Project Design Phase-II
Data Flow Diagram & User Stories

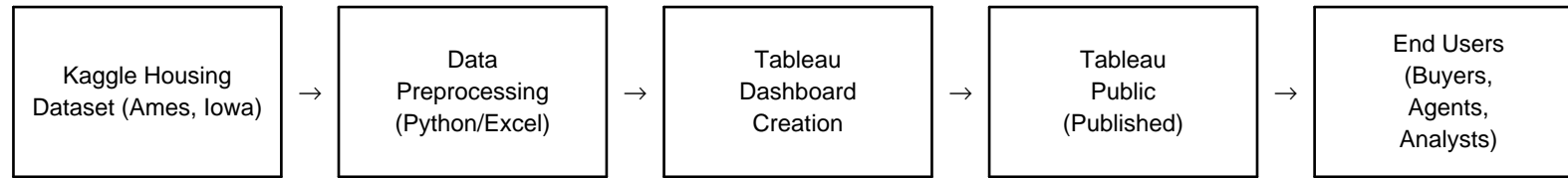| Date	
Team ID	
Project Name	Visualizing Housing Market Trends: An Analysis of Sale Prices and Features Using Tableau
Maximum Marks	4 Marks

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

Housing Market
Analysis System

| Kaggle Dataset | → Raw Data → | Analyze Housing Sale Prices & Features | → Reports → | Buyers / Agents / Analysts |

↑↓

Researchers / Analysts

← Query ←

DFD Level 1

Kaggle Housing Dataset (Ames, Iowa) → Data Preprocessing (Python/Excel) → Tableau Dashboard Creation → Tableau Public (Published) → End Users (Buyers, Agents, Analysts)
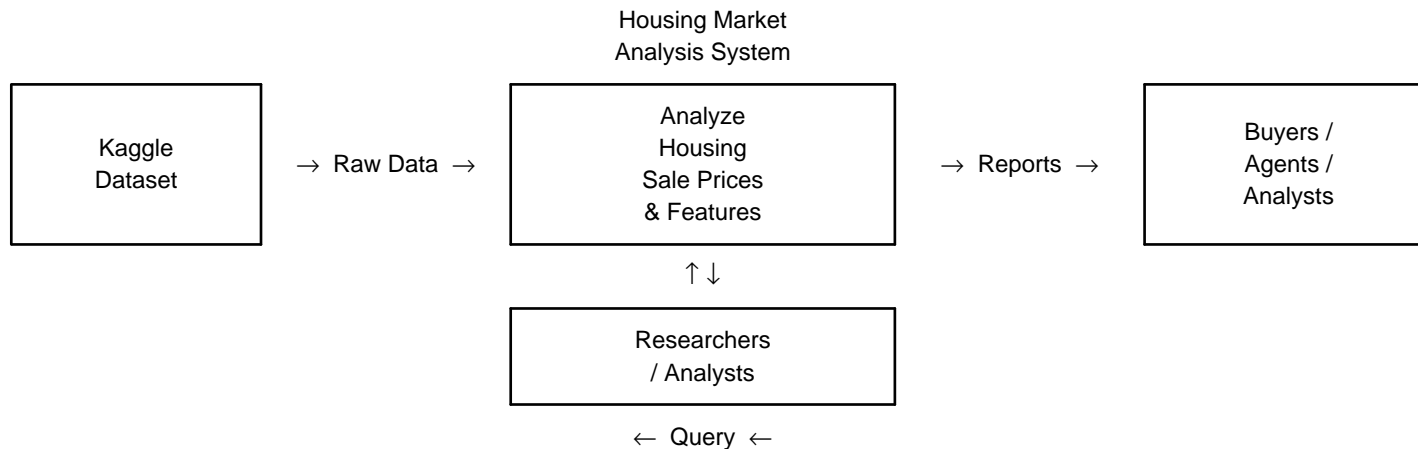
User Stories:

User stories define the functional requirements from the end-user perspective. They help the team understand what the user wants to achieve using the system.

US No.	User Type	User Story	Acceptance Criteria
US-1	Home Buyer	As a home buyer, I want to see average sale prices by neighborhood on a map so that I can identify affordable areas.	Map shows color-coded neighborhoods with tooltip showing avg price.
US-2	Home Buyer	As a home buyer, I want to filter properties by number of bedrooms and price range so that I can find listings within my budget.	Filter panel updates all charts dynamically on selection.
US-3	Real Estate Agent	As a real estate agent, I want to see the correlation between living area and sale price so that I can advise clients on pricing.	Scatter plot shows GrLivArea vs SalePrice with trend line.
US-4	Real Estate Agent	As a real estate agent, I want to compare price trends over years so that I can identify the best time to buy or sell.	Line chart shows year-over-year avg sale price with filter by neighborhood.
US-5	Market Analyst	As a market analyst, I want to view price distributions by overall quality rating so that I can assess how quality affects value.	Box plot or bar chart shows avg sale price for quality ratings 1–10.
US-6	Market Analyst	As a market analyst, I want to examine the impact of garage capacity and basement area on price so that I can identify hidden value drivers.	Heat map or grouped bar chart shows multi-feature pricing interactions.
US-7	Any User	As a user, I want to share the dashboard with colleagues so that we can collaborate on property research.	Dashboard is published on Tableau Public with a shareable link.