Project Initialization and Planning Phase

Date	15 March 2024
Team ID	LTVIP2026TMIDS91514
Project Title	**TransLingua: AI-Powered Multi-Language Translator**
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) report

The project proposal aims to overcome language barriers using Generative AI–based translation techniques, improving communication efficiency and accuracy. The TransLingua system addresses limitations of traditional translation tools by providing context-aware, fast, and reliable translations. This solution enhances user experience, supports multilingual communication, and enables seamless interaction across different languages.

Project Overview	
Objective	The primary objective is to eliminate language barriers by implementing Generative AI–based language translation techniques, ensuring fast, accurate, and context-aware multilingual communication.
Scope	The project focuses on analyzing and improving language translation processes by incorporating Generative AI and Natural Language Processing to build a robust, efficient, and scalable translation system.
Problem Statement	
Description	Inaccuracies, lack of contextual understanding, and delays in existing translation systems negatively affect communication efficiency and user satisfaction, especially in multilingual environments.
Impact	Solving these issues will result in improved communication accuracy, reduced misunderstandings, and an enhanced user experience, contributing to effective global interaction and user trust.
Proposed Solution	
Approach	Employing Generative AI and NLP techniques to analyze input text and generate accurate, context-aware translations across multiple languages.
Key Features	Implementation of a Generative AI–based language translation model

	Real-time multilingual text translation Context-aware and fluent language generation

Resource Requirements

Resource Type	**Description**	**Specification / Allocation**
Computing Resources		
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	1 TB SSD
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