

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

Date	10-02-2026
Team ID	LTVIP2026TMIDS65437
Project Name	Flavour Fusion: -Ai-Driven Recipe Blogging
Maximum Marks	4 Marks

Functional Requirements:

Functional requirements for a "Flavour Fusion: AI-Driven Recipe Blogging" system define the specific behaviours, actions, and features the system must provide to create, manage, and share innovative, AI-generated, cross-cultural recipes. These requirements focus on blending, personalization, and content generation, typically utilizing technologies like Python, Flask, and Natural Language Processing (NLP).

S.NO	Functional Requirements	Sub Functional Requirements
1.	AI-Powered Recipe Generation (Core Functionality)	<ul style="list-style-type: none">• Cross-Cultural Fusion Algorithm• Content Generation (LLM Integration)• Ingredient Substitution Engine• Real-time Trend Integration
2.	User Personalization and Input	<ul style="list-style-type: none">• User Preference Input• Pantry Inventory Management• Image-Based Recipe Generation
3.	Content Management and Blogging	<ul style="list-style-type: none">• Dynamic Blog Post Generation• SEO Optimization• Image Generation/Attachment
4.	Interactive and Social Features	<ul style="list-style-type: none">• Recipe Saving and Exporting• Social Media Sharing• Community Feedback Loop
5.	Technical and Nutritional Data	<ul style="list-style-type: none">• Nutritional Analysis• Accurate Ingredient Measurement Conversion

Non-Functional Requirements

Non-functional requirements (NFRs) for an AI-driven recipe blogging platform, such as "Flavour Fusion," focus on the quality attributes, constraints, and operational aspects that define *how* the system performs, rather than *what* it does. These requirements are critical for user trust, system adoption, and technical success, especially when utilizing AI to generate creative, personalized content.

S.NO	Non-Functional Requirements	Sub Non-Functional Requirements
1.	Performance and Responsiveness	<ul style="list-style-type: none">• Latency: The AI recipe generator must provide initial recipe ideas within 2-3 seconds of user input.• Image Handling: High-resolution food images must load within 2 seconds to maintain engagement, etc.
2.	Reliability and Availability	<ul style="list-style-type: none">• Error Handling: The AI must handle ambiguous, incomplete, or impossible ingredient combinations without crashing, providing a polite suggestion to refine the input.• Data Integrity: The system must ensure that generated recipes are consistent and stored correctly without data loss.
3.	Scalability	<ul style="list-style-type: none">• Growth Handling: The system architecture (e.g., using microservices) must allow for scaling horizontally to manage.• Data Ingestion: The system should be capable of processing thousands

		of new user-submitted images
4.	Usability and User Experience	<ul style="list-style-type: none"> • Interface Design: The UI should be intuitive, allowing users to find or generate recipes within 3 clicks from the homepage. • Accessibility: The site must comply with WCAG 2.1 guidelines, ensuring users with disabilities can navigate.
5.	Maintainability	<ul style="list-style-type: none"> • Modularity: The codebase should be modular, allowing for easy updates to the AI model without disrupting the frontend functionality. • Documentation: All API endpoints and AI model versions must be well-documented.