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

Date	02 February 2026
Team ID	LTVIP2026TMIDS49772
Project Name	TransLingua: AI-Powered Multi-Language Translator
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	Text Input Module	Enter text to be translated Select source language Select target language
FR-2	Input Validation	Validate empty text input Ensure source and target languages are selected Display appropriate error messages
FR-3	AI Integration	Connect to Google Gemini API Send structured translation prompt Handle API response and fallback if needed
FR-4	Translation Processing	Generate context-aware translated text Preserve tone and meaning
FR-5	Output Display	Display translated text in UI Enable copy-to-clipboard feature
FR-6	Deployment	Deploy application on Streamlit Cloud Make application accessible via URL

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The application must have a simple and intuitive Streamlit interface that is easy to use.
NFR-2	Security	API keys must be securely stored and not exposed in the frontend.
NFR-3	Reliability	The system should generate consistent and structured outputs for valid inputs.
NFR-4	Performance	Translation should be generated within a few seconds under normal network conditions.
NFR-5	Availability	The application should be accessible online whenever deployed.
NFR-6	Scalability	The system should handle multiple users without significant performance degradation.