

## Project Planning Phase

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

Date	11 February 2026
Team ID	LTVIP2026TMIDS24988
Project Name	Civil Engineering Insight Studio
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	User Interface Development	USN-1	Design Streamlit layout and image upload section	2	High	Frontend Dev
Sprint-1	User Interface Development	USN-2	Implement structural analysis input field	1	High	Frontend Dev
Sprint-1	User Interface Development	USN-3	Display uploaded construction image preview	2	High	Frontend Dev
Sprint-1	AI Integration	USN-4	Integrate Google Gemini Vision API	5	High	AI Dev
Sprint-1	AI Integration	USN-5	Create structured engineering prompt template	3	High	AI Dev
Sprint-1	AI Integration	USN-6	Display generated structural report in UI	3	High	Full Stack Dev
Sprint-2	Report Formatting	USN-7	Format output into structured engineering sections	3	Medium	Backend Dev
Sprint-2	Report Export	USN-8	Implement optional report download functionality	3	High	Backend Dev

Sprint-2	User Experience Enhancement	USN-9	Add loading indicator during AI analysis	2	Medium	Frontend Dev
Sprint-2	System Reliability	USN-10	Implement input validation and error handling	3	High	Full Stack Dev
Sprint-2	Testing & Deployment	USN-11	Perform functional testing and local deployment	3	High	Full Stack Dev

### 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	16	7 Days	01 Feb 2026	07 Feb 2026	16	07 Feb 2026
Sprint-2	14	7 Days	08 Feb 2026	14 Feb 2026	14	14 Feb 2026

#### 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)

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

Total Story Points Completed = 16 + 14 = 30

Number of Sprints = 2

Velocity = 30 / 2

**Velocity = 15 Story Points per Sprint**

**Burndown Chart:**

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.