

Project Design Phase-II

Data Flow Diagram & User Stories

Date	31 January 2025
Team ID	LTVIP2026TMIDS42143
Project Name	online payments fraud detection using machine learning
Maximum Marks	4 Marks

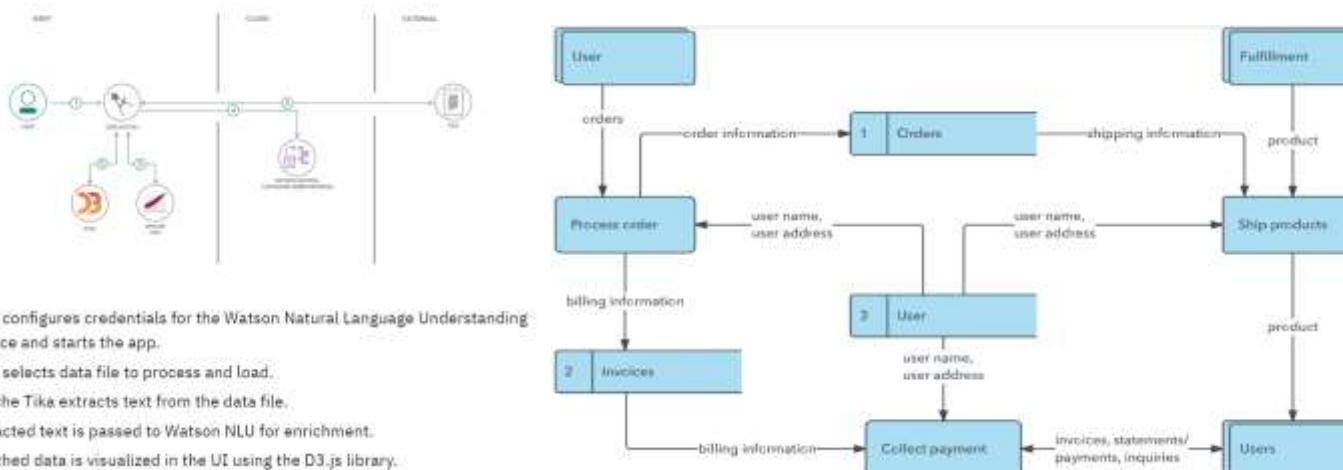
Data Flow Diagrams:

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: DFD Level 0 (Industry Standard)

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

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Customer (Web User)	Access Application	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)	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 (Web User)	Input Validation	USN-6	As a user, I should receive an error if invalid data is entered	System prevents submission or shows error message	Medium	Sprint-2
Customer (Web User)	Responsive UI	USN-7	As a user, I can use the application on desktop and mobile browsers	UI adjusts properly for different screen sizes	Medium	Sprint-2