

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

Date	4 February 2026
Team ID	LTVIP2026TMIDS24657
Project Name	Flavour Fusion: AI-Driven Recipe Blogging
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Input Handling	User can enter a recipe topic User can select desired word count (100–2000 words)
FR-2	Input Validation	System validates that recipe topic is not empty System restricts word count within allowed range
FR-3	AI Recipe generation	System constructs structured prompt for Gemini API System sends request to Google Gemini API System receives generated recipe blog content
FR-4	Content Display	System displays generated blog in structured format System shows title, introduction, ingredients, and instructions clearly
FR-5	Markdown Export	System converts generated content into Markdown format User can download recipe as .md file
FR-6	Loading Experience	System displays a random programming joke during AI processing
FR-7	Error Handling	System displays user-friendly error message if API call fails

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The system shall provide a clean, intuitive Streamlit interface requiring no technical expertise.
NFR-2	Performance	AI generation should complete within acceptable response time (typically 3–8 seconds depending on API latency).

NFR-3	Reliability	The system shall handle API failures gracefully without crashing.
NFR-4	Availability	The application should be accessible whenever the hosting platform is active.
NFR-5	Scalability	The system should handle multiple concurrent requests depending on Gemini API limits.
NFR-6	Maintainability	The codebase should be modular and easy to update for future enhancements.
NFR-7	Security	API keys must be securely stored using environment variables or Streamlit secrets.