

Requirement analysis

Solution Requirements

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| Date | 9 Feb 2026 |
| Team ID | LTVIP2026TMIDS71831 |
| Project Name | Translingua: ai-powered multi-language translator |
| Maximum Marks | 4Marks |

Functional Requirements:

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|--------|-------------------------------|--|
| FR-1 | Language Detection | Automatically detect the source language of the input text accurately. |
| FR-2 | Text Translation | Translate text from the source language to the selected target language using AI models. |
| FR-3 | Translation Accuracy | Achieve high translation accuracy using neural machine translation techniques. |
| FR-4 | User Satisfaction | Provide fast, reliable, and clear translations through an easy-to-use interface. |
| FR-5 | Multi-Language Support | Support translation across multiple widely used languages. |

Non-functional Requirements:

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

| NFR No. | Non-Functional Requirement | Description |
|---------|----------------------------|--|
| NFR-1 | Usability | The system shall provide a simple and intuitive web interface for entering text and viewing translated output. |
| NFR-2 | Reliability | The system shall deliver consistent and accurate translations under normal operating conditions. |

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| NFR-3 | Performance | The system shall generate translations within 2–3 seconds with minimal latency. |
| NFR-4 | Availability | The system shall remain operational and responsive during all active user sessions or demonstrations. |
| NFR-5 | Scalability | The system shall support future expansion to additional languages and higher numbers of concurrent users. |