Project Design Phase
Solution Architecture

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Team ID	LTVIP2026TMIDS24859
Project Name	Calculate Family Expenses using Service Now
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Maximum Marks	4 Marks

Solution Architecture

The Calculate Family Expenses project addresses the common challenges families face in tracking and managing daily expenses manually. The solution architecture explains how the ServiceNow platform is configured to provide a centralized, automated, and user-friendly expense management system. It uses ServiceNow's low-code features such as custom tables, business rules, relationships, and reporting tools to automate expense recording and calculation.

Purpose of the Solution Architecture

The purpose of this solution architecture is to provide an efficient and automated system for managing family expenses using ServiceNow. It defines how tables, automation components, and user interface elements work together to ensure accurate expense tracking. It helps users easily record daily expenses, automatically calculate totals, and maintain organized financial records. The architecture also ensures scalability, usability, and efficient data management.

Solution Structure

The architecture consists of the following components:

Core Tables:
The system includes two main tables: Family Expenses and Daily Expenses. The Family Expenses table stores summarized expense information such as date, total amount, and expense details. The Daily Expenses table stores individual expense records, including date, expense amount, family member name, and comments.

Relationships:
A relationship is established between Daily Expenses and Family Expenses tables using the date field. This allows the system to link daily expense records with their corresponding family expense summary, ensuring structured and organized data.

Automation Components:
Business Rules are used to automate expense calculations. When a new Daily Expense record is inserted or updated, the Business Rule automatically updates the total amount and expense details in the Family Expenses table. Auto-numbering is used to generate unique identifiers for records.

User Interface Elements:
Custom forms are used to provide a simple interface for entering and managing expenses. Related lists allow users to view linked daily expense records within the Family Expenses form. Reports can be generated to analyze spending patterns.

Configuration Management:
Update Sets are used to track and manage system configuration changes. This ensures proper development, testing, and deployment of the expense management application.

Phases of Development

The system development includes the following phases:

- Setting up the ServiceNow Personal Developer Instance

- Creating Family Expenses and Daily Expenses tables

- Configuring fields, relationships, and auto-numbering

- Implementing Business Rules for automation

- Designing forms and configuring related lists

- Testing and validating the application functionality

Specifications

The system is built using ServiceNow's low-code platform and follows best practices for scalability and maintainability. It provides automated expense calculation, centralized data management, and an easy-to-use interface. The architecture is scalable and can be extended to include advanced reporting, dashboards, and financial analysis features.

Solution Architecture Diagram