

## Project Planning Phase

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

Date	27-10 -2023
Team ID	Team - 592731
Project Name	Walmart Sale Analysis For Retail Industry with Machine Learning
Maximum Marks	8 marks

### 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	Project Initialization & Infrastructure Setup	USN-1	As a project manager, I want to set up the development environment and configure the necessary infrastructure to commence the Walmart Sale Analysis project.	1	High	Akshara
Sprint-1	Data Collection	USN-2	As a data engineer, I want to gather and collate a comprehensive dataset of Walmart's historical sales data and	2	High	Akshara

			relevant parameters for training the machine learning model.			
Sprint-2	Data preprocessing	USN-3	Preprocess the collected dataset by cleaning, normalizing, and splitting it into training and validation sets to prepare it for analysis.	3	High	Akshara
Sprint-3	Model Development & Training	USN-4	Select the most suitable model for sales prediction and train the chosen machine learning model using the preprocessed Walmart sales dataset.	5	High	Chetan
Sprint-4	Model Deployment & Integration	USN-5	As a software developer, I want to deploy the trained machine learning model as a service or API and integrate it into a user-friendly interface	6	High	Chetan
Sprint-5	Personalized Risk Assessment	USN-6	As an individual, I want to utilize the developed model to forecast future sales trends and make informed decisions	1	Medium	Yogitha
Sprint-5	Model Evaluation and Enhancement	USN-7	These user stories represent the key phases and tasks involved in the project planning for Walmart Sale Analysis in the retail industry using machine learning. The team members and their responsibilities can be customized based on your project team's composition.	2	High	Yogitha

### Project Tracker, Velocity and 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	3	1 Day	28 Oct 2023	28 Oct 2023	3	28 Oct 2023
Sprint-2	3	1 Day	29 Oct 2023	29 Oct 2023	3	29 Oct 2023
Sprint-3	5	3 Days	30 Oct 2023	1 Nov 2023	5	1 Nov 2023
Sprint-4	6	3 Days	2 Nov 2023	4 Nov2023	6	4 Nov2023
Sprint-5	3	2 Days	5 Nov 2023	6 Nov 2023	3	6 Nov 2023

### Velocity:

Imagine we have a 11-days sprint duration, and the velocity of the team is 3 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$\text{Velocity} = (3+3+5+6+3) / 5 = 20 / 5 = 4$$

$$AV = \frac{\text{sprint duration}}{\text{velocity}}$$

$$AV = 11/4 = 2.75$$

## Burndown Chart:

### Sprint burndown

BETA



0 points done, 3 points to go



# Board Section

Software project

PLANNING

Timeline

Backlog

Board

+ Add view

DEVELOPMENT

Code

Project pages

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GROUP BY: None

Insights

TO DO 5

Apply time-series analysis techniques to identify seasonality and trends in sales data. Forecast future sales using appropriate models like ARIMA or Exponential Smoothing.

✓ KAN-4

Segment Walmart's customer base based on purchasing behavior and demographics. Analyze the performance of

IN PROGRESS 5

Perform data preprocessing tasks, including data normalization and handling missing values. Implement an ETL (Extract, Transform, Load) process to prepare the data for analysis.

✓ KAN-2

Conduct EDA to understand the data's characteristics, distribution, and outliers. Create

DONE 1 ✓

Set up the project environment, including version control and collaboration tools. Identify and collect historical sales data from Walmart's databases. Ensure data integrity and perform initial data cleaning.

PROJECT INFRASTRUCTURE AND SETUP

✓ KAN-15

Quickstart

TO DO 5

Segment Walmart's customer base based on purchasing behavior and demographics. Analyze the performance of different customer segments in terms of sales.

☒ KAN-5

Analyze inventory data to optimize stocking levels and reduce holding costs. Develop a plan for inventory management,

IN PROGRESS 5

Conduct EDA to understand the data's characteristics, distribution, and outliers. Create visualizations to gain insights into sales trends and customer behavior.

☒ KAN-3

Perform data preprocessing tasks, including data normalization and handling

DONE 1 ✓

☒ KAN-15 ✓

Quickstart

# Backlog Section

The screenshot displays the 'Backlog' section of a project management application. The interface is divided into three main areas: a left sidebar, a top navigation bar, and a central workspace.

**Left Sidebar:**

- My Kanban Project** (Software project)
- PLANNING**
  - Timeline
  - Backlog** (selected)
  - Board
  - + Add view
- DEVELOPMENT**
  - Code
  - Project pages
  - Add shortcut
- You're in a team-managed project
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**Top Navigation Bar:**

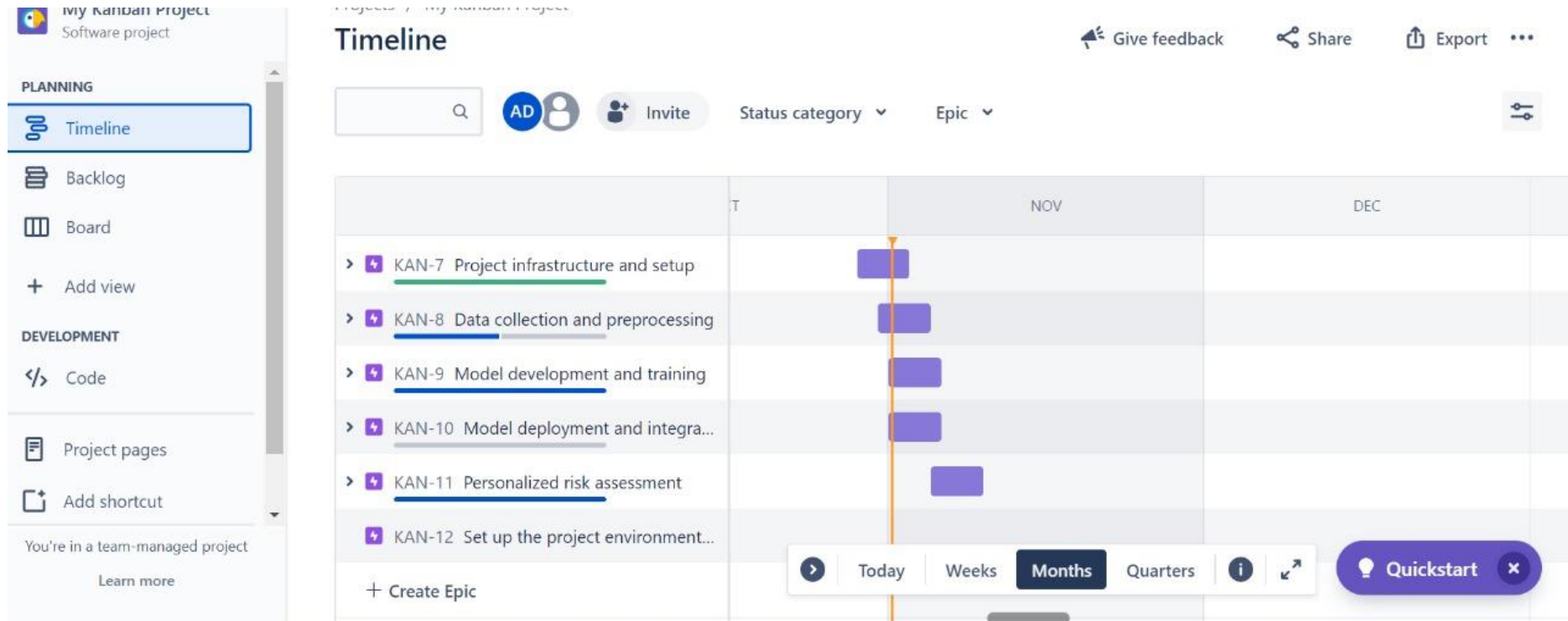
- Projects / My Kanban Project
- Backlog
- Search bar
- AD (Avatar)
- Invite
- Epic (dropdown)
- Cloud icon
- Settings icon

**Central Workspace:**


- Epic** (dropdown menu)
  - Issues without epic
  - > Project infrastructure and setup
  - > Data collection and preprocessing
  - > Model development and training
  - > Model deployment
  - + Create epic
- Board (11 issues)**
  - 5 5 1 (Issue counts)
  - Issues list:
    - ✓ KAN-2 Perform data preprocessing tasks, including data normalizat... **IN PROGRESS**
    - ✓ KAN-3 Conduct EDA to understand the data's characteristics, distri... **IN PROGRESS**
    - ✓ KAN-4 Apply time-series analysis techniques to identify seasonality... **TO DO**
    - ✓ KAN-5 Segment Walmart's customer base based on purchasing be... **TO DO**
    - ✓ KAN-6 Analyze inventory data to optimize stocking levels and redu... **TO DO**
    - ✓ KAN-15 Set up the project environment, including version control a... **DONE**
    - ✓ KAN-16 Perform data preprocessing tasks, including data normaliz... **IN PROGRESS**
    - ✓ KAN-17 Conduct EDA to understand the data's characteristics, distr... **TO DO**
    - ✓ KAN-18 Apply time-series analysis techniques to identify seasonalit... **IN PROGRESS**
    - ✓ KAN-19 Segment Walmart's customer base based on purchasing b... **IN PROGRESS**

**Quickstart** (popup button)

# Timeline Section





 **My Kanban Project**  
Software project

PLANNING

Timeline

Backlog

Board

+ Add view

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Projects / My Kanban Project

## Timeline

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