Project Design Phase II

Data Flow Diagram & User Stories

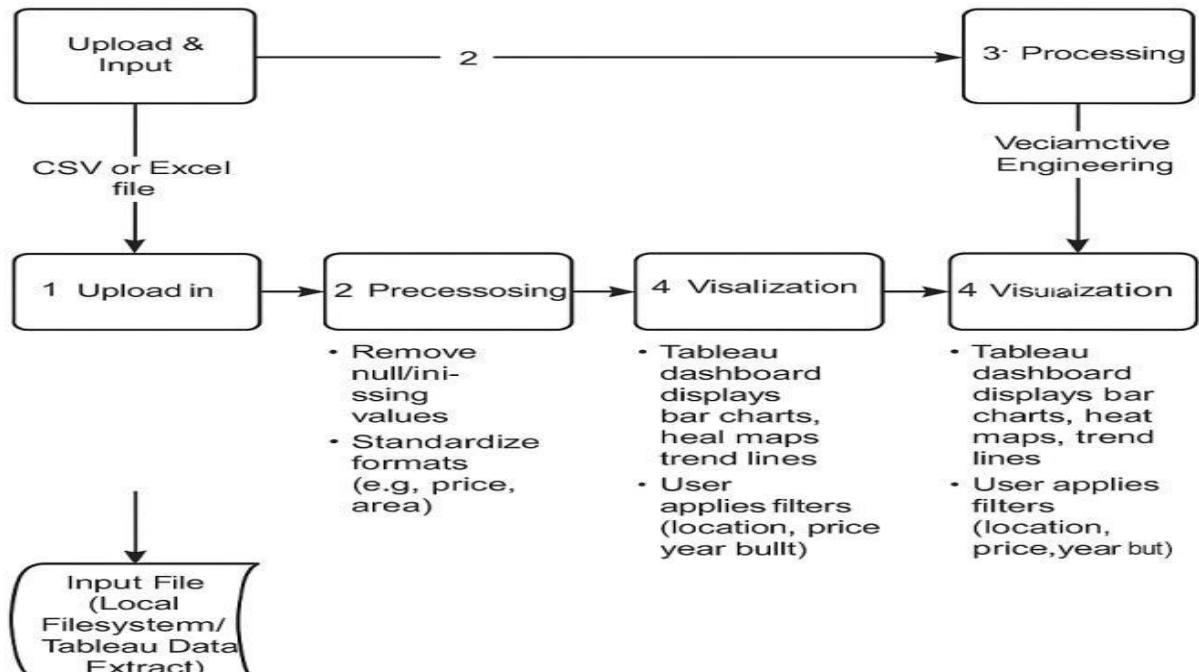| Date	*19 June 2025*
Team ID	*LTVIP2025TMID48542*
Project Name	*Visualizing Housing Market Trends: An Analysis of Sale Prices and Features using Tableau.*
Maximum Marks	4 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

DFD Level 0 - Project Overview

- User uploads the housing dataset (CSV/Excel)

- Preprocessing Module (Python) cleans and transforms the data

- Feature Engineering Module adds derived attributes (e.g., price/sq. ft)

- Visualization Layer (Tableau Dashboard) displays trends and insights
- User views or exports filtered insights

DFD Level 1 - Detailed Process
- Data Upload → File Validation → Missing Value Handling

- Data Transformation → Unit Normalization → Column Derivations

- Dashboard → Filters by Region, Price, Bedrooms, etc. → Displays Graphs and Charts

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority / Release
Data Analyst / Student	Data Upload	USN-1	As a user, I can upload a housing dataset in CSV/Excel format	Dataset successfully uploaded and ready for processing	High / Sprint-1
Data Analyst / Student	Data Preprocessing	USN-2	As a user, I can clean data and remove missing entries	Data cleaned with no missing/null values	High / Sprint-1
Data Analyst / Student	Feature Engineering	USN-3	As a user, I can create new metrics like price per sqft, age of house	Derived fields are generated correctly	High / Sprint-1
End User / Viewer	Visualization Filtering	USN-4	As a user, I can filter housing data by location, price, or bedroom count	Filters apply correctly on dashboard	High / Sprint-2
End User / Viewer	Trend Analysis	USN-5	As a user, I can view charts showing sale price trends over time	Charts show monthly/yearly price trends	High / Sprint-2
End User / Viewer	Export Data	USN-6	As a user, I can export filtered visualizations as images or PDFs	Export works and saves in selected format	Medium / Sprint-3