Project Design Phase-II
Technology Stack (Architecture & Stack)
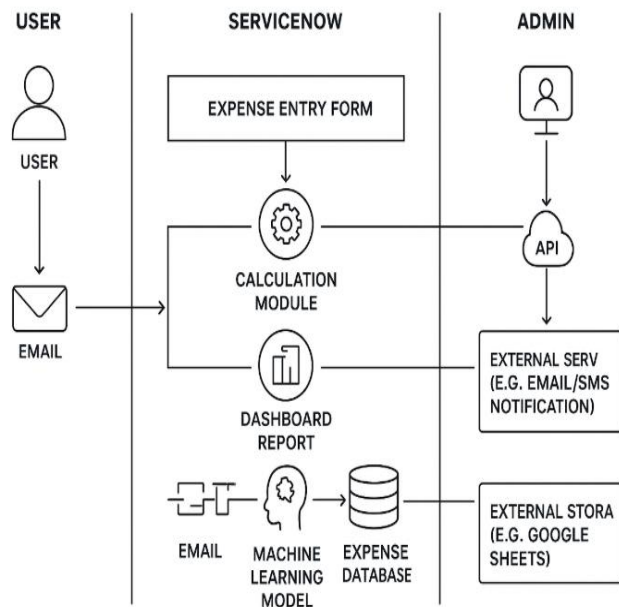
Date	20 Feb 2026
Team ID	LTVIP2026TMIDS91120
Project Name	Calculating Family Expenses using Service Now
Maximum Marks	4 Marks

Technical Architecture:

The deliverable includes an architectural diagram showing the data flow and components of the **Family Expense Calculation System** developed using **ServiceNow**.
The architecture defines how users interact with the system through the ServiceNow interface, where data is processed, stored, and visualized.

Example: Calculating Family Expenses using ServiceNow

Guidelines:

- Include all the processes (As an application logic / Technology Block)
- Provide infrastructural demarcation (Local / Cloud)
- Indicate external interfaces (third party API's etc.)
- Indicate Data Storage components / services
- Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Family members interact via ServiceNow web dashboard to input and view expenses.	ServiceNow Web UI
2.	Application Logic-1	Handles expense entry and validation for category, date, and amount.	ServiceNow Flow Designer, Client Script
3.	Application Logic-2	Calculates total and categorized expenses automatically.	GlideRecord in Server Script
4.	Application Logic-3	Generates and displays reports and dashboards.	ServiceNow Performance Analytics
5.	Database	Stores expense details, user profiles, and budget information	ServiceNow Custom Expense Table
6.	Cloud Database	Managed by ServiceNow's secure cloud infrastructure.	ServiceNow Cloud Database
7.	File Storage	Stores exported reports (PDF/Excel) and system logs.	ServiceNow Attachments, System Logs
8.	External API-1	Optional integration with Google Sheets for external reporting.	REST API Integration
9.	External API-2	Optional integration with email or SMS alerts for budget notifications.	Notification API, Twilio (optional)
10.	Machine Learning Model	(Future Enhancement) Predict spending trends and provide saving suggestions.	AI Builder / Predictive Intelligence (optional)
11.	Infrastructure (Server / Cloud)	Hosted on ServiceNow SaaS Cloud.	ServiceNow Cloud (SaaS)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Not applicable (ServiceNow is proprietary)	-
2.	Security Implementations	Role-based access control for users and admins.	ACLs, Scoped Applications
3.	Scalable Architecture	SaaS-based and horizontally scalable through ServiceNow Cloud.	ServiceNow Cloud Architecture
4.	Availability	Highly available ServiceNow platform ensures 99.99% uptime.	Load-balanced ServiceNow Instances
5.	Performance	Optimized through background scripts, indexed tables, and efficient queries.	GlideRecord, Asynchronous Flows
6.	Usability	Simple, intuitive dashboard for expense tracking and visualization.	ServiceNow UI Builder
7.	Reliability	Ensures accurate and consistent expense calculations.	ServiceNow Flow Designer