Project Design Phase
Solution Architecture

Date	01 November 2025
Team ID	NM2025TMID02948
Project Name	Calculating Family Expenses Using Service Now
Maximum Marks	4 Marks

Solution Architecture :

Goals of the Architecture:

- Enable centralized tracking of family expenses in ServiceNow.

- Maintain accurate expense records across family members and categories.

- Provide automated calculations for total and category-wise spending.

- Reduce manual tracking effort and improve household financial planning.

Key Components:

- **Family Member Table** (custom table for storing family members)

- **Expense Table** (records individual family expenses with categories like Food, Travel, Utilities, etc.)

- **Business Rule** (Before Insert/Update to calculate running totals)

- **Scheduled Job** (optional, to generate monthly summary & reset totals)

- **Dashboard Reports** (total spend, category spend, budget vs actual)

Development Phases:

1. Create family member records (e.g., Father, Mother, Child 1, Child 2)

2. Create expense categories (Food, Utilities, Travel, Education, Medical, Others)

3. Build Expense table and link to Family Member table

4. Implement Business Rule for automatic total calculation

5. Add UI Policy / Client Script for user-friendly form inputs

6. Create dashboard reports to visualize spending

7. Test scenarios:

   o Add expense for individual members

   o Validate category totals

   o Check monthly budget vs spend report

Solution Architecture Description:

The solution architecture is designed to streamline and automate family expense tracking within the ServiceNow platform. This system ensures accurate expense recording, categorization, and total calculation across all family members. A Business Rule and calculation logic are implemented to automatically sum expenses and update monthly totals, eliminating the need for manual calculations.

The architecture focuses on maintaining financial data consistency by storing expenses in a custom Expense table linked to a Family Member table. Whenever an expense record is added or updated, the system recalculates the total spending for that member and category. This ensures real-time accuracy in reporting and analysis.

The development process includes creating a custom Family Member table, defining expense categories, building an Expense table, implementing automation through Business Rules, and validating the accuracy of calculated totals. This architecture reduces manual tracking effort, improves budgeting accuracy, promotes financial discipline, and provides greater visibility into household spending patterns.

SOLUTION ARCHITECTURE DIAGRAM

Family Expense Calculation in ServiceNow

Family Members
Submit daily expenses

Business Rule
Auto-calculates expense totals

Family Member Table
List of family members linked to expenses

Custom Expense Table
Stores expense details (amount, category, member, date)

Expense Entry Form (ServiceNow)
Capture food, groceries, utilities, travel, etc.

Script Includes
Calculation logic for totals & categories

Dashboard UI
Displays monthly spend, category breakdown

Notifications (Optional)
Daily/Weekly expense summary alerts

Reports
PDF / Email monthly expense statements