Project Report Format

1. INTRODUCTION

1.1 Project Overview

This project aims to visualize housing market trends using Tableau by analyzing data attributes such as sale price, number of bedrooms, bathrooms, and house age. The goal is to help users and stakeholders understand key patterns and make informed decisions.

1.2 Purpose

- Solve complex housing market analysis using visual analytics.
- Improve understanding of pricing patterns, trends, and influencing factors.
- Empower users like buyers, sellers, real estate agents, and policymakers with actionable insights.

2. IDEATION PHASE

2.1 Problem Statement

The real estate market has vast amounts of data, but it is underutilized due to lack of intuitive visualization. Buyers and sellers struggle to identify fair pricing or trends in property features.

2.2 Empathy Map Canvas

Think & Feel: “Am I overpaying?” “Is this a good location?”
See: Multiple listings with inconsistent data.
Hear: Advice from agents, online reviews.
Say & Do: Search on websites, filter prices, compare houses.
Pain: Lack of clear, reliable trend information.
Gain: Visual clarity on property value and trends.

2.3 Brainstorming

Ideas generated:

- Build interactive dashboards
- Use filters for city, price, and bedrooms
- Show year-wise price trends
- Add story feature to narrate key insights
- Incorporate comparison charts

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

1. Searches for house listings
2. Feels overwhelmed by data
3. Uses our visual dashboard
4. Gains clarity
5. Makes a confident decision

3.2 Solution Requirement

Functional:

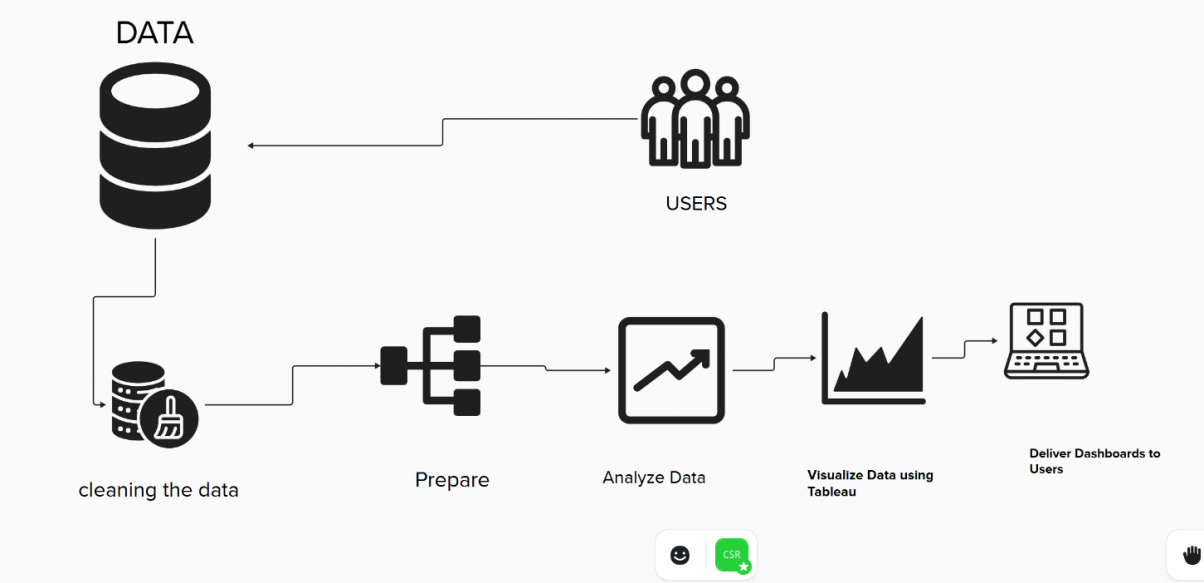
- Load housing dataset
- Clean and transform data
- Build interactive Tableau dashboards
- Filter and drill-down features

Non-Functional:

- Fast load time
- User-friendly interface
- Publicly accessible dashboards

3.3 Data Flow Diagram

Level 0 DFD



3.4 Technology Stack

- **Visualization Tool**: Tableau
- **Data Format**: CSV
- **Data Source**: Kaggle / Transformed_Housing_Data2
- **Other Tools**: Excel

4. PROJECT DESIGN

4.1 Problem Solution Fit

The proposed solution addresses the difficulty in understanding property trends by transforming raw data into clear, dynamic visual dashboards.

4.2 Proposed Solution

Create Tableau dashboards and storyboards that visualize property prices, number of rooms, age of homes, and comparisons across locations.

4.3 Solution Architecture

- **Input**: CSV dataset with housing features
- **Processing**: Data cleaning and transformation
- **Output**: Dashboards and stories in Tableau
- **Users**: Buyers, sellers, analysts, real estate agents

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Product backlog created with user stories for each task:

- Data collection and cleaning
- Creating bar charts, scatter plots
- Dashboard design
- Story creation
- Testing and publishing

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

- Data load time within 3–5 seconds
- Dashboards tested with filters and high-volume data
- Dashboard responsiveness verified for different screen sizes

7. RESULTS

7.1 Output Screenshots

(Attach your Tableau dashboard screenshots showing:

- Bar chart of price vs. bedrooms
- Scatter plot of price vs. age
- Filters for city, price range
- Story scenes with insights

8. ADVANTAGES & DISADVANTAGES

Advantages:

- Intuitive and visual data insights
- Saves time for analysis
- Helps in decision-making

Disadvantages:

- Requires Tableau knowledge
- Limited by dataset quality
- Real-time data integration not included

9. CONCLUSION

The project successfully demonstrated how housing market data can be transformed into meaningful insights using Tableau. The visual approach helps reduce complexity and increases confidence in data-driven decisions.

10. FUTURE SCOPE

- Add geolocation mapping
- Include real-time data updates
- Mobile/tablet optimized dashboards
- Integrate with real estate platforms

11. APPENDIX

➤ Source Code :

No programming code used—Tableau-based only.

➤ Dataset Link:

https://www.kaggle.com/datasets/biplavkant/transformed-housing-data2
(*Use a dataset with fields like price, bedrooms, bathrooms, age of house*)

➤ GitHub & Project Demo Link:

https://github.com/Tejaswini-4413/visualizing-Housing-Market-Trends-An-Analysis-Of-Sale-Prices-Features-Using-Tableau/tree/main/project%20planing%20template%201