Project Planning Phase

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

Date	27 October 2023
Team ID	592963
Project Name	Smart Home – Temperature Prediction
Maximum Marks	8 Marks
Team Members	P. Sri Naga Varsha S. Guna Sekhar T. Shreyansh

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

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data Collection and Preparation	USN-1	As a user,I will Collect relevant data, which may include temperature measurements, humidity levels, occupancy status, weather data, and heating/cooling system settings. Ensure that the data is accurate and well-structured	4	High	Varsha

Sprint-1	Data Preprocessing	USN-2	As a user, I should Clean and preprocess the data by handling missing values, outliers, and scaling features. Data preprocessing is a critical step to ensure the quality of your machine learning model.	2	Medium	Guna
Sprint-2	Feature Engineering	USN-3	As a user, I should Create or select relevant features that can improve the accuracy of your temperature prediction. Consider factors like time of day, day of the week, and seasonal trends.	3	Medium	Shreyansh
Sprint-1	Train , Test and Deploy the Model	USN-4	Use a machine learning algorithm to train the model on the selected features. Test the accuracy of the trained model on a separate set of data, preferably from a different time period. Integrate the trained model into the smart home system to provide temperature predictions based on real-time sensor data.	4	High	Akshara Yogitha
Sprint-2	User Interface (UI) Development	USN-5	Create a user-friendly interface for homeowners or residents to interact with the smart home system. This may	5	High	Thanu

			include a mobile app, web interface, or voice commands.			
Sprint-3	Integration with Smart Home Systems	USN-6	Integrate your temperature prediction model with other smart home systems, such as thermostats, HVAC (Heating, Ventilation, and Air Conditioning) systems, and IoT devices, to control and optimize temperature settings.	4	High	
Sprint-3	Data Security and Privacy and Documentation	USN-7	Implement robust security and privacy measures to protect user data and ensure that personal information is handled securely. Document the entire project, including data sources, preprocessing steps, model architecture, and deployment procedures, to ensure that the project is maintainable and understandable for future developers	5	High	

Project Tracker, Velocity & Burndown Chart:

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	10	8 Days	24 Oct 2023	01 Nov 2023	10	01 Nov 2023

Sprint-2	8	6 Days	31 Oct 2023	05 Nov 2023		
Sprint-3	9	5 Days	07 Nov 2023	12 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)

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

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.

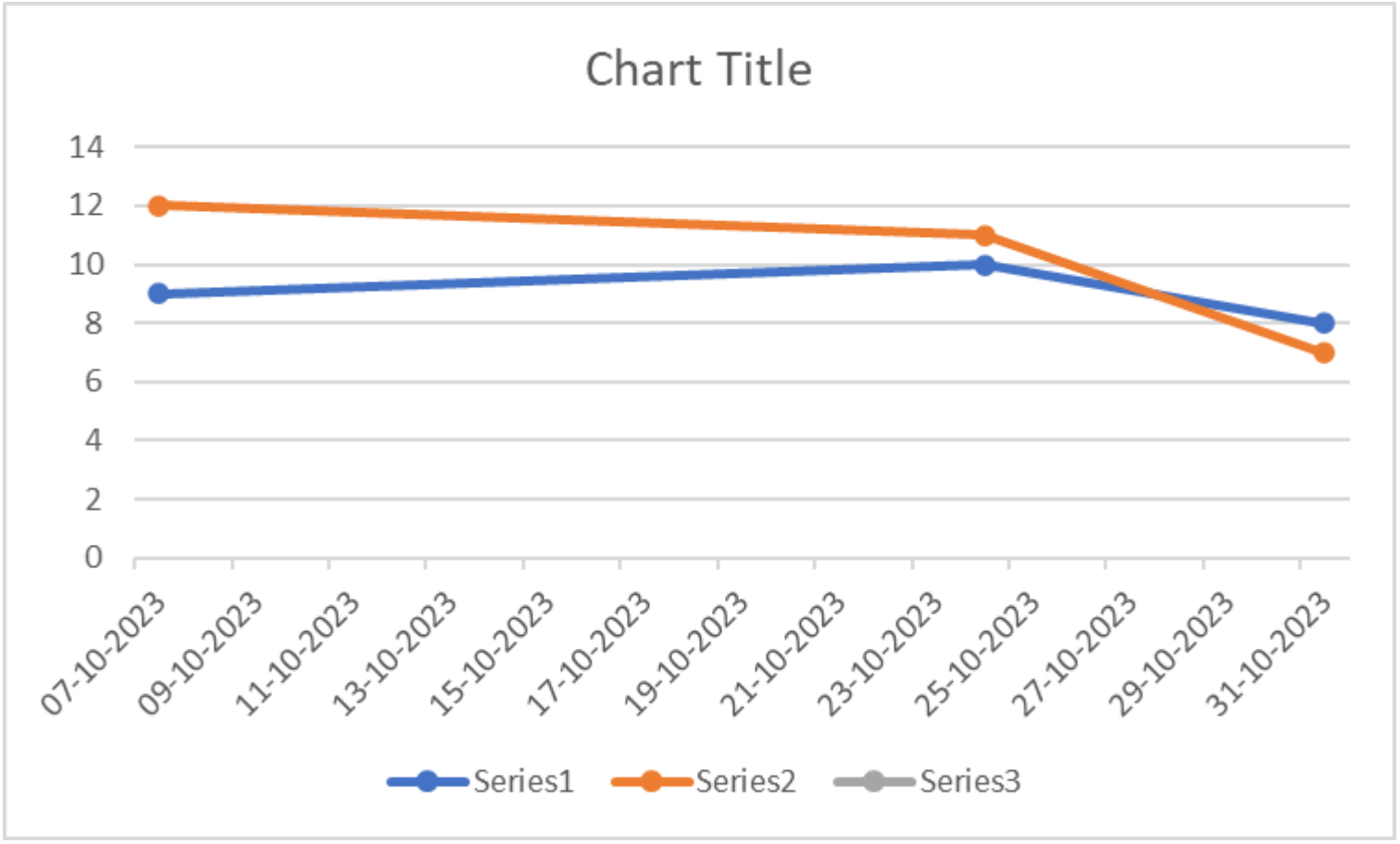
Chart Title
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19-10-2023
21-10-2023
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25-10-2023
27-10-2023
29-10-2023
31-10-2023
Series1
Series2
Series3