

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

Date	11 February 2026
Team ID	LTVIP2026TMIDS57513
Project Name	calculating family expenses using service now
Maximum Marks	4 Marks

Technical Architecture:

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

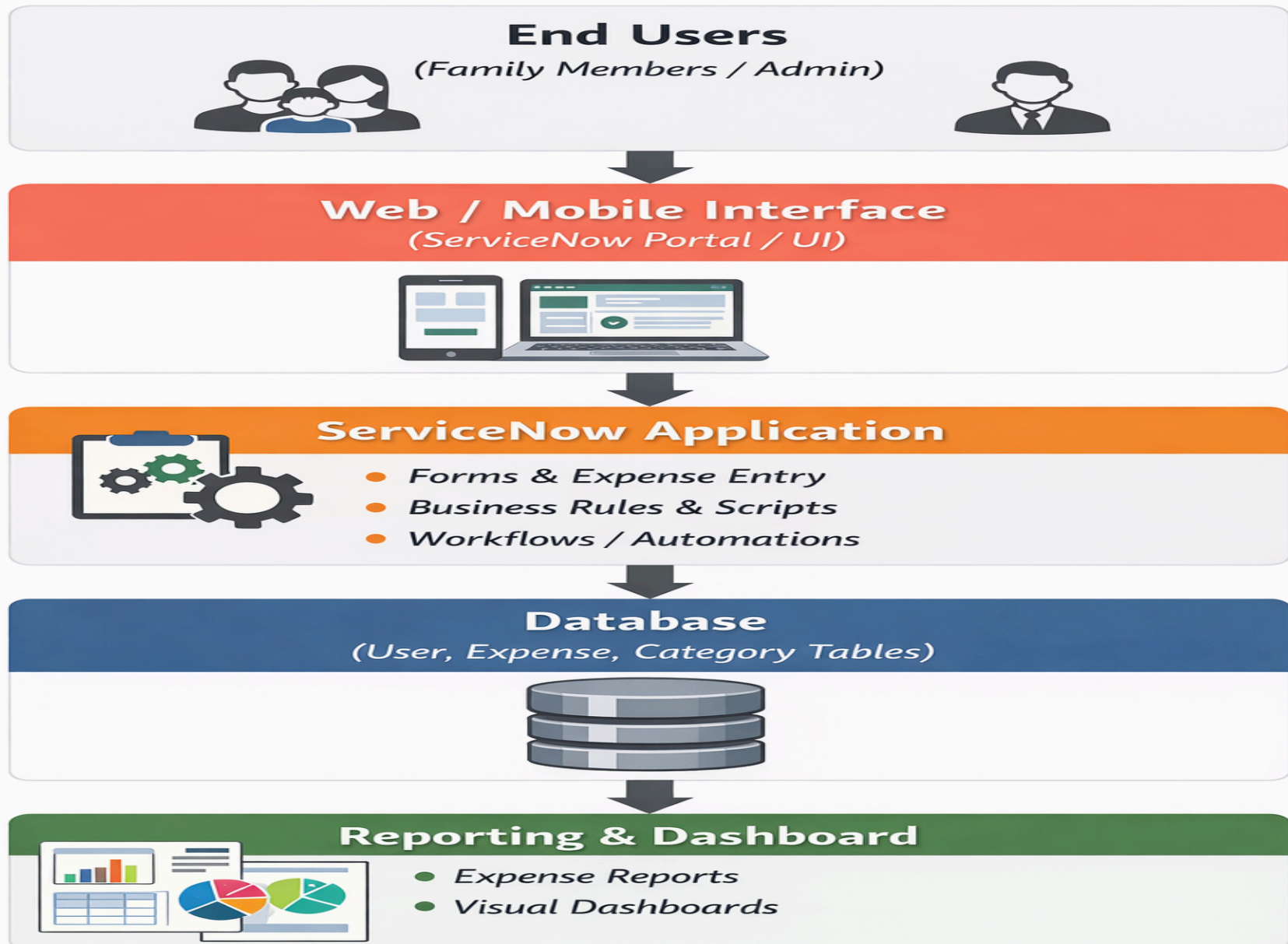


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Allows family members to register, log in, add expenses, and view dashboards through a web-based portal.	ServiceNow Service Portal, HTML, CSS, JavaScript
2.	Application Logic-1	Handles user registration, login authentication, and profile management processes.	ServiceNow Business Rules, Client Scripts, ACL
3.	Application Logic-2	Manages expense entry, validation, categorization, and automatic calculation of totals.	ServiceNow Flow Designer, Script Includes
4.	Application Logic-3	Generates reports, dashboards, and monthly summaries based on stored expense data	ServiceNow Reporting & Performance Analytics
5.	Database	Stores structured data such as user details, expense records, and categories in custom tables	ServiceNow Tables (MySQL-based backend)
6.	Cloud Database	Provides secure cloud-based data hosting and backup services for the application.	ServiceNow Cloud Platform
7.	File Storage	Stores uploaded bills, receipts, and supporting documents securely within the application.	ServiceNow Attachment Storage
8.	External API-1	Enables social login integration such as Facebook authentication for user registration and login	REST API / OAuth 2.0

9.	External API-2	Allows integration with external financial or notification services (e.g., email/SMS alerts).	REST API / SMTP / Web Services
10.	Machine Learning Model	Analyzes expense patterns to provide insights such as spending trends and budget predictions (if implemented)	ServiceNow Predictive Intelligence / Basic Analytics
11.	Infrastructure (Server / Cloud)	Hosts the application, database, and services in a secure and scalable cloud environment.	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source web technologies are used to customize the ServiceNow portal interface and enhance user interaction for expense management.	HTML, CSS, JavaScript (Service Portal Framework)
2.	Security Implementations	Ensures secure user authentication, data protection, and role-based access control for managing family expense records.	ServiceNow ACL (Access Control Lists), Role-Based Access, HTTPS Encryption
3.	Scalable Architecture	Supports increasing users and growing expense data without affecting system performance.	ServiceNow Cloud Platform (SaaS Architecture)
4.	Availability	Provides 24/7 system accessibility with minimal downtime for users to manage expenses anytime.	ServiceNow Cloud Infrastructure with High Availability
5.	Performance	Ensures fast data processing, quick dashboard loading, and smooth user interaction.	ServiceNow Performance Analytics, Optimized Business Rules & Scripts

