Project Design Phase

Solution Architecture

Date	19 June 2025
Team ID	LTVIP2025TMID48901
Project Name	Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau
Maximum Marks	4 Marks

Solution Architecture:-

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.

- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.

- Define features, development phases, and solution requirements.

- Provide specifications according to which the solution is defined, managed, and delivered.

Key Aspects:-

🧩 Business Problem:-

Stakeholders such as real estate analysts and executives struggle to interpret scattered housing market data. There's a need for a centralized tool to visualize and analyze house prices, renovation effects, and property characteristics.

🧪 Technology Solution:-

The solution uses Tableau to create an interactive dashboard built from a structured housing dataset (e.g., Kaggle's train.csv). Users can analyze renovation impacts, age distribution, and other features through visual filters and charts.
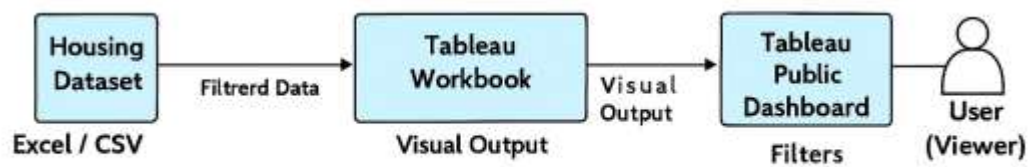
🧱 Features:-

- Visualization of sales by renovation age

- Distribution analysis by bathrooms, bedrooms, floors

- Age comparison between renovated and non-renovated houses

- Exportable insights

📦 Solution Delivery:

- Tableau Public Dashboard
- Published with open-source CSV dataset
- Shared via URL + Screenshots

Example - Solution Architecture Diagram: -

Figure 1: Solution Architecture for Housing Market Visualization using Tableau