Project Design Phase
Proposed Solution Template

Date	28 February 2026
Team ID	LTVIP2026TMIDS46423
Project Name	Intelligent SQL Querying with LLMs Using Gemini Pro
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Non-technical users face difficulty retrieving structured data from relational databases due to lack of SQL knowledge. This leads to dependency on technical teams, delays in report generation, and reduced efficiency in decision-making.
2.	Idea / Solution description	The proposed solution, SQL-LLM, is an AI-powered system that converts natural language queries into executable SQL statements using a Large Language Model (LLM). Users can enter simple English queries, and the system automatically generates and executes SQL queries on the connected database.
3.	Novelty / Uniqueness	The solution integrates AI-based Natural Language Processing directly with relational databases, enabling real-time query generation without requiring SQL knowledge. It combines prompt engineering, query validation, and secure execution into a single streamlined system.
4.	Social Impact / Customer Satisfaction	The system reduces technical dependency, increases productivity, and empowers business users to access data independently. It improves decision-making speed and enhances user confidence in database interaction
5.	Business Model (Revenue Model)	The solution can follow a SaaS model where organizations pay subscription fees for access. Additional revenue streams include enterprise licensing, API usage-based billing, and customized deployment for corporate clients.
6.	Scalability of the Solution	The architecture is modular and cloud-ready. It can be deployed on AWS/Azure, integrated with multiple databases, and scaled horizontally to support large organizations and concurrent users.