Project Design Phase-II

Technology Stack & Architecture

Date	2 November 2025
Team ID	NM2025TMID03181
Project Name	Calculating Family Expenses using Service Now
Maximum Marks	4 Marks

Technical Architecture

Include your architectural diagram here — for example, the DFD image generated previously for your system, showing Users, Daily Expenses, Family Expenses, Budget, and Reports blocks, with flows connecting them to ServiceNow platform components.

Table-1: Components and Technologies

S.No	Component	Description	Technology
1	User Interface	Family members and admin interact via a web dashboard.	ServiceNow Web UI
2	Application Logic-1	Handles expense entry, validation, and update in database.	ServiceNow Flow Designer, Scripts
3	Application Logic-2	Categorizes, accumulates, and relates daily and family expenses.	Business Rules, GlideRecord
4	Notification	Sends alerts/notifications about budget limits or new entries.	ServiceNow Notifications
5	Expense Database	Stores all expense, member, budget, and category data.	Custom Tables in ServiceNow, CMDB
6	Cloud Database	Managed and maintained by ServiceNow as back-end infrastructure.	ServiceNow Cloud Database

S.No	Component	Description	Technology
7	File Storage	Allows export of reports and logs.	Internal log storage, export APIs
8	External API	Optional (e.g., integrating with banking APIs for expense input automation).	REST API Integration in ServiceNow
9	Machine Learning Model	Not applicable for current scope (possible in future for trend analysis, recommendations).	-
10	Infrastructure Server	Cloud hosted, managed fully on the ServiceNow SaaS platform.	ServiceNow Cloud SaaS

Table-2: Application Characteristics

S.No	Characteristics	Description	Technology/Approach
1	Open-Source Frameworks	Not applicable; ServiceNow is proprietary.	-
2	Security Implementations	Role-based access, ACLs, secure scripting for sensitive operations.	ACLs, Scoped Applications
3	Scalable Architecture	SaaS deployment makes system scalable across family sizes and data volumes.	ServiceNow Cloud Architecture
4	High Availability	System is hosted and load-balanced on ServiceNow cloud for 24x7 access.	Load-balanced ServiceNow Instances
5	Performance	Real-time user and batch operations, indexed data for quick report generation.	GlideRecord