

Project Design Phase
Solution Architecture

Date	19-02-2026
Team ID	
Project Name	
Maximum Marks	4 Marks

Solution Architecture:

The solution architecture for the Family Expense Management System is based on a cloud-centric design using the ServiceNow platform to provide a centralized, secure, and real-time expense tracking solution for households. Family members interact with the system through a web-based user interface where they can record daily expenses, specify details such as date, amount, category, and member name, and attach supporting information if required. This input is processed by ServiceNow's application layer, which uses business rules and scripts to validate data, automatically calculate totals, and aggregate individual entries into consolidated family expense records.

All expense data is stored in ServiceNow's cloud database, ensuring secure storage, backup, and accessibility from anywhere. The system continuously updates dashboards and reports, providing real-time insights into daily, weekly, and monthly spending patterns. Authorized users, such as the head of the family, can view summaries, generate reports, monitor budgets, and analyze trends through interactive visualizations. Notifications can be triggered when spending exceeds predefined limits, helping maintain financial discipline.

The architecture also includes role-based access control to protect sensitive financial information and ensure that only authorized users can modify records. Because the system operates on a scalable cloud infrastructure, it can easily support additional users, larger datasets, and new features without performance degradation. Overall, this solution architecture enables seamless data flow from user input to storage, processing, analytics, and presentation, empowering families with accurate, up-to-date financial insights for informed decision-making.

Example - Solution Architecture Diagram:

