Project Design Phase-II
Data Flow Diagram & User Stories

| Date	19 JUNE 2025
Team ID	LTVIP2025TMID33800
Project Name	TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning
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.

Example: (Simplified)
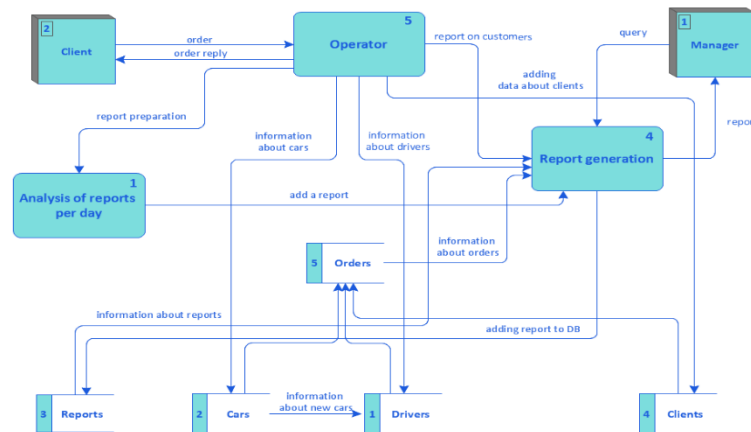
Example: DFD Level 0 (Industry Standard)
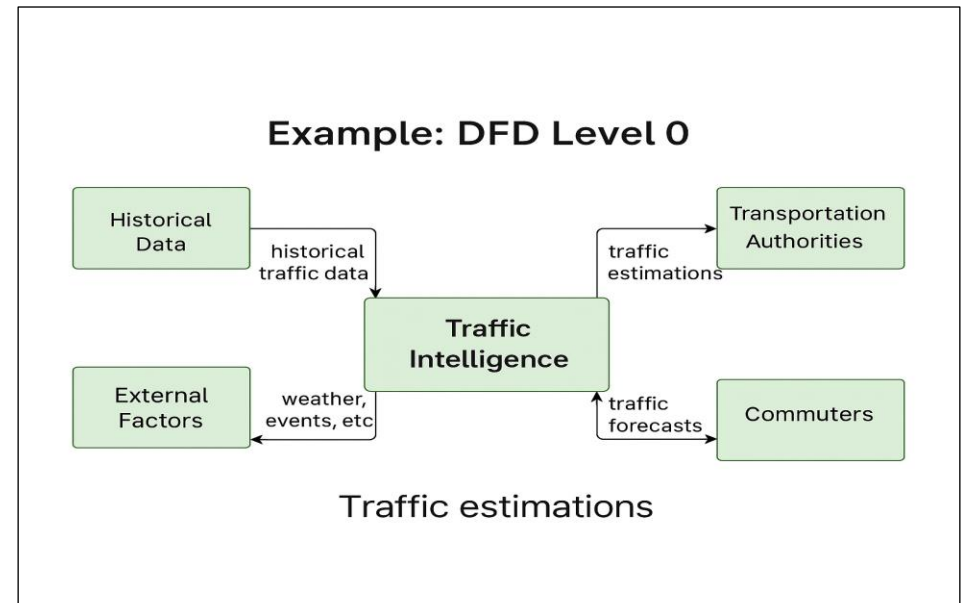
User Stories

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 Engineer	Data Integration	USN-1	As a developer, I want to train and validate a model to predict traffic volume	Data sources integrated and stored in raw form	High	Sprint-1
Data Engineer	Data Preprocessing	USN-2	As a developer, I want to evaluate model performance using test data and metrics	Dataset is cleaned, transformed, and ready for modeling	High	Sprint-1
ML Engineer	Model Building	USN-3	As a developer, I want to deploy the trained model as a service for real-time predictions	Model trained and validated with >80% accuracy	Low	Sprint-2
ML Engineer	Model Evaluation	USN-4	As an admin, I want to access real-time and historical traffic data through a secure dashboard	Model achieves acceptable MAE/RMSE	Medium	Sprint-1
DevOps	Model Deployment	USN-5	As a developer, I want to deploy the trained model as a service for real-time predictions	Model accessible via API	High	Sprint-1
Admin	Dashboard Access	USN-6	As an admin, I want to access real-time and historical traffic data through a secure dashboard	Dashboard displays real-time predictions	High	Sprint-4
City Planner	Urban Planning Insights	USN-7	As a city planner, I want to visualize traffic trends to assist infrastructure decisions	Reports downloadable by region and date	Medium	Sprint-3
Commuter	Route Optimization	USN-8	As a commuter, I want suggested routes based on predicted traffic	Routes change based on live prediction data	Low	Sprint-4
Third-party App	API Integration	USN-9	As a developer, I want access to traffic prediction API for use in external apps	API returns responses <2s and supports authentication	High	Sprint-2