

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

Date	26 January 2025
Team ID	LTVIP2025TMID60628
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 Overview Dashboard	<ul style="list-style-type: none">Dataset Summary Dashboard CreationKey Metrics KPI Cards DisplayAverage Sales Price VisualizationTotal Records Counter ImplementationBasement Area VisualizerData Quality Indicators
FR-2	Renovation Analysis Module	<ul style="list-style-type: none">House Age Pie Chart CreationRenovation Status SegmentsAge Group Categories DefinitionRenovated vs Non-Renovated ComparisonAge Distribution Donut ChartProperty Lifecycle Visualization
FR-3	Age Distribution Analysis	<ul style="list-style-type: none">Bathroom Count Bar ChartBedroom Distribution GraphFloor Level AnalysisAge vs Features MatrixFeature Combination HeatmapMulti-Attribute Comparison Tool
FR-4	Feature Analysis Dashboard	<ul style="list-style-type: none">Executive Summary DashboardInteractive Filter PanelDrill-Down Navigation SystemKey Insights CalloutsStakeholder-Specific ViewsStrategic Recommendations Display
FR-5	Interactive Dashboard Integration	<ul style="list-style-type: none">Executive Summary DashboardInteractive Filter PanelDrill-Down Navigation SystemKey Insights CalloutsStakeholder-Specific ViewsStrategic Recommendations Display
FR-6	User Access Management	<ul style="list-style-type: none">Role-Based Dashboard AccessAnalyst View ConfigurationMarketing Team View SetupExecutive View CustomizationGuest User Limitations

FR-7	Data Export & Reporting	<ul style="list-style-type: none"> • PDF Report Generation • Excel Data Export • Image Export for Presentations • Scheduled Report Delivery • Custom Report Templates
FR-8	Real-Time Data Integration	<ul style="list-style-type: none"> • Data Source Connection • Automated Data Refresh • Data Validation Checks • Error Handling & Logging • Data Backup & Recovery

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	<ul style="list-style-type: none"> • Dashboard must be intuitive with minimal training required • Navigation should be self-explanatory for all user types • Visual consistency across all dashboard components • Responsive design for different screen sizes • Maximum 3 clicks to reach any specific insight • Tooltips and help text for complex visualizations
NFR-2	Security	<ul style="list-style-type: none"> • Role-based access control for different user groups • Secure data transmission using HTTPS • User authentication and session management • Data privacy compliance for sensitive housing information • Audit trail for all user activities • Regular security updates and patches
NFR-3	Reliability	<ul style="list-style-type: none"> • System uptime of 99.5% during business hours • Automated backup of all dashboards and configurations • Error recovery mechanisms for data loading failures • Consistent performance across different browsers • Data integrity validation checks • Fallback options for critical visualizations
NFR-4	Performance	<ul style="list-style-type: none"> • Dashboard loading time less than 5 seconds

		<ul style="list-style-type: none"> • Interactive filters response time under 2 seconds • Support for datasets up to 1 million records • Efficient memory usage for complex visualizations • Optimized queries for large data processing • Smooth transitions and animations
NFR-5	Availability	<ul style="list-style-type: none"> • 24/7 system availability with planned maintenance windows • Redundant server configuration • Disaster recovery plan with 4-hour recovery time • Multiple data center support • Automated monitoring and alerting • Service level agreement compliance
NFR-6	Scalability	<ul style="list-style-type: none"> • Support for up to 100 concurrent users • Horizontal scaling capability for increased load • Expandable data storage architecture • Additional dashboard creation without performance impact • Multi-tenant architecture support • Cloud-based scaling options
NFR-7	Compatibility	<ul style="list-style-type: none"> • Cross-browser compatibility (Chrome, Firefox, Safari, Edge) • Mobile device responsiveness • Integration with existing ABC Company systems • Standard data format support (CSV, Excel, JSON) • API compatibility for future integrations • Version control for dashboard updates
NFR-8	Maintainability	<ul style="list-style-type: none"> • Modular dashboard design for easy updates • Comprehensive documentation for all components • Version control for all dashboard configurations • Automated testing framework • Clear code structure and naming conventions • Knowledge transfer documentation