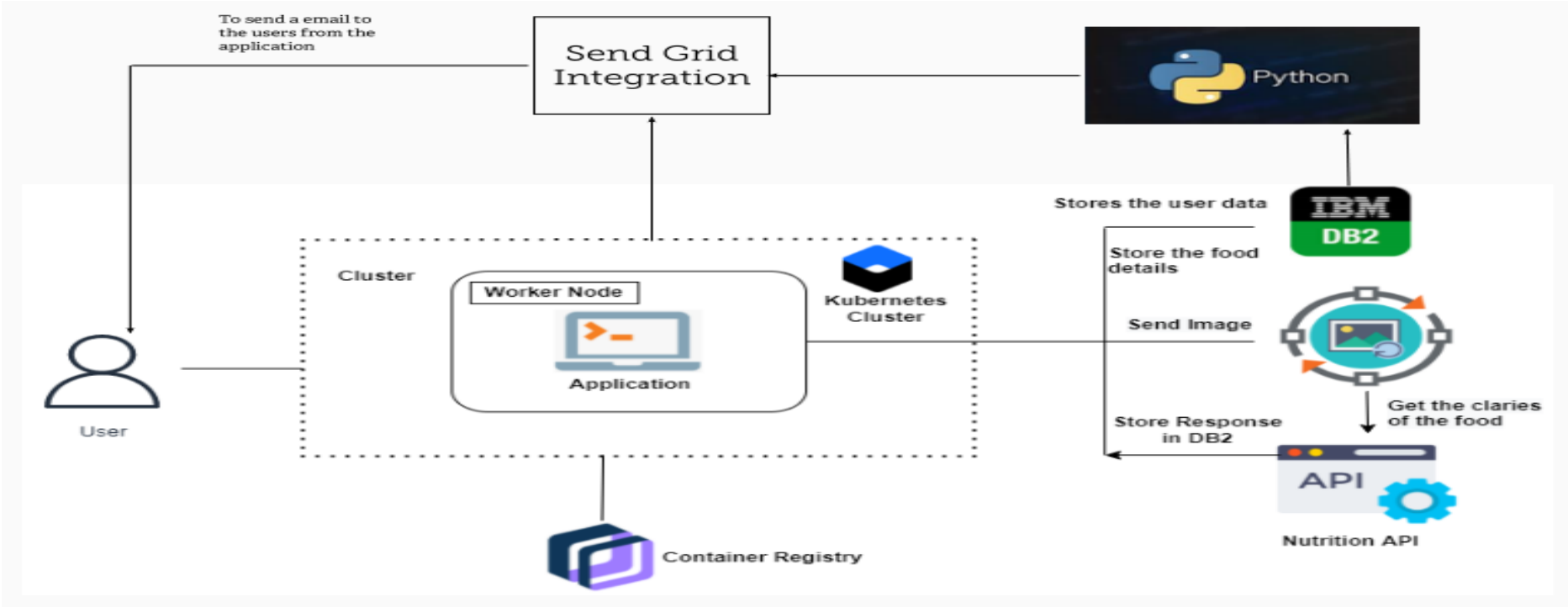

Table -1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	Web UI	HTML, CSS, JavaScript
2.	To get the food nutrition and calories 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, Java Script.
3.	Database	Get the user's name, mail and stores the food calories value. Data types: integer, string, Float Number and etc.,	MySQL, Postger SQL
4.	Cloud Deployment	Through is the application Will compose to the internet	IBM DB2, Kubernetes, Docker
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, etc.

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	Unique ID and password provided. Assures all the data inside the system will be protected against malware attacks or unauthorized access	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Allows You to access over 365,000 recipes 86,000 Food products. The application must be scalable enough to support 10,000 visits at the same time while maintaining optimal performance	Presentation tier- HTML/ CSS/ JavaScript Application tier- Python (API) Data tier- MySQL, PostgreSQL

S.No	Characteristics	Description	Technology
4.	Availability	To make use the application and data are available24*7	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	It supporting 1,000 users per hour must provide 6 seconds or less response time in a desktop browser, including the rendering of text and images	Optimize image sizes, use a content delivery network, use website caching and adopt cloud based website monitoring.