

Project Design Phase-II

Data Flow Diagram & User Stories

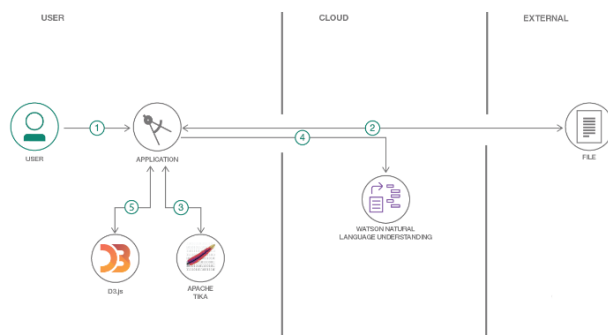
Date	11 February 2026
Team ID	LTVIP2026TMIDS54415
Project Name	Online Payment Fraud Detection using Machine Learning
Maximum Marks	4 Marks

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.

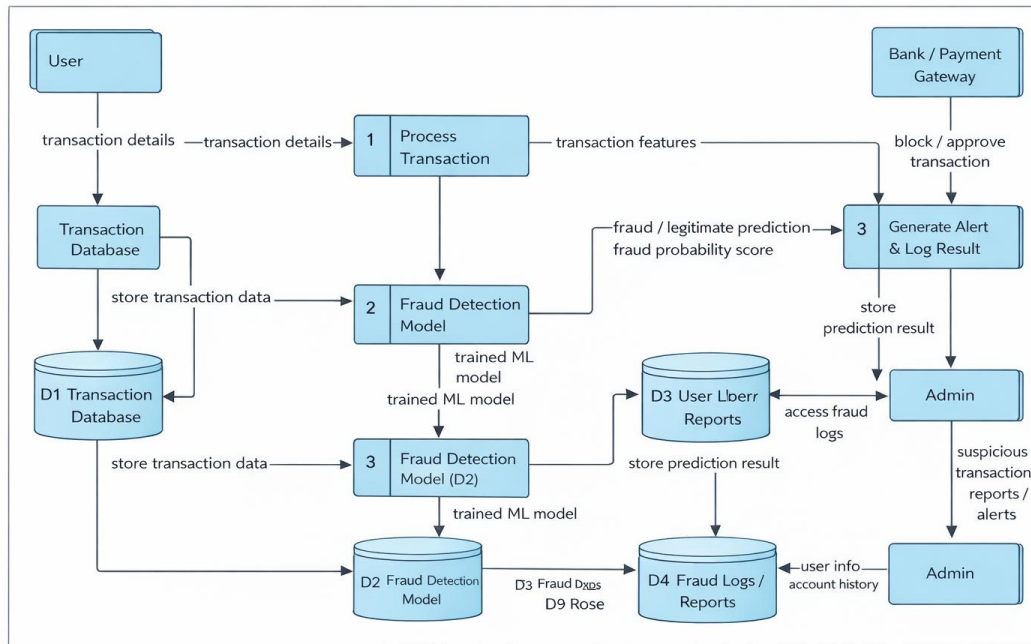
Example: [\(Simplified\)](#)

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.

Example: DFD Level 0 - Online Payment Fraud Detection System



User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Customer	Fraud Monitoring	US-1	As a customer, I want to receive real-time alerts when a high-risk transaction occurs on my account.	System sends instant notification (SMS/App/Email) for risky transactions.	High	Sprint-1
Customer	Transaction Transparency	US-2	As a customer, I want to view the risk score of my recent transactions.	User can see fraud probability score and transaction status.	High	Sprint-2
Customer	Account Security	US-3	As a customer, I want the system to temporarily block suspicious	Suspicious transaction is placed on hold until user confirmation.	High	Sprint-1

			transactions until I verify them.			
Customer	Authentication	US-4	As a customer, I want secure login using two-factor authentication.	User logs in using password + OTP verification.	High	Sprint-1
Fraud Analyst	Monitoring	US-5	As a fraud analyst, I want to review flagged transactions in a centralized dashboard.	Analyst can filter transactions by risk level, date, and user.	High	Sprint-2
Fraud Analyst	Investigation	US-6	As a fraud analyst, I want to see detailed transaction patterns for suspicious accounts.	System displays transaction history and anomaly indicators.	High	Sprint-3
Administrator	Reporting & Analytics	US-7	As an admin, I want to generate monthly fraud detection performance reports.	Admin can download reports showing precision, recall, F1-score, and accuracy.	High	Sprint-3