

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

|               |  |
|---------------|--|
| Date          | 10 February 2026                                   |
| Team ID       | LTVIP2026TMIDS65701                                |
| 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                    | User can enter text to be translated                |
|        |                               | System validates non-empty input                    |
| FR-2   | Language Selection            | User can select source language                     |
|        |                               | User can select target language                     |
| FR-3   | AI Translation                | System generates translation using Google Gemini AI |

**Non-functional Requirements:**

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

| NFR No. | Non-Functional Requirement | Description   |
|---------|----------------------------|---|
| NFR-1   | Usability                  | The application should have a simple and user-friendly web interface.           |
| NFR-2   | Security                   | API keys must be securely stored using environment variables and not hardcoded. |
| NFR-3   | Reliability                | The system should consistently provide accurate translations without errors.    |
| NFR-4   | Performance                | The system should generate translations with minimal delay.                     |
| NFR-5   | Availability               | The application should be accessible whenever the Streamlit server is running.  |
| NFR-6   | Scalability                | The system should support future expansion to more languages and features.      |