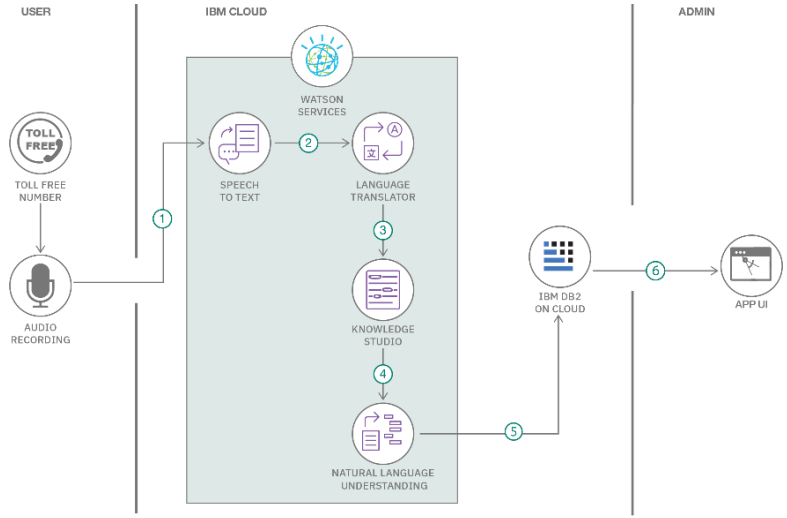
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID14661
Project Name	Project – AI-Powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	4 Marks

Technical Architecture:



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript
2.	Application Logic-1	Logic for a process in the application	Python, Flask
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	File storage requirements	Cloud based Storage
8.	External API-1	Used to get the Nutritional content of the fruits	Fruityvice
9.	External API-2	Used to get country and time-zone info to internationalize food quantity units.	ip-api
10.	External API-3	Use the time-zone to retrieve time and parts of the day.	World Time
11.	Machine Learning Model	Purpose of Machine Learning Model	Pytorch
12.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local, Docker images

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Pytorch, Sklearn, Seaborn
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	IAM user, SSL certs
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Web Server – HTML, CSS Application Server – Python Flask Database Server – IBM Cloud

S.No	Characteristics	Description	Technology
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	IBM Cloud hosting
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	IBM Load Balance