Project Design Phase-II
Data Flow Diagram & User Stories
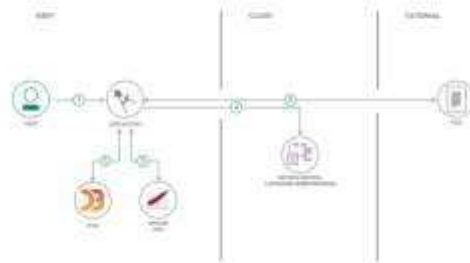
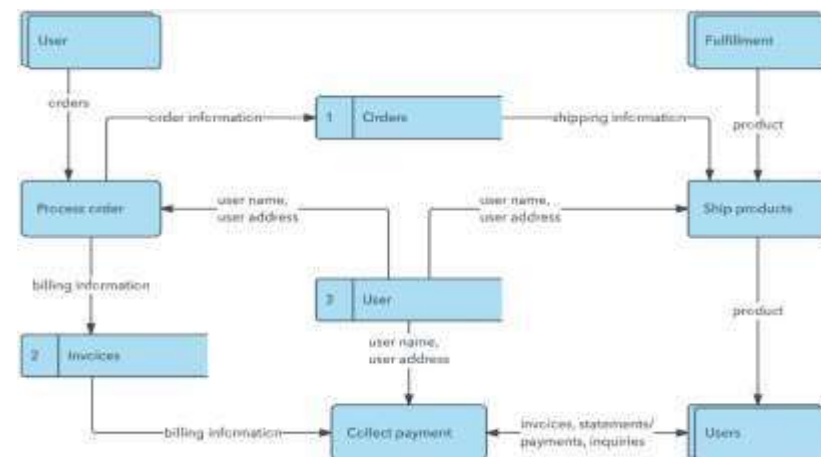| Date	31 January 2025
Team ID	LTVIP2026TMIDS41276
Project Name	online payments fraud detection using machine learning
Maximum Marks	4 Marks

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)

Flow

1. User configures credentials for the Watson Natural Language Understanding service and starts the app.
2. User selects data file to process and load.
3. Apache Tika extracts text from the data file.
4. Extracted text is passed to Watson NLU for enrichment.
5. Enriched data is visualized in the UI using the D3.js library.

User Stories

Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
User Type					
Customer (Web User)	USN-1	As a user, I can access the home page of the fraud detection application	Application loads index.html successfully	High	Sprint-1
Customer (Web User) — Access Application					
Customer (Web User) — Enter Transaction Details	USN-2	As a user, I can enter transaction details like step, type, amount, balances	All input fields are visible and accept valid data types	High	Sprint-1
Customer (Web User) — Encode Transaction Type	USN-3	As a user, when I select transaction type, the system encodes it correctly	Selected type is transformed using encoder.pkl without error	High	Sprint-1
Customer (Web User) — Predict Fraud	USN-4	As a user, I can click Predict to check whether a transaction is fraud or not	System calls /predict route and displays prediction result	High	Sprint-1
Customer (Web User) — View Prediction Result	USN-5	As a user, I can see whether the transaction is "Fraud Transaction" or "Not a Fraud Transaction"	Prediction text is displayed clearly on the same page	High	Sprint-1

Customer Input Validation (Web User)	USN-6	Medium	Sprint-2	As a user, I should receive an error if invalid data is entered	System prevents submission or shows error message
Customer Responsive UI (Web User)	USN-7	Medium	Sprint-2	As a user, I can use the application on desktop and mobile browsers	UI adjusts properly for different screen sizes