

Hackathon Project Phases Template

Project Title: Flavour fusion

Team Mannar

Members:

- M.Akshith(team leader)
- Rukwith Reddy
- Yashasvi krishna
- Premkumar

Phase-1: Brainstorming & Ideation

Objective: Develop an AI-powered web application that simplifies and enhances recipe blogging by generating engaging, high-quality content based on user inputs.

Key Points:

Problem Statement:-

-Food bloggers struggle with time-consuming content creation.-
Maintaining a unique and engaging writing style is challenging.- Many users need structured recipes without extensive manual effort.

Proposed Solution:-

-An AI-powered application using Google's Generative AI to generate structured, high-quality recipe content.

- Allows users to input recipe topics and customize content length.- Provides personalized, well-structured, and SEO-optimized recipes.

Target Users:

- Food bloggers who want to generate quick and engaging content
- Home cooks seeking structured and easy-to-follow recipes.
- Businesses looking to automate content for recipe websites.

Expected Outcome: A functional AI-powered recipe blogging platform that generates high-quality content based on user preferences

Phase-2:Requirement Analysis

Objective:

Define technical and functional requirements for the Flavour Fusion web application.

Key Points:

Technical Requirements:

- Programming Language: Python
- Backend: Flask
- Frontend: Gradio
- AI Model: Google Generative AI
- Database: Not required initially (API-based)

Functional Requirements:

- User inputs recipe topics and desired word count.
- AI generates structured, engaging, and SEO-optimized recipes.
- User-friendly interface for viewing and editing recipes.

Constraints & Challenges:

- Ensuring AI-generated content aligns with user preferences.
- Handling API rate limits and optimizing API calls.
- Creating an intuitive and appealing UI.

Phase-3: Project Design

Objective: Design the architecture and user flow of the application

Key Points: System Architecture:

1. User enters a recipe topic and word count.
2. The backend processes the request using Google Generative AI.
3. AI generates a detailed, structured recipe.
4. The frontend displays the generated recipe with formatting options.

User Flow:

Step 1: User enters a topic (e.g., "Vegan Chocolate Cake").

Step 2: Backend calls Google Generative AI API to generate the recipe.

Step 3: The app displays the structured recipe with formatting options

UI/UX Considerations:

- Minimalist, user-friendly interface.
- Options for content customization and formatting.
- Dark & light mode for better user experience.

Phase-4: Project Planning (Agile Methodologies)

Objective:

Break down development tasks for efficient completion.

sprint	TASK	Priority	Durati on	dea dline	Assigned to	dependenci es	Expected outcome
sprint1	Setup Environme nt & API Integration	High	6hours	End of Day 1	Akshith	API Key, Flask setup	API connection established
sprint2	Develop ui (stremlit interface)	Medium	3hours	End of Day 1	rukwith	API respon se format finalize d	Basic UI ready
sprint3	AI powered generation	High	4hours	End of Day 1	yashasvi	API,UI element s ready	AI-generated content

sprint4	Error Handling & Debugging	High	2hours	Mid Day 2	prem	API logs, UI inputs	Improved API stability
sprint5	UI Enhancements & Testing	Medium	2hours	Mid Day 2	akshith	UI layout finalized	Responsive UI

PHASE-5: Project Development

Objective:

Implement core features of the Flavour Fusion Web App

Key Points:

1. Technology Stack Used:

- Frontend: Gradio
- Backend: Flask
- AI Model: Google Generative AI
- Programming Language:Python

2. Develepment Process:

- Implement API Key authentication and AI integration.
- Develop recipe content generation logic.
- Optimize queries for better performance.

3.Challenges &Fixes:

- Challenge: AI content quality varies
- Fix:Optimize API calls to fetch only necessary data.

Phase-6:

Functional & Performance Testing Objective:

Ensure the Flavour Fusion web app functions correctly.

Test case id	category	Test scenario	Expected outcome	status	tester
TC-001	Functional	Query “vegan Chocolate cake”	AI generates a structured recipe	passed	akshith
TC-002	Functional	Query “best desert under 30 minutes”	AI generates quick dessert recipe	passed	prem
TC-003	performance	API response under 500 ms	Fast response time	optimized	yashasvi
TC-004	Bug fixes	Fix incorrect ingredients listings	Accurate ingredient lists	fixed	rukwith
TC-005	Ui testing	Ensure ui is responseive	Mobile and desktop support	fixed	akshith
TC-006	deployment	Host app using streamlit	Accessible online	deployed	Devops team

Final Submission:-

Project Report (following template)

- Demo Video (3-5 minutes)
- GitHub Repository Link
- Presentation