

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

Date	24 February 2026
Team ID	LTVIP2026TMIDS34458
Project Name	Intelligent SQL Querying with LLMs using Gemini Pro
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	User Registration	Registration through Form Registration through Gmail Registration through LinkedIn
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User Authentication	Login using Email & Password Logout from application Password reset
FR-4	Natural Language Query Input	Enter query in natural language Validate user input
FR-5	SQL Generation	Convert natural language to SQL using Gemini Pro Validate generated SQL (SELECT only)
FR-6	Query Execution	Execute SQL query on database Fetch query results
FR-7	Results Display	Display results in tabular format Show generated SQL query

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The system should have a simple and user-friendly interface so that non-technical users can easily enter natural language queries and view results.
NFR-2	Security	The system should ensure data security by allowing only SELECT queries and preventing unauthorized access or malicious SQL operations.
NFR-3	Reliability	The system should consistently generate correct SQL queries and return accurate results without frequent failures.
NFR-4	Performance	The system should process user queries and display results within a short response time.
NFR-5	Availability	The system should be available to users whenever required, with minimal downtime.
NFR-6	Scalability	The system should be able to handle an increasing number of users and database queries without performance degradation.