

## Project Design Phase Solution Architecture

Date	2 November 2025
Team ID	NM2025TMID00454
Project Name	Calculating Family Expenses using Service Now
Maximum Marks	4 Marks

### Solution Architecture:

#### Goals of the Architecture:

- Provide an automated and structured system to record and track family expenses.
- Ensure data consistency, categorization, and secure storage within ServiceNow tables.
- Simplify expense management through workflows, forms, and dashboards.
- Generate real-time insights into spending patterns for improved budgeting.

#### Key Components:

- **Family Expense Table:** Stores individual expense records (amount, date, category, payer, remarks).
- **Family Member Table:** Maintains details of each family member contributing expenses.
- **Expense Category Table:** Defines expense types such as food, travel, utilities, education, etc.
- **Business Rules / Flow Designer:** Automates calculations, budget validations, and notifications.
- **Reports and Dashboards:** Visualize monthly or category-wise expense summaries for better analysis.

## **Development Phases:**

1. Create **tables** for Family Members, Expense Categories, and Family Expenses.
2. Design **forms and relationships** to connect expenses with members and categories.
3. Build **business rules or flow logic** for automatic total calculations and validations.
4. Configure **reports and dashboards** to view expenses by date, category, or member.
5. Test the system with sample entries and verify results.

## **❖ Solution Architecture Description:**

The **Solution Architecture** for *Calculating Family Expenses using ServiceNow* is designed to provide a centralized platform for tracking and analyzing household expenses. It leverages ServiceNow's tables, business rules, and reporting capabilities to automate data management and visualization.

Each family member can log expenses under specific categories. Business rules or flow logic calculate totals automatically and prevent invalid entries. Dashboards display expense distribution, allowing users to manage budgets effectively. The design ensures scalability, enabling future integration with payment APIs or AI-based forecasting tools.

This architecture helps transform ServiceNow from a traditional ITSM platform into a personal finance management system that promotes accuracy, transparency, and financial discipline within households.

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## Example - Solution Architecture Diagram:

