

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	27 February 2026
Team ID	LTVIP2026TMIDS66231
Project Name	IntelliSQL: Intelligent SQL Querying with LLMs using Gemini Pro
Maximum Marks	4 marks

Brainstorming for “IntelliSQL: Intelligent SQL Querying with LLMs using Gemini Pro”:

Brainstorming for the project “IntelliSQL: Intelligent SQL Querying with LLMs using Gemini Pro” focuses on exploring how large language models (LLMs) can be used to translate natural language questions into accurate SQL queries. The main goal of this brainstorming session is to generate ideas on how IntelliSQL can assist students, developers, analysts, and businesses in querying databases without needing expertise in SQL syntax.

IntelliSQL can solve this problem by leveraging Gemini Pro’s advanced natural language understanding to interpret user queries and generate optimized SQL statements. The system will bridge the gap between non-technical users and relational databases by providing accurate, context-aware SQL generation along with query explanations and result summaries.

Step-1: Team Gathering, Collaboration and Select the Problem Statement:

The screenshot shows the 'Template' section of the Brainstorm & Idea Prioritization template. It features a large blue header with the title 'Brainstorm & idea prioritization'. Below the header, there's a sidebar with the word 'Template' and a vertical list of instructions:

- Use this template to run your own brainstorming sessions so your team can explore IntelliSQL ideas even if you're not sitting in the same room.
- 10 minutes to prepare
- 1 hour to collaborate
- 2-8 people recommended

On the right side, there are two main sections: 'Before you collaborate' (step 1) and 'Define your problem statement' (step 2).

- Before you collaborate:** Includes steps for 'Team gathering', 'Set the goal', and 'Learn how to use the tools'. A note says: 'IntelliSQL is an AI-powered system that enables users to query relational databases using plain English. Powered by Gemini Pro LLM, it translates natural language into accurate SQL queries, making databases accessible to all.' A link 'Open article' is provided.
- Define your problem statement:** Includes a note: 'What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.' A note says: 'IntelliSQL: Intelligent SQL Querying with LLMs using Gemini Pro'.

At the bottom, there are four buttons: 'Team gathering', 'Brainstorm ideas', 'Group & prioritize', and 'Select best idea'.

Step-2: Brainstorm, Idea Listing and grouping:

2 Brainstorm – IntelliSQL SQL Querying System
Write down any ideas that come to mind that address the IntelliSQL problem statement.
⌚ Time: 10 minutes

TIP
Use sticky notes to write one idea per note. Focus on IntelliSQL SQL querying.

Person 1 Developer	Person 2 Data Analyst	Person 3 Student	Person 4 Business User	Person 5 DB Admin
Query DB with plain English	Filter data by date/name	Learn SQL by seeing queries	Get sales insights fast	Validate LLM SQL output
Auto-generate SQL queries	Compare sales data easily	Ask questions about data	No SQL skills needed	Optimize generated SQL
Explain SQL in simple terms	Generate reports fast	Understand query results	Easy data exploration	Secure query execution

3 Group Ideas– IntelliSQL SQL Querying System
Take turns sharing ideas while clustering similar or related notes. Give each cluster a label.
⌚ 20 minutes

Group 1:Natural Language Query Interface		Group 2:SQL Generation & Optimization	
NL to SQL conversion	Plan English queries	Accurate SQL generation	Query optimization
Query autocomplete	Multi-language support	Schema-aware generation	Join & filter handling
Group 3:Result Explanation & Visualization		Group 4:Database Compatibility	
Explain SQL results	Chart & graph output	MySQL support	PostgreSQL integration
Summary reports	Data export	SQLite connection	Cloud DB support
Group 5 :Security & Performance			
Secure query execution	Access control		
Fast query response	Error handling		

Step-3: Idea Prioritization

Idea prioritization for the IntelliSQL project focuses on selecting the most valuable and impactful features that improve SQL query generation and user experience.

4 Prioritize – IntelliSQL SQL Querying System
Your team should focus on the most important and feasible ideas for IntelliSQL.
⌚ 30 minutes

TIP
Prioritize ideas by discussing and placing them on a matrix. Ideas in the top-left corner have high importance and high feasibility. These will have the most impact.

Importance	Feasibility
High Importance + High Feasibility	High Importance + High Feasibility
Medium Importance + High Feasibility	Medium Importance + High Feasibility
Medium Importance + Low Feasibility	Medium Importance + Low Feasibility

5 After you collaborate
Select the most important and feasible solution:
IntelliSQL: AI-Powered Natural Language to SQL Query System

Create system prototype (MVP)

- NL Query Input Interface**: Accept plain English questions and display results
- Gemini Pro SQL Generator**: Translate queries to SQL using Gemini Pro LLM
- Database Connector**: Connect to MySQL, PostgreSQL, SQLite databases

Future improvements

- Query history & favorites**: Save and reuse past queries
- Voice-to-SQL support**: Accept voice queries and convert to SQL

Workflow steps at the bottom:

- Empty matrix
- Add ideas
- Place ideas on matrix
- Final prioritization

Here certainly we chose “Using Gemini Pro LLM to convert natural language queries into accurate SQL statements for seamless database interaction” as our most prioritized idea. Among all other ideas, this was the most important to us because the core purpose of IntelliSQL is to allow users to query databases using plain English without writing SQL manually. If Gemini Pro cannot accurately interpret natural language and produce correct SQL queries, the entire system becomes unreliable. Therefore, ensuring high-quality, accurate SQL generation is our top priority.

Then comes our second most important idea, which is “Integrating IntelliSQL with popular databases like MySQL, PostgreSQL, and SQLite to support multi-database environments.” This was taken as our second priority because broad database compatibility is essential for real-world adoption. By supporting multiple database systems, IntelliSQL becomes more versatile and useful for developers, analysts, and organizations working with different database platforms.

Then comes our next idea, which is “Providing additional features such as query explanation in plain English, query history, and result visualization for IntelliSQL users.” After achieving our main goal, we will expand the system to include these advanced features. This will make IntelliSQL more educational and user-friendly by helping users understand what each query does, review past queries, and visualize results through charts and tables. This will increase the overall value and effectiveness of the IntelliSQL project.