

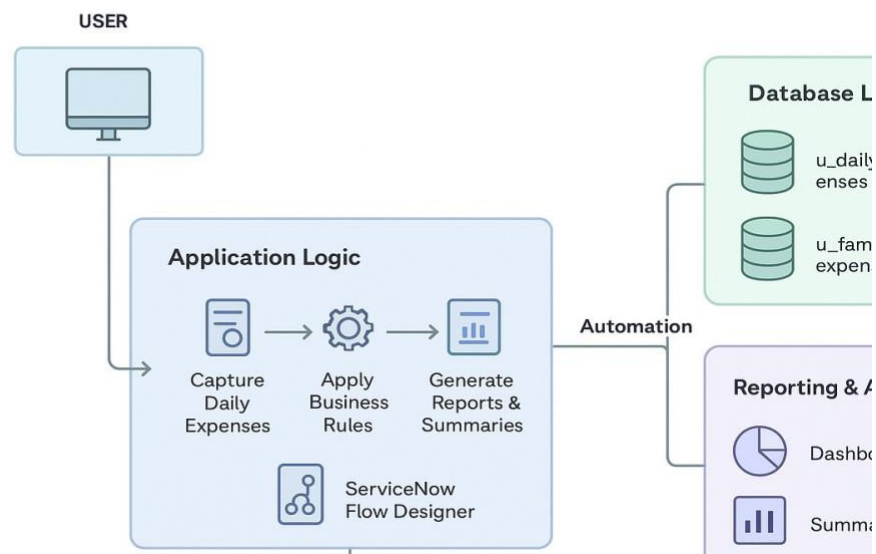
Project Design Phase-II

Technology Stack (Architecture & Stack)

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|---------------|--|
| Date | 02 NOV 2025 |
| Team ID | NM2025TMID00940 |
| Project Name | Calculating Family Expenses Using ServiceNow |
| Maximum Marks | 4 Marks |

Technical Architecture:

This project uses ServiceNow's cloud-based low-code platform to automate family expense management. It includes two primary tables — Family Expenses and Daily Expenses — linked through relationships and maintained by Business Rules and Workflows for automated calculations. The system allows users to input expenses, categorize them, and visualize totals via dashboards.



Flow Summary:

1. User submits daily expense → stored in Daily Expenses table.
2. Business Rule triggers → updates Family Expenses total.
3. Workflow checks budget limit → triggers notification if exceeded.
4. Data stored securely in ServiceNow's cloud database.
5. Dashboard displays total and categorized expense summary.

Table-1: Components & Technologies

| S.No | Component | Description | Technology |
|------|---------------------|---|---------------------------------|
| 1 | User Interface | Interface for adding and viewing expenses | ServiceNow Web UI |
| 2 | Application Logic-1 | Creates and updates Family Expenses automatically | ServiceNow Business Rule |
| 3 | Application Logic-2 | Validates mandatory fields and budget thresholds | ServiceNow Flow Designer |
| 4 | Application Logic-3 | Handles categorization and data validation | ServiceNow Form Design |
| 5 | Database | Stores Family and Daily Expense data | ServiceNow Tables |
| 6 | Cloud Hosting | Hosted and managed in the ServiceNow Cloud | ServiceNow SaaS Platform |
| 7 | Notifications | Sends alerts when expenses exceed budget | ServiceNow Notification Service |
| 8 | External APIs | Optional integration with bank or finance apps | REST API in ServiceNow |

Table-2: Application Characteristics

| S.No | Characteristic | Description | Technology |
|------|----------------|--|---------------------------------|
| 1 | Security | Role-based access for family members | ACLs, Scoped Apps |
| 2 | Scalability | Can handle multiple users and large data | ServiceNow Cloud Architecture |
| 3 | Availability | Always available through ServiceNow hosting | Load-balanced Instances |
| 4 | Usability | Simple and clear UI for all users | Form-based Design |
| 5 | Performance | Optimized with background scripts and indexed tables | GlideRecord, Background Scripts |