# Project Planning Phase
## Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

| Date | 08 February 2026 |
|---|---|
| Team ID | LTVIP2026TMIDS83745 |
| Project Name | IntelliSQL: Intelligent SQL Querying with LLMs Using Gemini Pro |
| Maximum Marks | 5 Marks |

## Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|---|---|---|---|---|---|---|
| Sprint-1 | Authentication & DB Setup | USN-1 | User registration and login module | 3 | High | 4 |
| Sprint-1 | Authentication & DB Setup | USN-2 | Secure database connection (MySQL/PostgreSQL) | 5 | High | 4 |
| Sprint-1 | Authentication & DB Setup | USN-3 | Display database schema and tables | 5 | Low | 4 |
| Sprint-1 | UI Development | USN-4 | Dashboard for entering natural language queries | 7 | Medium | 4 |
| Sprint-2 | NL to SQL Engine | USN-5 | Convert natural language to SQL using Gemini Pro | 8 | High | 4 |
| Sprint-2 | Query Processing | USN-6 | Validate generated SQL queries | 5 | High | 4 |
| Sprint-2 | Query Execution | USN-7 | Execute SQL and display results | 5 | High | 4 |

| Sprint | Functional Requirement (Epic) | User Story Number | User Story / Task | Story Points | Priority | Team Members |
|---|---|---|---|---|---|---|
| Sprint-2 | Error Handling | USN-8 | Provide meaningful error messages | 2 | Medium | 4 |
| Sprint-3 | Optimization | USN-9 | Optimize generated SQL queries | 6 | Medium | 4 |
| Sprint-3 | Visualization | USN-10 | Display results in charts/graphs | 6 | Medium | 4 |
| Sprint-3 | History Feature | USN-11 | Maintain query history | 4 | Low | 4 |
| Sprint-3 | Security | USN-12 | Prevent SQL injection and secure execution | 4 | High | 4 |
| Sprint-4 | Testing | USN-13 | Unit and integration testing | 6 | High | 4 |
| Sprint-4 | Performance Testing | USN-14 | Test system with large datasets | 5 | Medium | 4 |
| Sprint-4 | Deployment | USN-15 | Deploy application on cloud/local server | 5 | High | 4 |
| Sprint-4 | Documentation | USN-16 | Prepare technical documentation and user manual | 4 | Medium | 4 |

## Project Tracker, Velocity & Burndown Chart: (4 Marks)

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) |
|---|---|---|---|---|---|---|
| Sprint-1 | 20 | 7 Days | 28 dec 2025 | 26 mar 2026 | 20 | 26 mar 2026 |

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed (as on Planned End Date) | Sprint Release Date (Actual) |
|---|---|---|---|---|---|---|
| Sprint-2 | 20 | 7 Days | 28 dec 2025 | 06 Mar 2026 | 20 | 06 Mar 2025 |
| Sprint-3 | 20 | 7 Days | 08 jan 2025 | 14 Mar2026 | 20 | 14 Mar 2025 |
| Sprint-4 | 20 | 7 Days | 16 Feb 2026 | 22 mar 2026 | 20 | 22 Mar 2025 |

## Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

## Burndown Chart:

The Burndown Chart represents remaining story points versus time. Each sprint starts with 20 story points. Points reduce daily as tasks are completed, reaching zero by the sprint end date.

**Reference:**

[https://www.atlassian.com/agile/project-management](https://www.atlassian.com/agile/project-management)

[https://www.atlassian.com/agile/tutorials/how-to-do-scrum-with-jira-software](https://www.atlassian.com/agile/tutorials/how-to-do-scrum-with-jira-software)

[https://www.atlassian.com/agile/tutorials/epics](https://www.atlassian.com/agile/tutorials/epics)

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[https://www.atlassian.com/agile/project-management/estimation](https://www.atlassian.com/agile/project-management/estimation)

[https://www.atlassian.com/agile/tutorials/burndown-charts](https://www.atlassian.com/agile/tutorials/burndown-charts)