

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

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| Date | 30 June 2025 |
| Team ID | LTVIP2025TMID49628 |
| Project Name | Visualizing Housing Market Trends An Analysis of Sale Prices and Features using Tableau |
| Maximum Marks | 4 Marks |

Functional Requirements:

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|--------|--------------------------------------|----------------------------------------------------------------------------------------------------|
| FR-1 | Data Collection and Import | System must allow importing housing dataset from Excel/CSV. |
| FR-2 | Data Cleaning and Transformation | Must calculate house age and years since renovation; handle missing or invalid data |
| FR-3 | Visualization of Key Metrics | Dashboard must display KPIs such as average price, total houses, and basement area. |
| FR-4 | Sales Analysis by Renovation | Create a histogram that groups total sales based on years since renovation. |
| FR-5 | Feature-based House Age Distribution | Display grouped bar charts showing house age versus bathrooms, bedrooms, and floors. |
| FR-6 | Renovation Status Visualization | Show proportion of renovated vs. non renovated houses using pie charts. |
| FR-7 | Dashboard Interactivity | Enable users to filter dashboard by house age, renovation status, bedrooms, bathrooms, and floors. |
| FR-8 | Reporting and Export | Allow export of visualizations in PDF or image format for reporting and presentations. |

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

| FR No. | Non-Functional Requirement | Description |
|--------|----------------------------|---------------------------------------------------------------------------------------------------------|
| NFR-1 | Usability | Dashboard must be intuitive and easy to navigate for non technical stakeholders. |
| NFR-2 | Security | Only authorized users should be able to access or modify the dashboard if published to a secure server. |
| NFR-3 | Accessibility | Visuals must be readable on standard desktop and tablet screens. |
| NFR-4 | Performance | Dashboard should load within 5 seconds with a dataset of up to 10,000 records. |
| NFR-5 | Maintainability | The solution must be easily updatable if new scenarios or charts are added. |
| NFR-6 | Scalability | The system should be able to accommodate additional features or larger datasets in the future. |