

PROJECT DESIGN PHASE

Solution Architecture

Date	8 November 2025
Team ID	NM2025TMID01558
Project Name	Calculating Family Expenses Using Service Now
Maximum Marks	4 Marks

Solution Architecture:

Goals of the Architecture:

- Provide a centralized platform to store and track family expenses
- Automate total expense calculation for each day
- Maintain data accuracy without manual calculation errors
- Make expenses transparent and easy to review for all family members
- Allow future scalability (monthly reports, category tracking, dashboards)

Key Components:

- **Daily Expenses Table**
Stores individual entries such as member name, amount, date, and category
- **Family Expenses Table**
Stores consolidated total for each date
- **Business Rule**
Automatically calculates daily total whenever a new expense is added or updated
- **Relationship (Related List)**
Links Daily Expenses records to Family Expenses based on date
- **Forms & Views**
Used to enter, edit, and track expenses

Development Phases:

1. Create the **Daily Expenses** table with required fields
(date, member name, category, amount, description)

2. Create the **Family Expenses** table with fields
(date, total amount)
3. Configure a **Relationship** so each Family Expense record can display its related Daily Expenses
4. Implement a **Business Rule** on Daily Expenses to automatically:
 - Sum all expenses for the selected date
 - Update the corresponding record in Family Expenses
 - Test with multiple entries:
 - Enter different expenses on the same date
 - Check if the Family Expenses table shows correct total
5. Attempt user deletion (test both assigned & unassigned cases)

Solution Architecture Description:

The solution architecture is designed to automate expense calculation and provide a consolidated summary of family spending using ServiceNow. The system stores individual expense entries in the Daily Expenses table. Each time a record is created or modified, a Business Rule triggers and calculates the total spending for that date.

The calculated value is updated in the Family Expenses table, which acts as a centralized summary. A relationship is created so that users can directly view all related Daily Expenses from a Family Expense record.

This architecture removes manual calculations, reduces errors, and ensures all data remains accurate and up to date. It supports scalability for future features such as spending dashboards, category-wise charts, and monthly budgeting.

