

# Functional & Performance Testing Report

**Date:** 05 February 2026

**Team ID:** LTVIP2026TMIDS51094

**Project Name:** Flavour Fusion: AI-Driven Recipe Blogging

**Maximum Marks:**

## Test Scenarios & Results

Test Case ID	Scenario (What to test)	Test Steps (How to test)	Expected Result	Actual Result	Pass/Fail
FT-01	Text Input Validation	Enter a recipe topic (e.g., "Malai Kofta") vs. leaving it empty.	Valid inputs proceed; empty fields trigger a "Please enter a topic" warning.	System correctly identifies empty input and blocks generation.	Pass
FT-02	Number Input Validation	Enter word count of 50 (too low) and 555 (valid).	System should enforce the min_value=100 constraint set in Streamlit.	Values below 100 are automatically adjusted or rejected.	Pass
FT-03	Content Generation	Input "Vanilla Ice Cream" and click "Generate Recipe."	Gemini 2.5 Flash returns a full markdown recipe with prep/cook times.	Content is generated with correct formatting and tone.	Pass
FT-04	API Connection Check	Verify .env or Streamlit Secrets configuration.	API handshake is successful and model initializes without 401 errors.	Connection established using secure environment variables.	Pass
FT-05	PDF Export Test	Click "Download as PDF" after generation.	A .pdf file is generated with the recipe text included.	PDF downloads successfully; special characters are handled.	Pass
PT-01	Response Time Test	Measure time from "Generate" click to text appearance.	Content should appear within 5–10 seconds for Gemini 2.5 Flash.	Average generation time recorded at 6.2 seconds.	Pass
PT-02	API Speed Test	Simulate 3 simultaneous generation	API handles concurrent calls without timing out	Handled successfully; no performance	Pass

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		requests.	or leaking keys.	degradation noted.	
PT-03	UI Load Test	Check "Programmer Jokes" display during wait time.	Jokes should rotate or display while the status is "Generating."	Joke displayed correctly, improving the user's perceived wait time.	Pass

## Testing Summary & Notes

**Functional Success:** The core logic of converting a topic into a PDF-ready blog post is fully operational.

**Performance Insight:** While the API speed is excellent, the network latency occasionally pushed response times to 7 seconds. The implementation of the **Joke Generator** successfully mitigated user frustration during these intervals.

**Security:** FT-04 confirmed that the API key is not exposed in the frontend code, fulfilling our security requirements.