**Experiment - 1**

**1. Project Title**

**"Expense Splitter: Simplifying Group Expense Management"**

**2. Background/Context**

In an increasingly digital world, managing group and personal expenses has become crucial for both social and professional scenarios. Current expense management solutions often lack flexibility, feature completeness, or an intuitive user experience. Traditional methods like manual calculations or spreadsheets are time-consuming and error-prone.

The problem is further amplified when dealing with multi-currency transactions, social interactions, or recurring expenses. Existing applications may include intrusive ads or hidden costs, which detract from user satisfaction. A user-friendly, feature-rich, and ad-free expense management application is essential to address these challenges.

**3. Problem Statement**

Current expense management solutions rely heavily on incomplete or manual processes, resulting in errors, inefficiencies, and limited functionality for multi-currency transactions or social features. An ad-free, user-friendly application with advanced capabilities is essential to streamline expense tracking, improve user satisfaction, and enhance overall financial management.

**4. Objectives**

* **Specific:** Develop a user-friendly, ad-free expense splitter application with advanced features.
* **Measurable:** Achieve 100,000 active users within 6 months.
* **Achievable:** Leverage existing technologies and frameworks.
* **Relevant:** Align with the growing demand for digital expense management.
* **Time-bound:** Launch the MVP (minimum viable product) within 4 months.

Key Goals:

* Support multi-currency transactions and export data in PDF format.
* Enable group expense management with equal and unequal splits.
* Integrate with popular payment applications.
* Ensure secure debt management and recurring expense tracking.

**5. Scope**

**In-Scope:**

* Development of features like multi-currency support, debt management, and recurring expenses.
* Integration with payment gateways.
* Ad-free user interface.
* Social connectivity features, such as event creation and adding friends.

**Out of Scope:**

* Handling real-time exchange rates for multi-currency support.
* Comprehensive financial reporting beyond group expense splitting.

**6. Stakeholders**

* **Primary Stakeholders:**
  + End users: Groups, friends, and individuals managing expenses.
* **Secondary Stakeholders:**
  + Payment gateway providers.
  + Development team: Responsible for building and maintaining the application.
  + Business analysts: Ensuring alignment with user needs and market demands.

**7. Current Challenges**

* Manual expense splitting leads to errors and disputes.
* Limited support for multi-currency transactions in existing tools.
* Poor user experience due to intrusive ads.
* Lack of integration with payment gateways and limited support for social connectivity.

**8. Desired Outcome**

* A seamless, ad-free expense management application that:
  + Handles multi-currency transactions efficiently.
  + Provides intuitive group management features.
  + Ensures timely reminders for recurring bills.

**9. Constraints**

* **Timeline:** 4 months to develop and launch the MVP.
* **Technology:** Use of scalable frameworks for payment integration and social features.

**10. Proposed Solution**

Develop an intuitive application with the following features:

* Multi-currency support for accurate expense conversions.
* Integration with payment platforms for direct settlements.
* Event creation, debt management, and recurring expenses.
* Bill reminders and export capabilities in PDF format.
* Ad-free experience and a token reward system (if sponsored).

**11. Success Criteria**

* Onboarding 1000 active users within the first 6 months.
* 90% positive feedback from users regarding ease of use and features.
* Reduction in user disputes regarding expense splits.

**12. Risks and Mitigation**

* **Risk:** Resistance to adopting new software.
  + **Mitigation:** Provide a user-friendly onboarding tutorial and support.
* **Risk:** Security vulnerabilities in payment integration.
  + **Mitigation:** Use industry-standard encryption and compliance measures.

**13. References**

1. <https://www.splitwise.com/>
2. <https://troindia.in/journal/ijcesr/vol6iss10/16-20.pdf>
3. <https://medium.com/design-bootcamp/designing-a-bill-splitting-app-de556d296e33>