Project Initialization and Planning Phase

Date	28 June 2025
Team ID	LTVIP2025TMID50924
Project Title	Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau
Maximum Marks	3 Marks

<u>Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau</u>

Project Overview	
Objective	The primary objective of this project is to analyze and visualize housing market trends by examining sale prices and key property features using Tableau. The project aims to provide insights into market patterns, price fluctuations, and factors influencing home values, helping stakeholders make data-driven decisions.
Scope	• **Geographical Coverage:** Focus on a specific city, region, or nationwide data. • **Data Sources:** Utilize publicly available datasets (e.g., Zillow, Kaggle, government housing data). • **Analysis Areas:** Price trends over time, location-based variations, property features affecting prices. • **Visualization Methods:** Interactive dashboards, Story, Pie chart, Bar charts, and Histogram.
Problem Statement	

Description	The housing market is influenced by multiple factors, including location, property size, number of bedrooms, and economic trends. However, without effective visualization, identifying key trends and insights can be challenging. This project aims to bridge that gap by providing a clear, interactive representation of housing market data.
Impact	• Helps potential buyers and sellers make informed decisions. • Assists real estate professionals in understanding pricing trends. • Provides policymakers with insights into housing affordability and market fluctuations.

Proposed Solution	
Approach	• Collect and preprocess historical housing market data. • Use Tableau to create interactive visualizations. • Apply data analysis techniques to identify patterns and correlations. • Develop dashboards for easy interpretation of housing trends.
Key Features	• **Dynamic Visualizations:** Interactive dashboards showing trends over time. • **Geospatial Analysis:** Heat maps highlighting price variations by location. • **Comparative Analysis:** Charts comparing features like square footage vs. price. • **Predictive Insights:** Basic forecasting of price trends using historical data.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	Standard CPU (intel i7)
Memory	RAM specifications	16 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		

Frameworks	Data Visualization Frameworks	Tableau
Libraries	Additional libraries	Flask Package
Development Environment	IDE, version control	Jira, GitHub
Data		
Data	Source, size, format	Kaggle Dataset (Transformed Housing Data 2), 10MB