Calculating Family Expense

Project Design Phase

1. Problem–Solution Fit Template

The *Problem–Solution Fit* focuses on aligning the real-world issue with a practical, sustainable solution.

Problem Identified:

Families often lack a structured approach to track, analyze, and optimize their monthly expenses, resulting in overspending and poor financial planning.
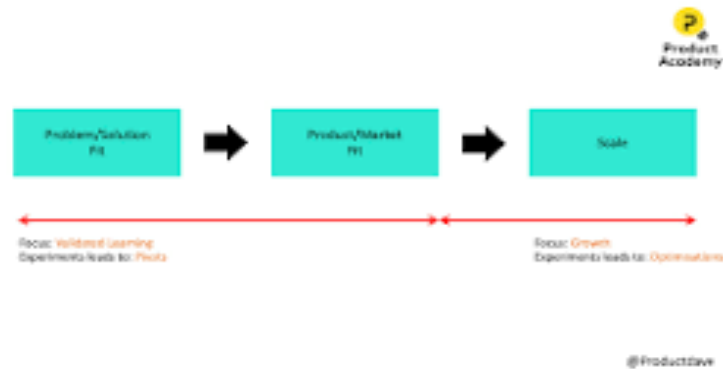
Proposed Solution:

A ServiceNow-based digital expense tracking system that helps families monitor, categorize, and analyze their financial data efficiently.

The solution automates calculations, generates monthly reports, and provides insights for better budgeting and savings.

Key Benefits:

- Reduces manual effort in expense recording
- Provides clarity in spending habits
- Encourages disciplined finance

2. Proposed Solution

The proposed system will be built on the **ServiceNow platform**, leveraging its workflow automation and data visualization capabilities.

Major Features:

1. **Expense Entry Module:** Allows users to record daily, weekly, or monthly expenses.
2. **Expense Categorization:** Automatically classifies expenses under predefined categories.
3. **Budget Tracker:** Users can set a budget limit and get notifications when nearing it.
4. **Analytics Dashboard:** Displays visual insights on spending patterns.
5. **Data Export:** Allows downloading of reports for manual review or recordkeeping.

Design Considerations:

- A responsive user interface compatible with desktops and mobile browsers.
- Secure login and user-specific data management.
- Optimized workflows to minimize latency in record retrieval.

3. Solution Architecture

The system's architecture outlines the interaction between various modules and components.
It uses the **ServiceNow cloud environment** as the backbone for managing workflows and database operations.

Architecture Layers:

- **User Interface Layer:** Provides input forms and dashboards for interaction.
- **Application Layer:** Manages workflows, automation, and data validation logic.
- **Database Layer:** Stores all expense-related records, categorized by user and family.

Data Flow:

1. User inputs expense → stored in ServiceNow database.
2. Workflow processes the data (categorization, budget comparison).
3. Processed data sent to Analytics Dashboard for visualization.
4. Reports generated and available for user download.

Conclusion

The **Project Design Phase** defines the core structure and technical blueprint of the *Calculating Family Expense* system.
It ensures that the solution is scalable, efficient, and user-friendly, forming a solid foundation for the **Project Planning** and **Implementation Phases** that follow.