Project Design

Phase Solution Architecture

Date	
Team ID	NM2025TMID05673
Project Name	Calculating Family Expenses using Service Now
Maximum Marks	4 Marks

Solution Architecture:

The Solution Architecture defines the overall structure and flow of the system — how the data, processes, and components interact to achieve the goal of efficiently managing and calculating family expenses. It serves as the blueprint that connects user requirements to a functional and automated solution.

Components of the Architecture:

a. User Interface (Presentation Layer)

- Provides web and mobile access through ServiceNow's portal.

- Users can add, edit, or delete expenses.

- Dashboards display visual reports, graphs, and monthly spending summaries.

b. Business Logic (Application Layer)

- Automates expense calculation and categorization.

- Uses **ServiceNow Flow Designer** for workflows — like approval or reminders for high expenses.

- Applies rules to compare current spending against budget limits.

c. Database (Data Layer)

- Stores all expense data (amount, date, category, user).

- Uses ServiceNow tables for secure and structured data management.

- Enables retrieval and analysis of historical data for reports and trend analysis.

Types of Solution Architectures:

1. Logical Architecture:

- Defines how the system's components (UI, logic, and database) interact.

- Focuses on data flow — from user input to report generation.
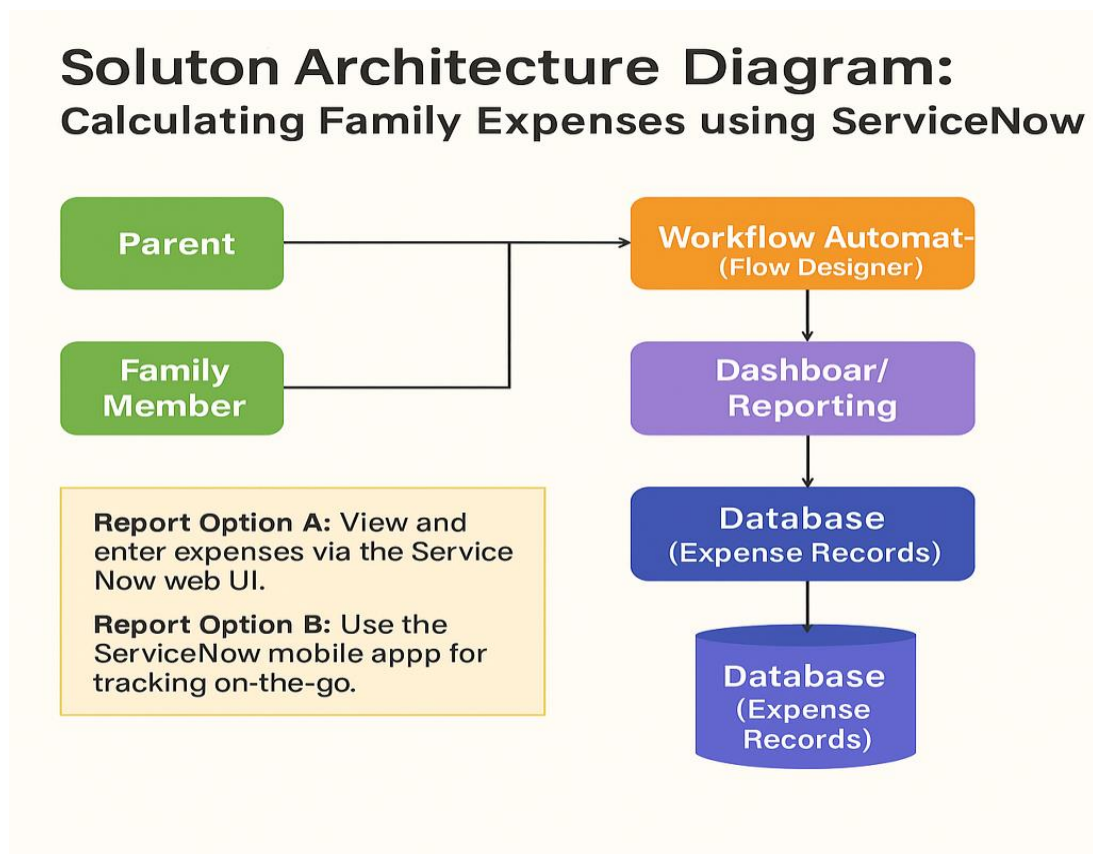
2. Physical Architecture:

- Represents the actual deployment — how the system runs on ServiceNow servers.

- Involves ServiceNow platform hosting, cloud storage, and integration with devices.

3. Process Architecture:

- Maps the entire workflow:

  - Expense Entry → Verification → Calculation → Report Generation → Insights.

- Ensures smooth flow between modules and automation of routine tasks.

4. Data Architecture:

- Describes how expense data is collected, stored, and analyzed.

- Maintains accuracy, security, and accessibility through structured ServiceNow tables.

Purpose of Solution Architecture

- To **streamline** the process of family expense management.

- To ensure **scalability** — new expense categories or users can be added easily.

- To **enhance automation** using ServiceNow workflows.

- To provide **data-driven insights** for better budgeting decisions.