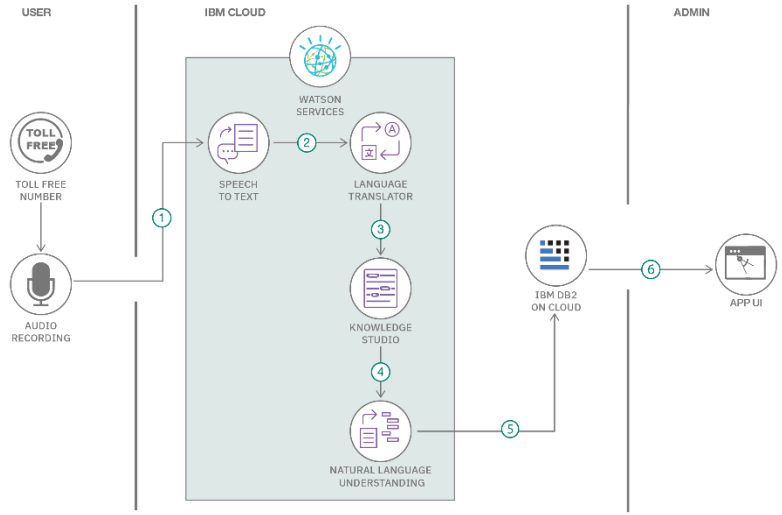
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	14 June 2025
Team ID	LTVIP2025TMID47655
Project Name	A College Food Choices Case Study
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2



Guidelines:

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

Table-1 : Components & Technologies:

S.No	Component	Description	Technology / Tool
1.	User Interface	Interface to view dashboard and interact with visuals	Tableau Public / Tableau Desktop
2.	Application Logic-1	Data preprocessing and transformation (e.g., cleaning responses, formatting)	Python (Pandas), Tableau Prep
3.	Application Logic-2	Creating calculated fields (e.g., BMI, Daily Calorie Intake) and filters	Tableau Calculated Fields
4.	Application Logic-3	Visualization logic and chart rendering for dietary behavior analysis	Tableau Visualization Engine
5.	Database	Local storage of student food choice survey dataset	Flat File (.CSV)
6.	Cloud Database (Optional)	Hosting data for cloud-accessible dashboards	Google Sheets / Tableau Cloud
7.	File Storage	Where survey dataset is stored before loading into Tableau	Local Filesystem / Google Drive
8.	External API-1	Not applicable in current dashboard	N/A
9.	External API-2	Not applicable	N/A
10.	Machine Learning Model	Not used in current scope	N/A
11.	Infrastructure	System used for dashboard design, testing, and publishing	Local (Windows/MacOS) / Tableau Public

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology / Tool
1.	Open-Source Frameworks	Tableau Public is free to use; preprocessing is done using open-source Python	Tableau Public, Pandas
2.	Security Implementations	Privacy via local storage and controlled sharing of Tableau links	Google Drive Permissions, Tableau Sharing
3.	Scalable Architecture	Dashboards can handle more student data and expanded metrics over time	3-Tier Design (Data → Logic → UI)
4.	Availability	Dashboards are shareable and viewable via web links or exported copies	Tableau Public, Google Drive
5.	Performance	Dashboard optimized via field pruning, calculated extracts, and filtering	Tableau Extract Engine, Preprocessed CSVs