Project Design Phase

Proposed Solution

Date	2 November 2025
Team ID	NM2025TMID07923
Project Name	Calculating Family Expenses using ServiceNow
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	**Problem Statement (Problem to be solved)**	Families often struggle to record and monitor their daily and monthly expenses systematically. Manual tracking leads to **inconsistent entries**, **calculation errors**, and **a lack of transparency** in overall household spending. Without automation, there is no real-time financial overview, making it difficult to identify spending patterns or plan budgets effectively.
2.	**Idea / Solution Description**	To overcome these challenges, a **ServiceNow-based Family Expense Management System** has been developed. This application allows users to record, manage, and calculate family expenses automatically. It consists of two interlinked tables — **Family Expenses** (for monthly summaries) and **Daily Expenses** (for day-to-day records). Using **Business Rules**, **Flow Designer**, and **Table Relationships**, the system automatically updates total expenses and generates real-time summaries whenever new data is entered. This reduces manual work, ensures accuracy, and provides instant financial insights.
3.	**Novelty / Uniqueness**	The project creatively adapts **ServiceNow's enterprise automation capabilities** — typically used for IT service management — to solve a **personal finance management problem**. The integration of workflow automation, relationship-based tables, and auto-calculation logic showcases

		the **flexibility and extensibility** of the ServiceNow platform. It demonstrates how business-level automation can be repurposed for **household-level efficiency**, which is rarely explored in non-enterprise contexts.
4.	**Social Impact / Customer Satisfaction**	The system encourages better **financial discipline** by providing families with real-time insights into their spending habits. It promotes **financial literacy** and **awareness.** Users can easily identify where overspending occurs, plan budgets, and control unnecessary expenses. This fosters **responsible spending habits**, ensures **transparency**, and enhances overall satisfaction for all family members.
5.	**Business Model (Revenue Model)**	Although the current version is developed as an **academic prototype**, it has strong potential for **commercial scalability**. The application could be launched as a **subscription-based ServiceNow extension module** for small households, housing societies, or even small businesses.
6.	**Scalability of the Solution**	The architecture of this solution allows for easy **scaling and future enhancements**. Potential extensions include income tracking, savings goal management, debt tracking, and AI-powered predictive analysis for spending patterns. The system can integrate with **external platforms.** This adaptability makes it suitable for both personal and community-level financial management.

Solution Description

To address the challenges of manual household expense management, a custom application — **Family Expense Tracker** — has been designed and developed within the **ServiceNow platform**.

The system architecture includes two major data structures:

- **Family Expenses Table:** Stores monthly summaries, total expenditures, and category-based budget information.

- **Daily Expenses Table:** Captures individual expense entries, including date, category, amount, and remarks.

A **Table Relationship** ensures that every daily record is automatically linked to the corresponding family summary. When a new entry is added, **Business Rules** trigger an automatic update to recalculate totals and refresh monthly expenditure summaries.

Additionally, **Flow Designer workflows** automate notifications, report generation, and reminders for budget limits. Using **ServiceNow's built-in reporting tools**, users can visualize their spending trends through interactive charts and dashboards.

This automation-driven approach transforms a traditionally manual process into a **dynamic, data-driven financial management system**, ensuring **efficiency, accuracy, and real-time insights**.

Conclusion:

The project **"Calculating Family Expenses using ServiceNow"** successfully demonstrates how a powerful enterprise platform can be creatively repurposed for real-life financial management.

By integrating **automation, workflow logic, and real-time reporting,** the system eliminates manual errors and reduces the time spent on calculations and data management. Families can instantly view expense summaries, analyse patterns, and make informed financial decisions with minimal effort.

Through the use of **Business Rules, Flow Designer, and Table Relationships**, the solution ensures consistent, accurate, and dynamic updates to all financial data. Its user-friendly design and modular structure make it easy to scale and integrate with future enhancements like **AI-based recommendations, mobile accessibility, or income tracking modules**.

Overall, this project highlights ServiceNow's versatility beyond **IT workflows,** showcasing its potential in personal finance automation and emphasizing the growing importance of **digital tools for household financial management.**