Project Design Phase-II
Data Flow Diagram & User Stories

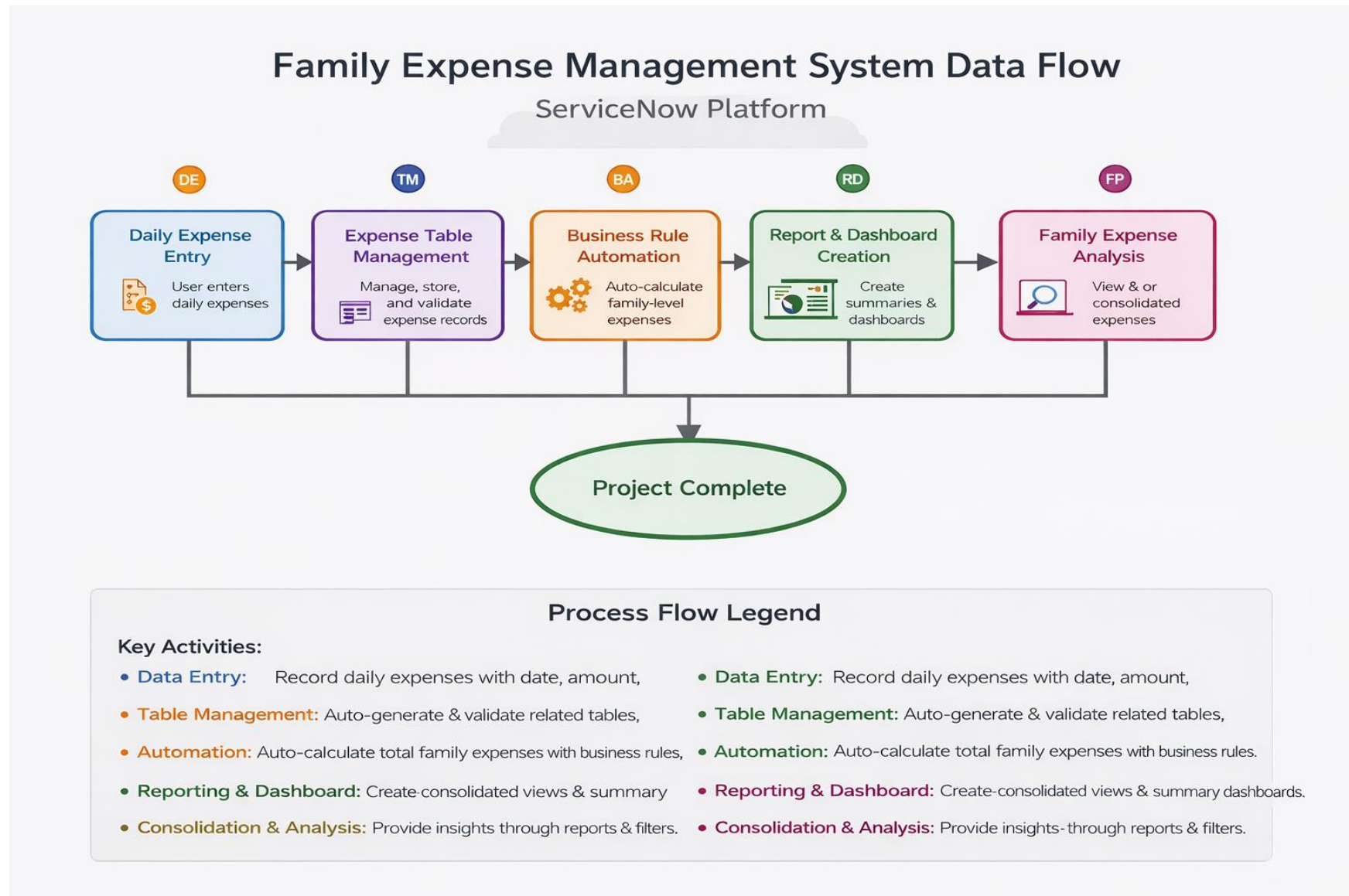| Date	10 February 2026
Team ID	LTVIP2026TMIDS56419
Project Name	Calculating Family Expenses using Service Now
Maximum Marks	4 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Flow Integration & Dependencies

Sequential Dependencies

1. Table Creation and Configuration must be completed before any expense data can be recorded in the system.

2. Daily Expense Entry depends on properly configured tables and validated form fields.

3. Table Relationships enable linking Daily Expenses with Family Expenses for structured data flow.

4. Business Rule Automation relies on accurate daily expense entries and established table relationships.

5. Form Configuration and Related Lists depend on completed tables and relationships to display consolidated data.

6. Expense Analysis and Consolidated Views require successful execution of business rules and data aggregation..

7. Documentation captures the complete development lifecycle, including configuration steps, automation logic, and results.

