Ideation Phase
Brainstorm & Idea Prioritization Template

Date	
Team ID	LTVIP2026TMIDS40761
Project Name	Online Payments Fraud Detection
Maximum Marks	4 Marks

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Our team gathered together to discuss and collaborate on selecting a suitable project topic. We shared our individual interests and strengths in Machine Learning, Data Science, and programming to ensure effective teamwork. Through brainstorming sessions, we explored several real-world problems related to cybersecurity, online transactions, and financial systems. After analyzing different ideas based on feasibility, real-world impact, dataset availability, and technical complexity, we decided to select the problem statement "Online Payments Fraud Detection Using Machine Learning." This problem was chosen because online payment fraud is increasing rapidly, causing significant financial losses, and traditional rule-based systems are not always effective. Therefore, we aim to develop a machine learning model that can analyze transaction patterns and accurately detect fraudulent activities while minimizing false positives.

Step-2: Brainstorm, Idea Listing and Grouping

- **Conducted structured brainstorming sessions within the team.**
- **Encouraged all members to share ideas related to online payment fraud detection.**
- **Listed all possible ideas without filtering to promote creativity.**
- **Generated ideas such as:**
    - **Transaction pattern analysis**
    - **Anomaly detection techniques**
    - **Supervised classification models**
    - **Risk scoring system**
    - **Real-time fraud monitoring**
    - **Multi-factor authentication**
- **Grouped ideas into categories:**
    - **Data-based methods**
    - **Algorithm-based methods**
    - **System-level solutions**
- **Evaluated ideas based on feasibility, data availability, complexity, and real-world impact.**
- **Shortlisted supervised machine learning with anomaly detection as the final approach.**

Step-3: Idea Prioritization

1. Reviewed all shortlisted ideas from brainstorming stage.

2.Evaluated ideas based on:

- **Feasibility**
- **Data availability**
- **Implementation complexity**
- **Accuracy and performance**
- **Scalability**
- **Real-world impact**

3. Compared supervised learning and anomaly detection methods.

4. Considered handling imbalanced data and reducing false positives.