

**Project Design Phase-II**  
**Solution Requirements (Functional & Non-functional)**

Date	
Team ID	LTVIP2026TMIDS40243
Project Name	Online Payments Fraud Detection
Maximum Marks	4 Marks

**Functional Requirements**  
(Functional & Non-functional)

**Functional Requirements:**

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Transaction Input	User enters transaction details (amount, type, balances, etc.)
FR-2	Fraud Prediction	System analyzes input using trained ML model (Decision Tree)
FR-3	Model Processing	System performs feature encoding and prediction probability calculation
FR-4	Result Display	System displays result as "Fraud" or "Not Fraud"
FR-5	Model Training	System trains ML models (Decision Tree, Random Forest, SVM, XGBoost)
FR-6	Model Comparison	Compare models using Accuracy, Precision, Recall, F1-score
FR-7	Model Saving	Save final trained model using Pickle for deployment
FR-8	Web Application Interface	Provide user-friendly Flask based web interface

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

NFR No.	Non-Functional Requirement	
NFR-1	Usability	Simple and user-friendly web interface for transaction input
NFR-2	Security	Secure handling of transaction data and no storage of sensitive user data
NFR-3	Reliability	Model should provide consistent fraud detection results
NFR-4	Performance	Fraud prediction should be generated in real-time (within seconds)
NFR-5	Availability	Web application should be accessible anytime during deployment
NFR-6	Scalability	System should handle large transaction datasets (6M+ records)
NFR-7	Accuracy	Model should achieve high fraud detection accuracy with minimal false positives
NFR-8	Maintainability	Code structured in modular format (EDA, training, Flask app)