

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

Date	2 NOVEMBER 2025
Team ID	NM2025TMID09055
Project Name	Calculating Family Expenses using Service Now
Maximum Marks	4 Marks

Technical Architecture:

The proposed system is a ServiceNow-based cloud application integrated with real-time data visualization, budgeting tools, and reporting services. It uses ServiceNow's platform capabilities (Flow Designer, Tables, UI Builder) along with REST APIs and external analytics libraries.

Example: Calculating Family Expenses using ServiceNow

The system architecture shows a cloud-based ServiceNow application for managing family expenses. It integrates expense tracking, budgeting, and reporting with secure data storage and real-time analytics.

Calculating Family Expenses using ServiceNow

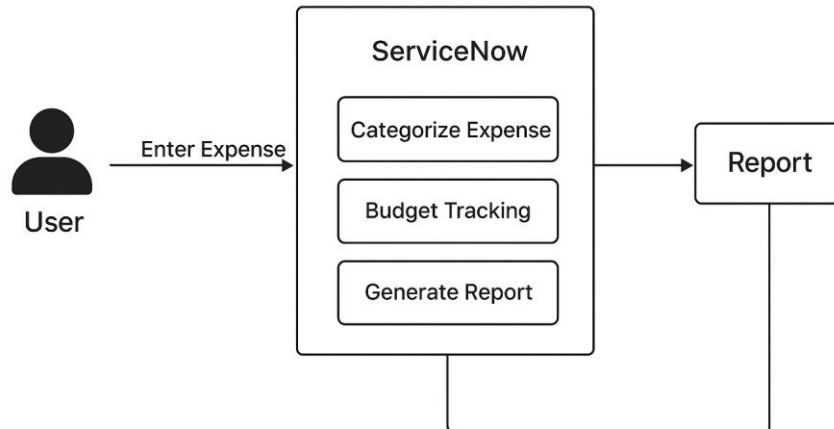


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web-based responsive UI for users to log in, view dashboards, and manage expenses.	ServiceNow UI Builder, HTML5, CSS, JavaScript
2.	Application Logic	Handles expense tracking, budget alerts, and category-wise analysis.	ServiceNow Flow Designer, Script Includes
3.	Database Layer	Stores user data, expenses, and reports securely.	ServiceNow Tables (CMDB-like structure)
4.	API Integration	Allows integration with external financial APIs or Excel data import/export.	REST APIs
5.	Analytics & Reports	Generates automated expense reports and visual analytics.	ServiceNow Performance Analytics, Chart Widgets
6.	Authentication	Manages secure login and role-based access.	ServiceNow ACLs, SSO Authentication
7.	Notification System	Sends budget alerts and monthly summaries to users.	ServiceNow Notification Engine, Email API
8.	Cloud Infrastructure	Hosts and scales the application securely.	ServiceNow Cloud Platform (SaaS)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Platform Type	SaaS-based cloud application	ServiceNow Cloud
2.	Scalability	Supports multiple users, families, and real-time data expansion	Cloud-native scalability
3.	Security	Role-based access control and encrypted data transactions	ACLs, HTTPS, OAuth
4.	Availability	High uptime through ServiceNow's cloud infrastructure	99.9% uptime SLA
5.	Data Storage	Secure and structured record management	ServiceNow Database Tables
6.	Performance	Optimized for fast data retrieval and dashboard updates	Indexed Tables, Asynchronous Flows