Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	1 Feb 2026
Team ID	LTVIP2026TMIDS24929
Project Name	Empowering India: Analysing the evolution of union budget allocations for sustainable growth
Marks	2 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Data Collection & Storage	• Import Union Budget dataset (2021–2024) • Store data in MySQL Database • Validate data integrity before storage
FR-2	Data Preprocessing	• Clean null values • Format revenue & capital columns • Create calculated fields (Total Budget, Growth %)
FR-3	Dashboard Visualization	• Category-wise budget visualization • Ministry-wise allocation analysis • Scheme-wise comparison charts
FR-4	Comparative Analysis	• Compare Actual vs Estimated vs Revised budgets • Year-wise trend analysis (2021–2024)
FR-5	Filtering & Interaction	• Filter by Financial Year • Filter by Ministry / Category • Drill-down into schemes
FR-6	Story & Insights	• Create Tableau Story with multiple scenes • Highlight top 5 ministries & schemes • Show budget growth trends
FR-7	Web Integration	• Embed Tableau Dashboard in Flask UI • Enable interactive dashboard view on web application
FR-8	Reporting & Export	• Allow users to download reports/screenshots • Provide summary insights for decision-making

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

NFR No.	Non-Functional Requirement	Description
NFR-1	Usability	User-friendly Tableau dashboard with clear layout, labels, legends, and responsive design.
NFR-2	Performance	Dashboards must load within acceptable time even with large dataset (2021–2024 budget data).
NFR-3	Reliability	Accurate calculations of Total Budget, Revenue, Capital, and Growth %.
NFR-4	Security	Secure database connection between MySQL and Flask application.
NFR-5	Availability	Dashboard accessible anytime via web deployment.
NFR-7	Scalability	System should support addition of future budget years and more datasets.
NFR-7	Maintainability	Modular code structure for easy updates and feature additions.