

Date	02 November 2025
Team Id	NM2025TMID03181
Project Name	Calculating Family Expenses using Service Now
Maximum Marks	4 Marks

## Solution Architecture:

### Goals of the Architecture:

- Automate recording and calculation of family expenses in ServiceNow
- Provide categorized expense tracking (e.g., groceries, utilities, entertainment)
- Maintain data integrity and security of financial records
- Enable budget comparison, alerts, and analytical visualization

### Key Components:

- **Expense Table (u\_family\_expense)** — stores each expense entry with fields such as amount, category, and date.
- **Budget Table (u\_budget\_limits)** — defines monthly or category-based spending limits.
- **Flow Designer / Business Rules** — automate expense calculation, budget validation, and notifications.
- **Reports & Dashboards** — visualize expenses by month, category, and variance from budget.
- **Notifications** — alert users when spending exceeds defined thresholds.

### Development Phases:

1. **Create Tables:** Design custom tables for expenses and budgets.
2. **Create Catalog Item / Form:** Allow users to record expenses easily.
3. **Implement Business Rules / Flows:** Automate total calculations and validations.
4. **Develop Reports & Dashboards:** Provide insights into spending and trends.
5. **Configure Notifications:** Send alerts when expenses exceed budget limits.
6. **Testing & Validation:** Ensure accuracy of calculations and secure data handling.

## Solution Architecture Description:

The proposed architecture leverages **ServiceNow's automation capabilities** to create a smart expense management system for families. Users can log expenses through a catalog form or custom app interface. Data is stored in dedicated tables (u\_family\_expense and u\_budget\_limits) to maintain financial integrity.

Business Rules and Flow Designer automate the calculation of totals and validation against pre-set budgets. When an expense pushes spending over the limit, the system triggers notifications via email or ServiceNow messages.

Dashboards and reports provide visual analytics, allowing families to monitor trends, compare monthly expenses, and plan better. This architecture promotes **automation, transparency, and efficiency**, repurposing ServiceNow for real-world personal finance management.

## Example – Solution Architecture Diagram:

### Solution Architecture

