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

Date	02 NOV 2025
Team ID	NM2025TMID03531
Project Name	Calculating Family Expenses using Service Now
Maximum Marks	4 Marks

Technical Architecture:

The deliverable includes the architectural diagram of how the system automates expense calculations and maintains data integrity using ServiceNow's workflow automation.

Example: Family expense calculation and aggregation using ServiceNow Business Rules.

Reference:

https://developer.servicenow.com/dev.do#!/learn/learning-plans/paris/app_store_learnv2_buildmyfirstapp_paris_understanding_business_rules
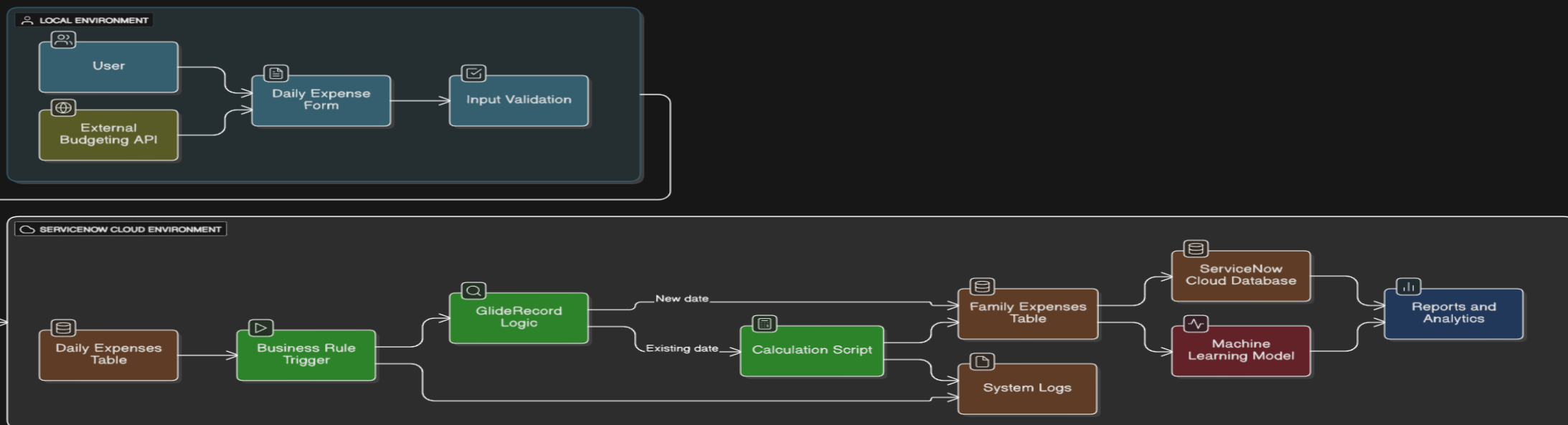
Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Users interact with the Daily Expense Form and Family Expense dashboard.	ServiceNow Web UI
2.	Application Logic-1	Captures and stores daily expense records.	ServiceNow Form Design
3.	Application Logic-2	Checks for existing family expense entries based on date.	Business Rules with GlideRecord
4.	Application Logic-3	Updates existing family expense or creates a new one automatically.	Script Includes / Business Rules
5.	Database	Stores all expense data including date, member, and total amount.	ServiceNow Tables (u_daily_expenses, u_family_expenses)
6.	Cloud Database	Managed on ServiceNow's cloud environment for scalability and reliability.	ServiceNow Cloud Database
7.	File Storage	Used minimally; stores logs and configuration data internally.	ServiceNow system logs
8.	External API-1	(Optional) Integration with budgeting or finance apps for analytics.	REST API in ServiceNow
9.	External API-2	Not applicable for current phase.	-
10.	Machine Learning Model	Not applicable currently, can be integrated for future expense prediction.	-
11.	Infrastructure (Server / Cloud)	Hosted and managed on ServiceNow SaaS cloud environment.	ServiceNow Cloud (SaaS)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Not applicable (ServiceNow is proprietary)	-
2.	Security Implementations	Data access secured with roles, ACLs, and scoped applications.	Access Control Lists (ACLs), Scoped Apps
3.	Scalable Architecture	Cloud-hosted, scalable for multiple users and expense categories.	ServiceNow Cloud Architecture
4.	Availability	High availability via ServiceNow's distributed cloud platform.	Load-balanced ServiceNow Instances
5.	Performance	Optimized with indexed tables and efficient GlideRecord queries.	Business Rules, GlideRecord