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

Date	27 October 2023
Team ID	Team-592652
Project Name	Project - Time Series Analysis for Bitcoin Price Prediction Using Prophet
Maximum Marks	8 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 Registration	USN-1	As a user, I can register on the website by providing my email, creating a password, and confirming it.	2	High	Development Team
Sprint-1	User Registration	USN-2	As a user, I receive a confirmation email after registering for the application.	1	High	Development Team

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-2	User Authentication	USN-3	As a user, I can log in to the application by entering my email and password.	1	High	Development Team
Sprint-2	User Authentication	USN-4	As a user, I can reset my password if I forget it.	2	Medium	Development Team
Sprint-3	Website Interface	USN-5	As a user, I can access real-time Bitcoin price predictions on the website's dashboard.	5	High	Development Team
Sprint-3	Website Interface	USN-6	As a user, I can explore historical Bitcoin price data for analysis on the website.	3	High	Development Team
Sprint-4	Chatbot Integration	USN-7	As a user, I can receive real-time Bitcoin price updates from the chatbot upon request.	3	Medium	Development Team

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-4	Chatbot Integration	USN-8	As a user, I can set personalized alerts for Bitcoin price fluctuations through the chatbot.	4	Medium	Development Team
Sprint-5	Machine Learning Model Development	USN-9	Develop and train a Machine Learning model for Bitcoin price predictions.	8	High	Development Team
Sprint-5	Data Analysis	USN-10	As a user, I want access to detailed documentation explaining the methodology behind the Bitcoin price predictions.	2	Low	Development Team
Sprint-5	Data Analysis	USN-11	As a user, I can download historical Bitcoin price data for further analysis.	3	Medium	Development Team

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 2023	29 Oct 2023	20	29 Oct 2023
Sprint-2	20	6 Days	31 Oct 2023	05 Nov 2023	16	05 Nov 2023
Sprint-3	20	6 Days	07 Nov 2023	08 Nov 2023	18	08 Nov 2023
Sprint-4	20	6 Days	09 Nov 2023	09 Nov 2023	20	09 Nov 2023

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)

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

20 + 20 + 20 + 20 + 20 + 20 + 20 + 20 + 16 + 16 + 16 + 16 + 16 + 18 + 18 + 18 + 18 = 298 / 18 ≈ 16.5

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.

Burndown Chart