

Project Design Phase-II Technology Stack (Architecture & Stack)

Date	02 Nov 2025
Team ID	NM2025TMID01191
Project Name	Calculating Family Expenses using ServiceNow
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: EXPENSE LOGGING AND SERVER-SIDE AGGEGATION

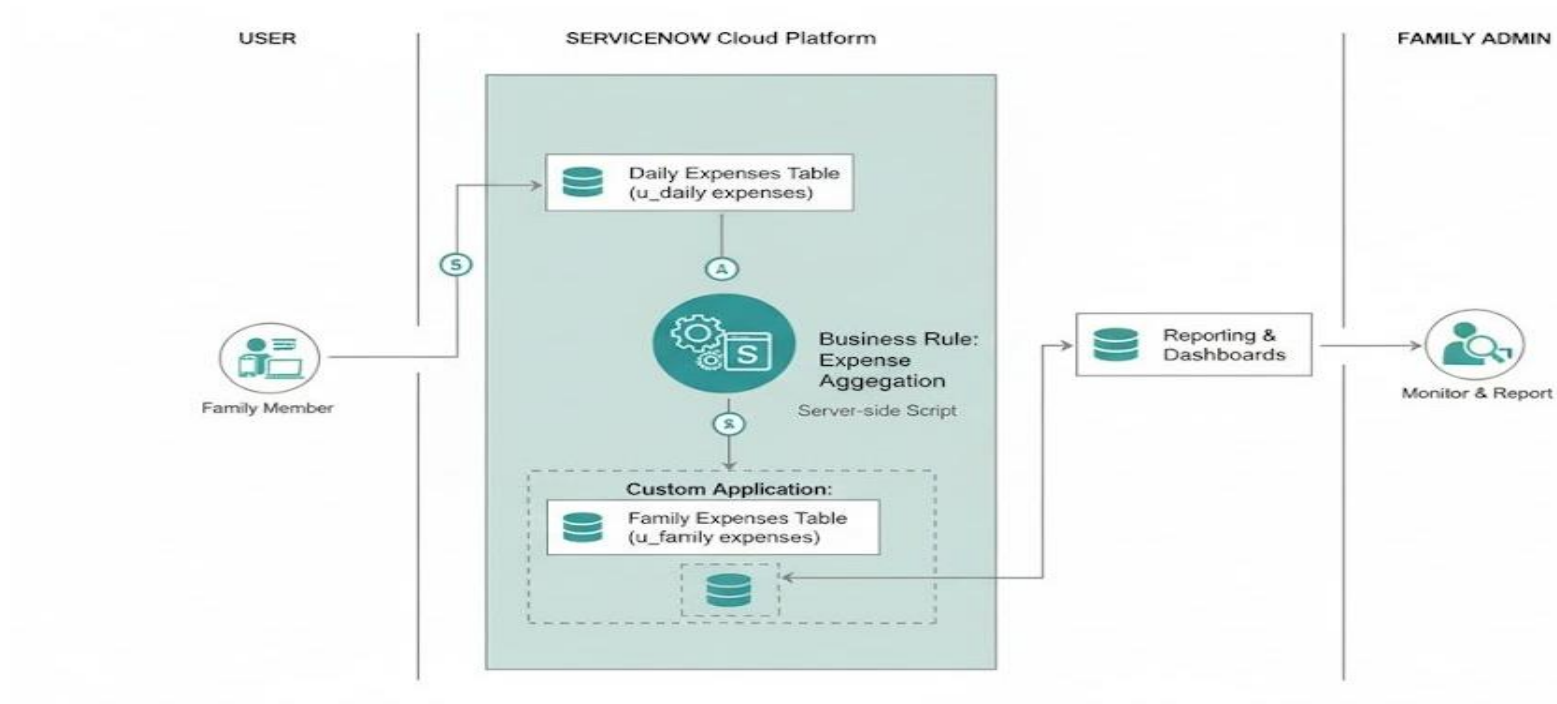


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	Family members interact with the Daily Expenses and Family Expenses forms and lists.	ServiceNow Web UI (Forms, Lists, Related Lists)
2	Application Logic-1	Automatically aggregates daily expenses into a summarized Family Expenses record for the same date.	ServiceNow Business Rule (Server-side GlideRecord script)
3	Application Logic-2	Creates a link between the daily entries and the main family expense record for easy viewing on the form.	ServiceNow Relationships (sys_relationship)
4	Application Logic-3	Auto-generates unique, padded record numbers for both tables (e.g., MFE001, MDE001).	ServiceNow Number Maintenance (sys_number)
5	Database	Stores all individual (Daily Expenses) and summarized (Family Expenses) records. Also stores user data for the 'Family Member Name' field.	ServiceNow Tables (u_family_expenses, u_daily_expenses, sys_user)
6	Cloud Database	All application tables are managed by the ServiceNow cloud backend.	ServiceNow Cloud Database
7	File Storage	Not a primary feature. System logs are stored internally.	ServiceNow system logs
8	External API-1	Not applicable for this project.	N/A
9	External API-2	Not applicable.	N/A
10	Machine Learning Model	Not applicable for the current use case.	N/A
11	Infrastructure (Server / Cloud)	The entire application is hosted and managed on a ServiceNow Personal Developer Instance (SaaS).	ServiceNow Cloud (SaaS)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Not applicable (ServiceNow is a proprietary platform).	N/A
2	Security Implementations	Access to the 'Family Expenditure' module can be controlled by roles. (Future step: ACLs to secure tables).	Application Scoping, Roles (Potential for ACLs)
3	Scalable Architecture	SaaS-based, scales automatically via the ServiceNow cloud architecture to handle many years of expense data.	ServiceNow Cloud Architecture
4	Availability	Highly available as it is hosted on the ServiceNow cloud platform.	Load-balanced ServiceNow Instances
5	Performance	Aggregation logic runs on the server (Business Rule) after submission. Table queries are indexed by default.	Server-side Scripting (Business Rule), Indexed Tables