Project Design Phase

Solution Requirements (Functional & Non-functional)

Team Id	LTVIP2025TMID47579
Project Name	Dietary Analysis
Date	25/06/2025

Functional Requirement :

1.	**Data Collection Interface**	• Survey forms or app for students to input dietary data. • Integration with cafeteria systems or meal logs.
2.	**Data Storage & Management**	• Centralized database to store raw food choice data securely. • Capability to update records in real time.
3.	**Data Cleaning & Preprocessing**	• Tools or scripts to remove duplicates, handle missing values. • Categorization (e.g., food types, calorie groups, meal timing).
4.	**Interactive Visualization (Tableau)**	• Dashboards showing calorie intake, diet types, nutrition etc. • Filters for gender, age, course, food preference, etc. • Trend analysis,
5.	**Analytics & Insights**	• Pattern recognition (e.g., high snack consumption at night). • Group-wise comparison (hostel vs day scholar, active vs inactive student.

Non Functional Requirement :

1.	**Scalability**	Should handle data from hundreds or thousands of students.
2.	**User-Friendliness**	Easy for students, admins, and nutritionists to use dashboards.
3.	**Performance**	Fast data processing and dashboard loading, even for large datasets.
4.	**Data Privacy & Security**	• Comply with data protection standards (like anonymizing health data). • Secure student login and role-based access control
5.	**Compatibility**	Should work on various devices (laptops, mobiles) and support data export (PDF, Excel).