

Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	31 January 3035
Team ID	LTVIP2026TMIDS78841
Project Name	Flavour Fusion: AI-Driven Recipe Blogging
Maximum Marks	4 Marks

Technical Architecture:

The architecture of Flavour Fusion consists of a user interface built using Streamlit, application logic developed in Python, and integration with an AI API for recipe generation. The system processes user input, sends requests to the AI service, formats the response, and displays the generated recipe blog to the user.

The application runs locally during development and can be deployed on cloud platforms for scalability.

Flavour Fusion: AI-Driven Recipe Blogging

Architectural Flow

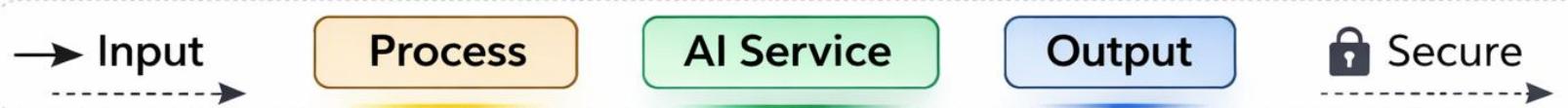
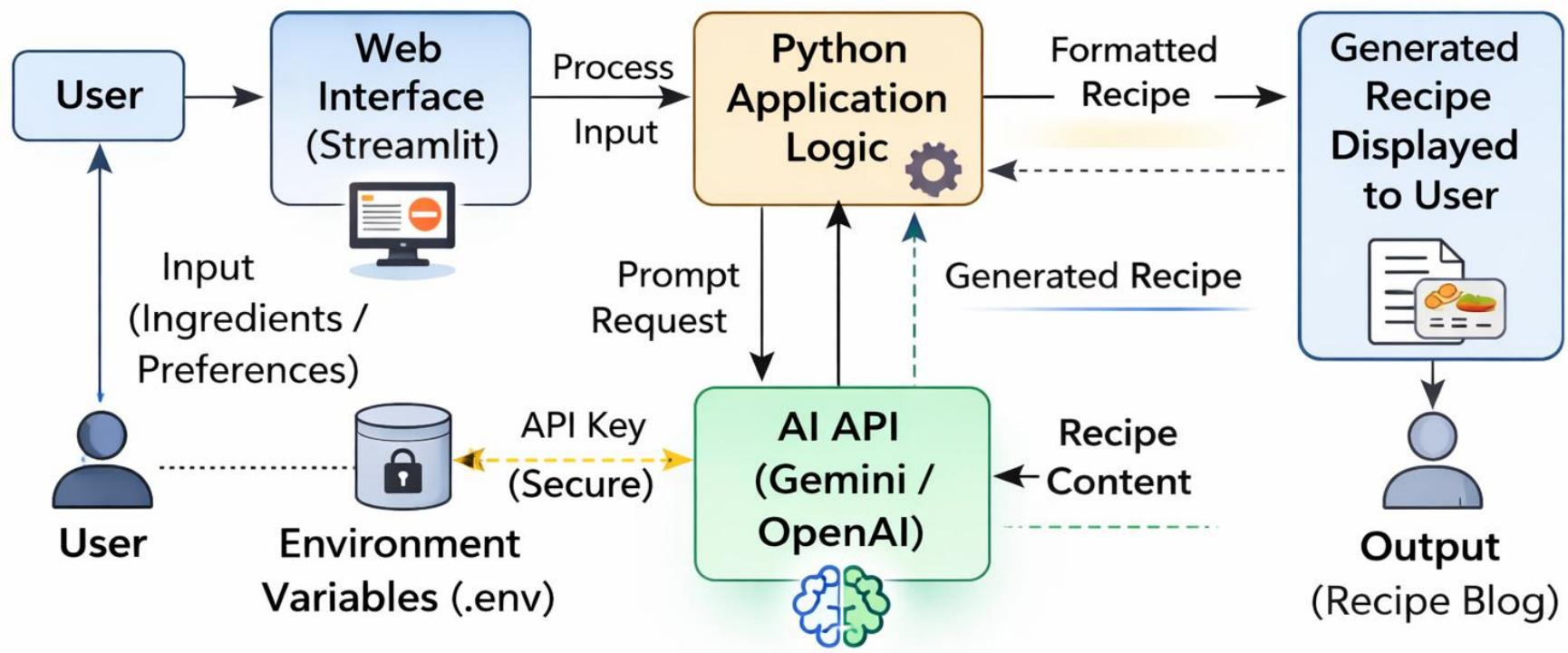


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web-based interface for user interaction.	Streamlit
2.	Application Logic	Handles input validation and AI prompt generation.	Python
3.	AI Integration	Generates recipes using AI model.	Gemini API / OpenAI API
4.	Data Storage	Stores API key configuration.	Environment Variables (.env)
5.	File Storage	Stores project files locally	Local File System
6.	External API	AI service for recipe generation.	Gemini / OpenAI
7.	Machine Learning Model	Generates recipe blog content	Generative AI Model
8.	Infrastructure	Local development & optional cloud deployment.	Local System / Cloud.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Framework used for UI and backend.	Streamlit, Python
2.	Security Implementations	API key stored securely.	Environment Variables
3.	Scalable Architecture	Can be deployed on cloud for multiple users.	Cloud Deployment
4.	Availability	Accessible via web interface.	Web Hosting
5.	Performance	Fast recipe generation within seconds.	AI API + Efficient Prompting

References:

<https://docs.streamlit.io/>

<https://docs.python.org/3/>

<https://ai.google.dev/>

<https://developers.openai.com/api/docs>