Project Design Phase
Proposed Solution Template

Date	
Team ID	LTVIP2026TMIDS40243
Project Name	Online Payments Fraud Detection
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Online payment platforms are facing increasing fraudulent transactions which lead to financial loss and reduced customer trust.
2.	Idea / Solution description	Traditional rule-based systems fail to detect compex, fraud patterns in real time. There is a need for an intelligent machine learning based system to accurately classify transactions as Fraud or Not Fraud.
3.	Idea / Solution description	We propose an ML-powered Online Payment Fraud Detection System using supervised learning algorithms such as Decision Tree, Random Forest, SVM, Extra Trees, and XGBoost.
4.	Novelty / Uniqueness	The system analyzes transacior features like amount, transaction type, old/new balances, etc, and predicts fraud probability in real time.
5.	Social Impact / Customer Satisfaction	• Reduces financial losses due fo frauduent transactions • Enhances user trust in digital payment platforms. • Provides real-time fraud alerts for safer online transactions
5.	Business Model (Revenue Model)	The fraud detection system can be offered as: • API-based fraud detection service for banks and fintech companies. • SaaS subscription model for payment gateways • Integration module for e-commerce platforms.
6.	Business Model (Revenue Model)	Revenue can be generated through licensing, API usage charges, or enterprise subscriptions.

Scalability of the Solution:

• Can be deployed on cloud infrastructure (AWS/Azure/GCP).
• Supports large-scale transaction data processing.
• Can be extended using deep learning models for higher accarruracy.
• Easily integrable with existing banking/payment systems.