Data Flow Diagram :

Family Expense Management System Data Flow
ServiceNow Platform

DE	TM	BA	RD	FP
Daily Expense Entry — User enters daily expenses	**Expense Table Management** — Manage, store, and validate expense records	**Business Rule Automation** — Auto-calculate family-level expenses	**Report & Dashboard Creation** — Create summaries & dashboards	**Family Expense Analysis** — View & or consolidated expenses

Project Complete

Process Flow Legend

Key Activities:

- **Data Entry:** Record daily expenses with date, amount,
- **Table Management:** Auto-generate & validate related tables,
- **Automation:** Auto-calculate total family expenses with business rules,
- **Reporting & Dashboard:** Create-consolidated views & summary
- **Consolidation & Analysis:** Provide insights through reports & filters.

- **Data Entry:** Record daily expenses with date, amount,
- **Table Management:** Auto-generate & validate related tables,
- **Automation:** Auto-calculate total family expenses with business rules.
- **Reporting & Dashboard:** Create-consolidated views & summary dashboards.
- **Consolidation & Analysis:** Provide insights-through reports & filters.

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
System Administrator	Performance Optimization	USN-1	As a System Administrator, I want the Family Expense application to perform efficiently with fast form loading and calculations, so that users experience smooth interaction even with large expense data.	Form load time under 5 seconds. Business rule execution completes without delay.	HIGH	Sprint-1
System Administrator	Data Configuration & Overview	USN-2	As a System Administrator, I want to configure core tables and provide an overview of expense data, so that data integrity and structure are maintained.	Family Expenses and Daily Expenses tables created with correct fields and validations.	High	Sprint-1
Family Head	Expense Summary Visualization	USN-3	As a Family Head, I want to view a consolidated summary of family expenses, so that I can quickly understand overall spending.	Display total expense amount, date-wise grouping, and consolidated expense details.	High	Sprint-3
Family Member	Daily Expense Entry	USN-4	As a Family Member, I want to record my daily expenses easily, so that all expenses are accurately tracked.	Daily expense form allows entry of date, amount, member name, and comments with validations.	Medium	Sprint-2
Family Head	Strategic Expense Insights	USN-5	As a Family Head, I want to understand spending patterns over time, so that I can make informed budgeting decisions.	Summary view shows expense trends and comparisons across dates.	High	Sprint-1
Expense Manager	Category-wise Expense Analysis	USN-6	As an Expense Manager, I want to analyze expenses based on different parameters such as family members and dates, so that I can identify high-spending areas.	Grouped views and related lists display expense breakdowns clearly.	High	Sprint-3
All Users	Integrated Dashboard Experience	USN-7	As any system user, I want to access all housing market visualizations through a unified, responsive dashboard, so that I can efficiently navigate between different analyses and maintain context.	Single Family Expenses form with related list showing linked Daily Expenses.	High	Sprint-3

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Family Head	Member-wise Expense Segmentation	USN-8	As a Family Head, I want to see how expenses vary by family member, so that I can manage and control individual spending patterns.	Expense details clearly indicate member-wise contributions.	Medium	Sprint-3
Expense Manager	Daily-to-Family Expense Aggregation	USN-9	As an Expense Manager, I want daily expenses to automatically update family-level totals, so that manual calculations are eliminated.	Business Rule correctly aggregates daily expenses into family expenses on insert/update.	High	Sprint-2
System Administrator	System Administration & Data Governance	USN-10	As a System Administrator, I want to manage users, roles, and data security, so that the system remains secure, reliable, and well-governed.	Role-based access, data integrity, and audit-ready configuration ensured.	High	Sprint-1