

Project Design Phase-II

Technology Stack (Architecture & Stack)

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

Technical Architecture:

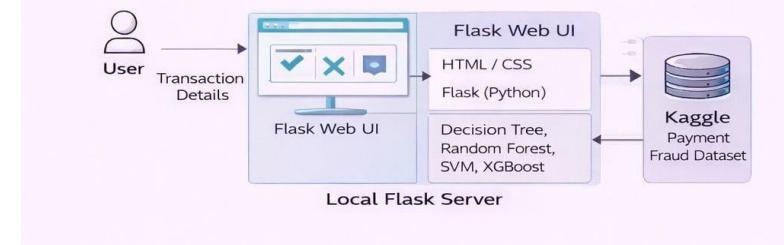
The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Table-1: Components & Technologies:

S.No.	Component	Description	Technology
1.	User Interface	Web-based UI for user interaction	HTML, CSS
2.	Backend	Backend server logic	Flask (Python)
3.	ML Model	Fraud detection algorithms	Decision Tree, Random Forest, SVM, XGBoost
4.	Dataset	Training data source	Kaggle Payment Fraud Dataset
5.	Storage	Data storage solution	CSV file
6.	Deployment	Server deployment	Local Flask Server

Table-2: Application Characteristics:

S.No.	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask, Skleran, Pandas	Flask, Skleran, Pandas
2.	Security Implementations	Input validation, threshold tuning	Technology
3.	Scalable Architecture	Retraining model for further updates	Retraining model improve
4.	Availability	Localhost deployment	Local Server
5.	Performance	Fast fraud prediction under 1 sec	Sprint-2



S.No	Characteristics	Description	Technology
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used

References:

<https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/>

<https://www.ibm.com/cloud/architecture>

<https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>