

Project Planning Phase

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

Date	14 March 2025
Team ID	PNT2025TMID00705
Project Name	TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning
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	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	Mohit Saraswat
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	Prashant Chaturvedi
Sprint-2		USN-3	As a user, I can register for the application through Facebook	2	Low	Naincy Goyal
Sprint-1		USN-4	As a user, I can register for the application through Gmail	2	Medium	Mohit Saraswat
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	1	High	Mohit Saraswat
Sprint-2	Dashboard	USN-6	As a user, I can view my profile dashboard with personalized data.	3	Medium	Prashant Chaturvedi

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2	Data Collection	USN-7	Collection of traffic data from multiple sources.	2	High	Naincy Goyal
Sprint-2		USN-8	Loading collected traffic data into the system.	1	High	Mohit Saraswat
Sprint-3	Data Preprocessing	USN-9	Handling missing values in the traffic data.	3	High	Prashant Chaturvedi
Sprint-3		USN-10	Handling categorical values for model training.	2	Medium	Mohit Saraswat
Sprint-4	Model Building	USN-11	Implementing the machine learning model for traffic prediction.	5	High	Naincy Goyal
Sprint-4		USN-12	Testing the trained ML model for accuracy.	3	High	Prashant Chaturvedi
Sprint-5	Deployment	USN-13	Developing front-end HTML pages for user interaction.	3	Medium	Mohit Saraswat
Sprint-5		USN-14	Deploying the ML model using Flask framework.	5	High	Naincy Goyal

Team Leader: Mohit Saraswat

Team Members:

- Prashant Chaturvedi
- Mohit Saraswat
- Naincy Goyal

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	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	18	06 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	15	13 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

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)

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

Velocity Calculation

Velocity = **Total Story Points Completed / Number of Sprints**

Total Story Points = 20 + 18 + 15 + 20 = **73**

No. of Sprints = **4**

Velocity = **73 / 4 = 18.25 (Story Points per Sprint)**

The team's average velocity is **18.25 Story Points per Sprint**.

Burndown Chart Summary

A **Burndown Chart** helps visualize the remaining work over time.

- **X-axis:** Time (Sprints)
- **Y-axis:** Remaining Story Points
- Initial story points: **80** (20 per sprint)
- Story points completed over time:
 - Sprint 1 → 60 left
 - Sprint 2 → 42 left
 - Sprint 3 → 27 left
 - Sprint 4 → 0 left

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>