**Project Design Phase**

**Solution Architecture**

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| Date | 24 June 2025 |
| Team ID | LTVIP2025TMID47510 |
| Project Name | Visualizing Housing Market Trends: An Analysis of Sale Prices and Features |
| Maximum Marks | 4 Marks |

**Solution Architecture:**

### ****Explanation of Components****

1. **Data Sources:**
   * Public or proprietary datasets related to home sales.
   * Includes features like price, location, number of bedrooms, bathrooms, year built, etc.
2. **Data Preprocessing:**
   * Cleansing to remove invalid entries.
   * Formatting date and numeric fields.
   * Creation of derived metrics like “Price per Sqft” and “Age of House”.
3. **Tableau Engine:**
   * Tableau pulls cleaned data and builds visual layers using its in-memory Hyper engine.
   * Filters and calculated fields are configured here.
4. **Visualization Layer:**
   * Consists of dashboards (bar graphs, line charts, maps) and stories (narrative-driven dashboards).
   * Filters allow users to explore data dynamically.
5. **Stakeholders:**
   * End users interact with the dashboard to explore trends, compare prices, and extract insights.
   * No technical expertise is needed to use the solution.