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

Date	03 October 2022
Team ID	PNT2022TMID39191
Project Name	Nutrition Assistant Application
Maximum Marks	4 Marks

Technical Architecture:

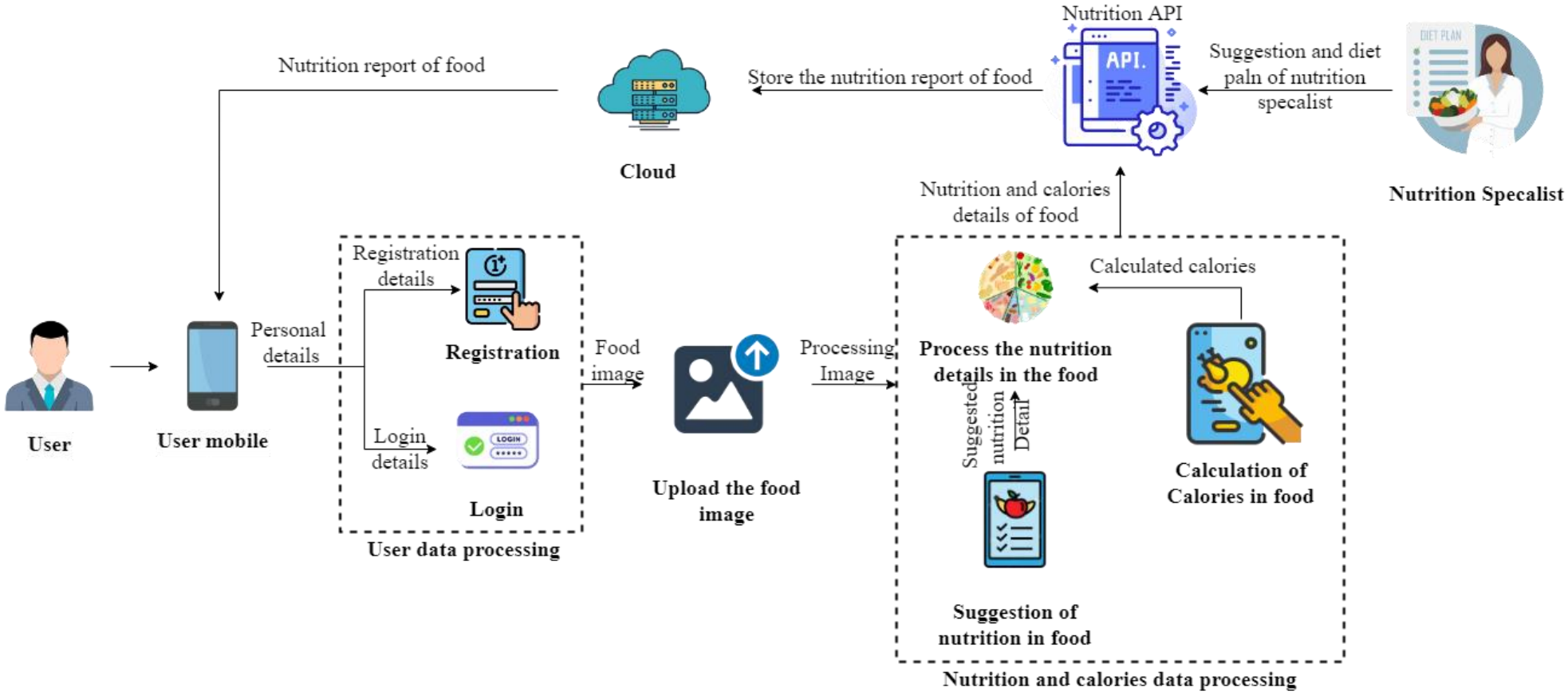

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	User interacts with application Mobile App, Chatbot.	HTML, CSS, JavaScript, React Js
2.	Database	Data Type, Configurations etc.	MySQL, java script, python, flask
3.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant
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 image in the upload image page	Clarifai's AI-driven food detection model API
6.	External API-2	Food API to check nutrition and calories in the indentified food	Food API
7.	External API-3	To collect diet plan from nutrition specalists	Healthcare API
8.	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	AES-256
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, automation recovering mechanism, and regular putting those recovery mechanism 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 base website monitoring