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

Date	20 Feb 2026
Team ID	LTVIP2026TMIDS24859
Project Name	Calculate Family Expenses
Mentor Name	Dr Shaik Salma Begum
Maximum Marks	4 Marks

Technical Architecture:

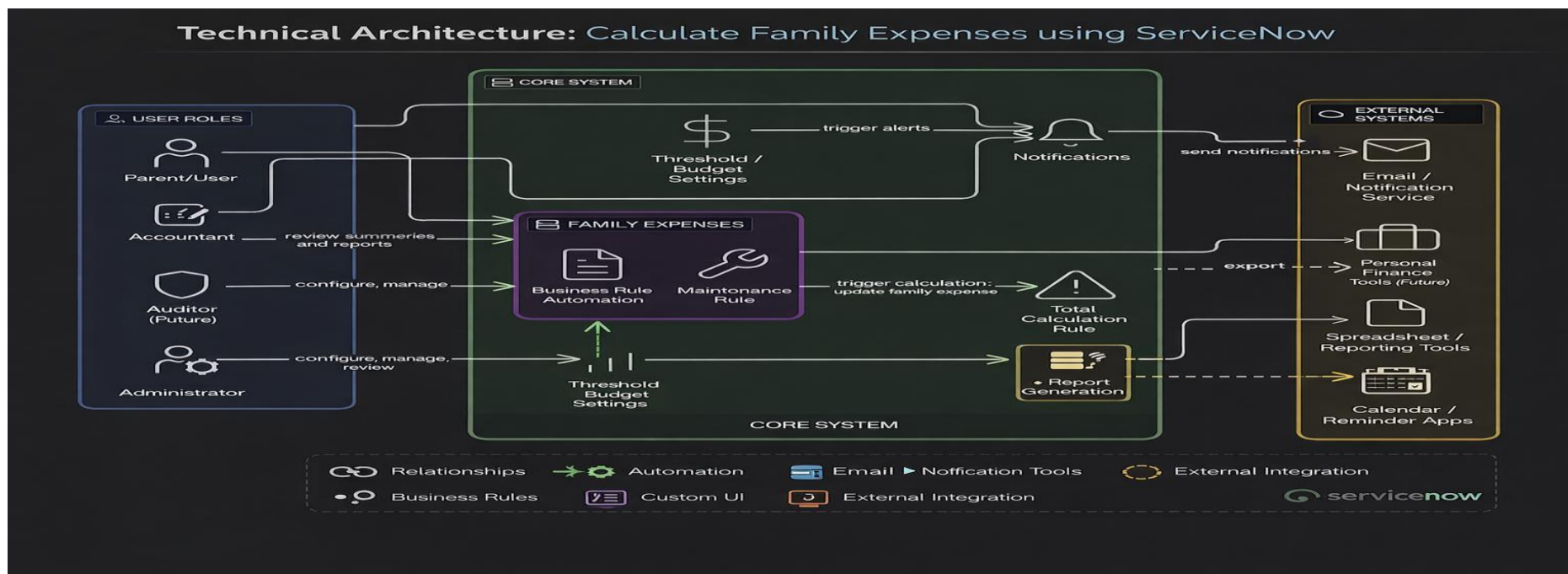The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	Web-based forms and dashboards for entering daily expenses and viewing family expense summaries	ServiceNow UI Framework (Form Designer, Lists, Service Portal)
2	Application Logic – 1	Dynamic form behavior, field validation, read-only and mandatory field configuration	ServiceNow Client Scripts, UI Policies (JavaScript, GlideForm API)
3	Application Logic – 2	Automation of expense calculation and record updates when daily expenses are added	ServiceNow Business Rules (GlideRecord API, Server-side scripting)
4	Application Logic – 3	Auto-number generation and relationship handling between Family Expenses and Daily Expenses tables	ServiceNow Dictionary, Relationships, Auto-numbering
5	Database	Stores family expense summaries, daily expense records, family member details, and expense history	ServiceNow Custom Tables (Family Expenses, Daily Expenses), MySQL Backend
6	Reporting & Analytics	Generates reports and dashboards to analyze expense trends and total expenses	ServiceNow Reporting Engine, Dashboards
7	External Integration	Enables integration with external tools like spreadsheets or financial apps for exporting reports	ServiceNow REST API
8	Infrastructure (Cloud)	Provides secure, scalable, and cloud-based hosting environment for the expense management system	ServiceNow SaaS Cloud Infrastructure

Table-2: Application Characteristics:

S.No	Characteristic	Description	Technology
1	Platform Framework	Uses ServiceNow low-code platform with JavaScript for automation, form logic, and business rules	ServiceNow Platform, JavaScript, Glide API
2	Security Implementations	Ensures secure access to expense records using role-based permissions and encrypted communication	ServiceNow ACLs, HTTPS, TLS, Role-based Access Control
3	Scalable Architecture	Cloud-based modular system that supports increasing expense records, users, and additional features like reporting and dashboards	ServiceNow Cloud Platform, Custom Tables, REST APIs
4	Availability	Provides high availability through ServiceNow's reliable cloud infrastructure, ensuring access to expense data with minimal downtime	ServiceNow SaaS Cloud Infrastructure
5	Performance	Optimized record handling and automated processing using business rules, ensuring fast form submissions and data retrieval	ServiceNow GlideRecord API, Business Rules, ServiceNow Caching
6	Data Integrity	Maintains accurate and consistent expense records using automated validation and structured database relationships	ServiceNow Database (MySQL backend), Dictionary, Relationships
7	Maintainability	Supports easy updates and configuration tracking using update sets and modular design	ServiceNow Update Sets, Configuration Management