

Project Planning Phase

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

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|---------------|--|
| Date | 15 February 2025 |
| Team ID | LTVIP2026TMIDS72705 |
| Project Name | TransLingua – AI-Powered Multi-Language Translator |
| 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 | Application Setup | USN-1 | As a developer, I can set up the Python virtual environment and install dependencies. | 2 | High | Team |
| Sprint-1 | UI Development | USN-2 | As a user, I can enter text for translation. | 2 | High | Team |
| Sprint-1 | Language Selection | USN-3 | As a user, I can select source and target languages. | 2 | High | Team |
| Sprint-1 | API Integration | USN-4 | As a system, I can integrate Google Gemini API for translation. | 5 | High | Team |
| Sprint-2 | Security Implementation | USN-5 | As a developer, I can store API keys securely using environment variables. | 3 | High | Team |
| Sprint-2 | Output Display | USN-6 | As a user, I can view translated text instantly. | 2 | High | Team |
| Sprint-2 | Testing | USN-7 | As a developer, I can perform functional testing. | 3 | Medium | Team |
| Sprint-2 | Documentation | USN-8 | As a developer, I can prepare GitHub repository and documentation. | 5 | Medium | Team |

Total Story Points per Sprint

Sprint-1 = 2 + 2 + 2 + 5 = **11 Story Points**

Sprint-2 = 3 + 2 + 3 + 5 = **13 Story Points**

Total Story Points = 11 + 13 = **24**

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

| Sprint | Total Story Points | Duration | Sprint Start Date | Sprint End Date (Planned) | Story Points Completed | Sprint Release Date |
|---------------|---------------------------|-----------------|--------------------------|----------------------------------|-------------------------------|----------------------------|
| Sprint-1 | 11 | 10 Days | 15 Feb 2025 | 24 Feb 2025 | 11 | 24 Feb 2025 |
| Sprint-2 | 13 | 10 Days | 25 Feb 2025 | 06 Mar 2025 | 13 | 06 Mar 2025 |
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4. Velocity Calculation

Velocity = Total Story Points Completed / Number of Sprints

Total Story Points = 24

Number of Sprints = 2

Velocity = $24 / 2 = 12$ Story Points per Sprint

If sprint duration is 10 days,

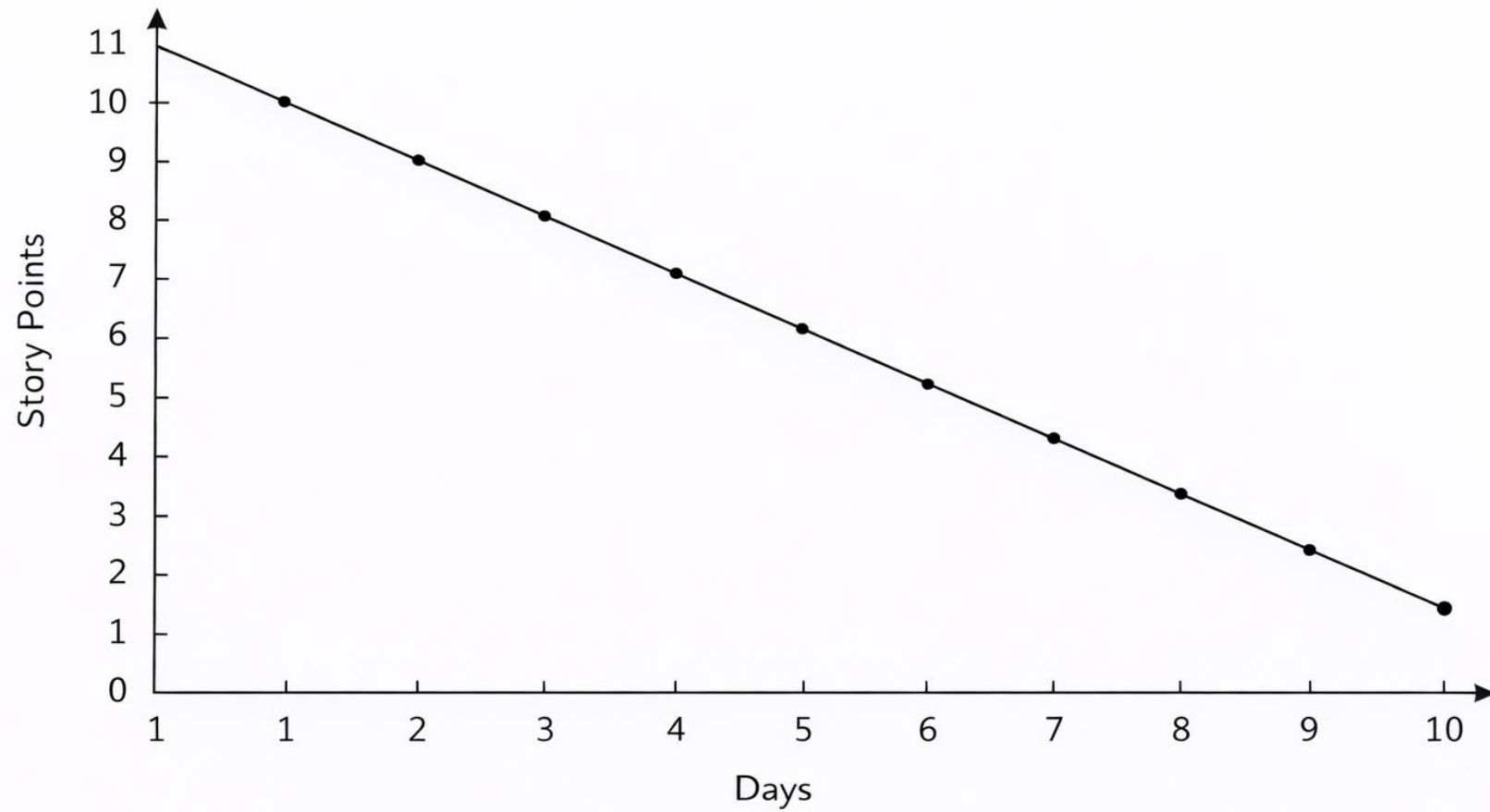
Average Velocity per Day = $12 / 10 = 1.2$ Story Points per Day

5. Burndown Chart Description

A burndown chart represents the remaining work against time during a sprint.

For this project, each sprint started with its respective total story points and gradually reduced to zero by the planned sprint end date. This indicates systematic progress and effective sprint management.

Burndown Chart for Software Development 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.

<https://www.visual-paradigm.com/scrum/scrum-burndown-chart/>

<https://www.atlassian.com/agile/tutorials/burndown-charts>

Reference:

<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/epics>

<https://www.atlassian.com/agile/tutorials/sprints>

<https://www.atlassian.com/agile/project-management/estimation>

<https://www.atlassian.com/agile/tutorials/burndown-charts>