Project Design Phase-II
Data Flow Diagram & User Stories

Date	8 February 2026
Team ID	LTVIP2026TMIDS76029
Project Name	Online Payments Fraud Detection using Machine Learning
Maximum Marks	4 Marks

Data Flow Diagrams:

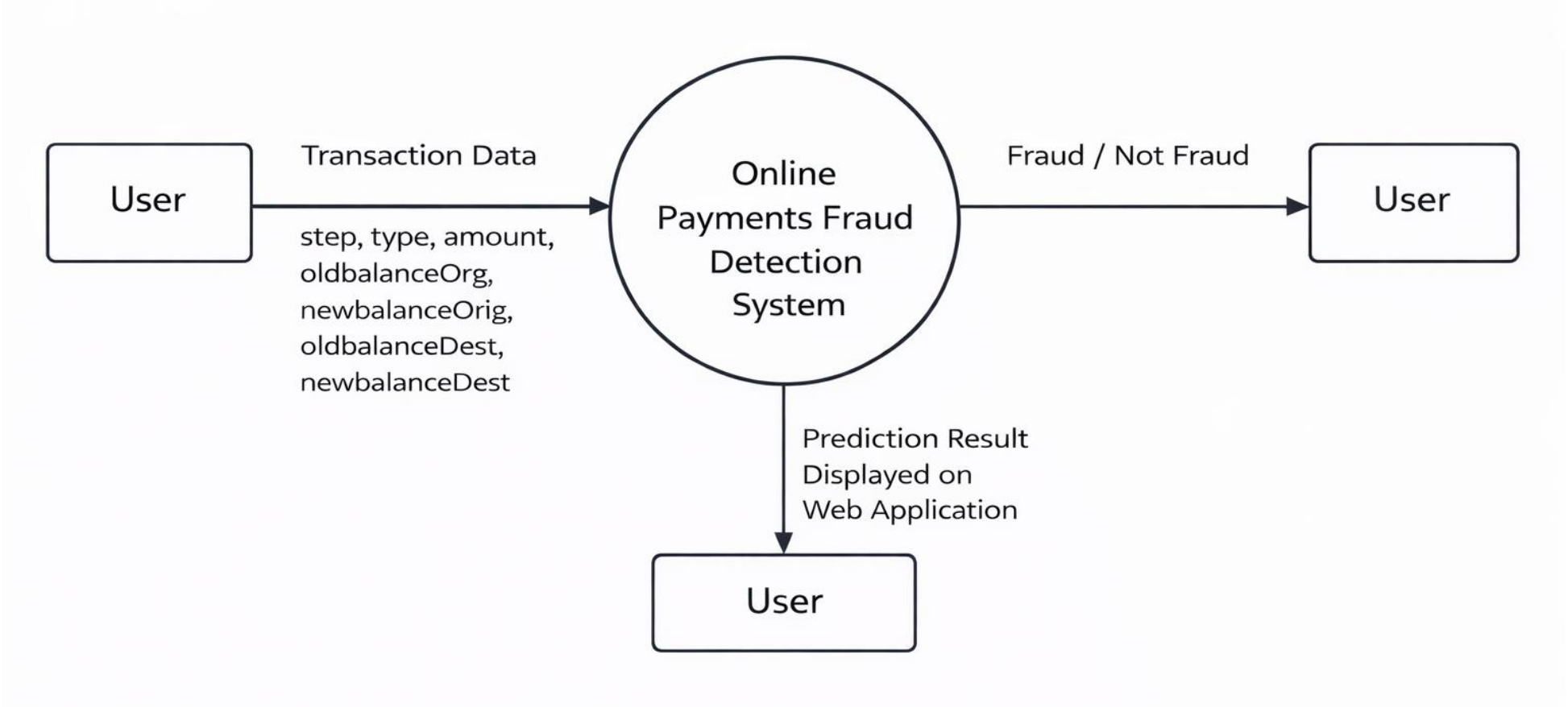
A Data Flow Diagram (DFD) is a graphical representation that illustrates how data moves within the **Online Payments Fraud Detection System**. It clearly shows how transaction data enters the system, how it is processed using Machine Learning algorithms, and how the final prediction result is generated and displayed to the user.

In our project, the DFD represents the complete flow of information starting from the user entering transaction details through the web interface. The input data is then sent to the backend server, where it is preprocessed and passed to the trained Machine Learning model for fraud prediction. Based on the model's analysis, the system classifies the transaction as either **Fraudulent** or **Not Fraudulent**. The result is then displayed back to the user through the web application.

The DFD also shows where data is temporarily stored, such as the trained model file (payments.pkl) and transaction inputs. It helps in understanding how data enters the system, how it is transformed during processing, and how the output is delivered in real-time.

A well-structured DFD ensures clarity in system design and helps explain the workflow of the fraud detection system in a simple and visual manner.

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
Customer (Web User)	View Home Page	USN-1	As a user, I can view the home page to understand the purpose of the fraud detection system.	Home page loads with project description and navigation buttons.	High	Sprint-1
Customer (Web User)	Navigate to Prediction Page	USN-2	As a user, I can navigate to the prediction page from the home page.	Clicking “Predict” opens the input form page.	High	Sprint-1
Customer (Web User)	Enter Transaction Details	USN-3	As a user, I can enter transaction details like step, type, amount, and balances.	System accepts valid input values in all required fields.	High	Sprint-2
Customer (Web User)	Submit for Fraud Check	USN-4	As a user, I can submit the transaction details for fraud detection.	Clicking “Submit for Fraud Check” sends data to backend successfully.	High	Sprint-2
Customer (Web User)	View Prediction Result	USN-5	As a user, I can see whether the transaction is Fraud or Not Fraud.	Result page displays prediction clearly (Fraud/Not Fraud).	High	Sprint-3

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Customer (Web User)	Predict Another Transaction	USN-6	As a user, I can go back and check another transaction.	“Predict Another” button redirects to input page.	Medium	Sprint-3
Customer (Web User)	Return to Home	USN-7	As a user, I can navigate back to the home page.	“Back to Home” button redirects correctly.	Medium	Sprint-3
Administrator (System)	Deploy ML Model	USN-8	As an administrator, I can deploy the trained ML model (payments.pkl) for prediction.	System loads model successfully without error.	High	Sprint-4
Administrator (System)	Model Integration	USN-9	As an administrator, I can integrate the ML model with Flask backend.	Model returns prediction when API is called.	High	Sprint-4