PROJECT DESIGN PHASE

SOLUTION ARCHITECTURE

Date	18 June 2025
Team ID	LTVIP2025TMID
Project Name	Visualizing Housing Market Trends: An Analysis of Sales Prices and Features Using Tableau
Maximum Marks	4 marks

Solution Architecture:

The **House Insights** system is designed to analyse housing market data and uncover key factors that influence property prices and sales trends. The architecture starts with a **data ingestion layer**, where cleaned and transformed housing data—such as sales price, number of bedrooms, bathrooms, floors, house age, renovation status, and basement area—is imported into the system. This data is processed using **Python-based ETL pipelines** that prepare it for analysis by calculating derived metrics (e.g., years since renovation, average sales price by category).

The **processing layer** includes logic to group, filter, and analyse data trends—for example, total sales by renovation age or house age distributions across different features (like bedrooms and bathrooms). These insights are visualized using **Tableau dashboards**, which allow stakeholders to interactively explore the data and spot patterns, such as how renovations impact pricing or how house features correlate with age.