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

Date	23 October 2022
Team ID	PNT2022TMID07937
Project Name	NUTRITION ASSISTANT APPLICATION

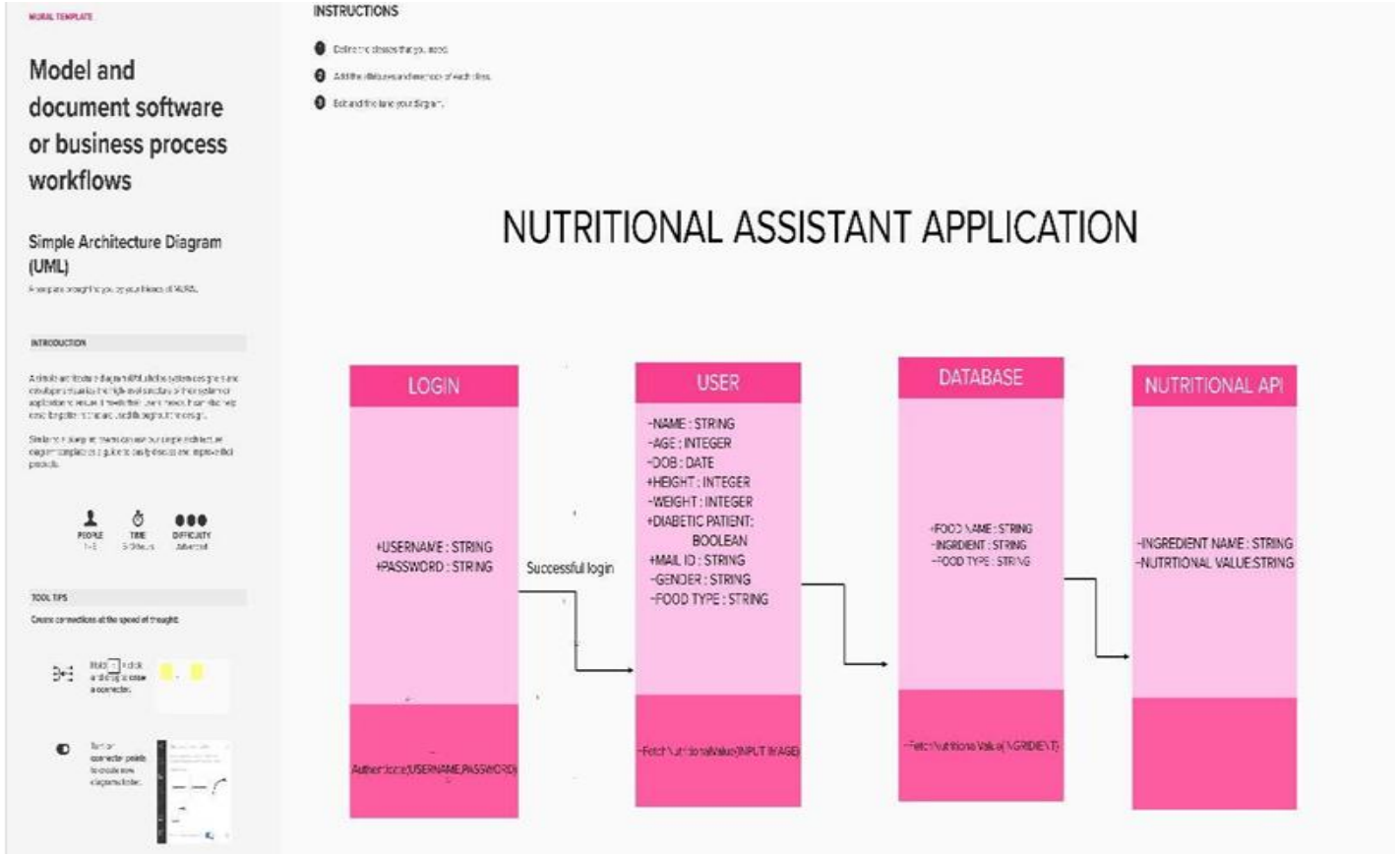

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI which gets image from the user to get the nutritional content.	HTML, CSS, Bootstrap
2.	Application Logic-1	Upload image in the application.	Python - Flask
3.	Application Logic-2	Displaying all the necessary information about the uploaded image to the user.	Python - Flask
4.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2
7.	File Storage	File storage requirements	IBM Container Registry
8.	External API-1	To give nutritional value of the determined food	Food API
10.	Machine Learning Model	For accurate food identification	Clarifai's AI Driven Food Detection Model
11.	Infrastructure (Server / Cloud)	Application Deployment on Cloud - Cloud Server Configuration :	Kubernetes.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Used Python-Flask for the backend system of the application.	Flask
2.	Security Implementations	All the security / access controls implemented in the application.	SHA-256, Encryptions
3.	Scalable Architecture	Applications can be transparently partitioned over multiple servers to reduce network traffic and scale up.	Event driven Architecture

S.No	Characteristics	Description	Technology
4.	Availability	Availability of application.	DNS,Network Load Balancing System.
5.	Performance	Design consideration for the performance of the application..	Caching, third party CDN