

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

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| Date | 30 January 2026 |
| Team ID | LTVIP2026TMIDS47695 |
| 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. |