Date:	2 November 2025
Project Title:	Calculating Family Expenses using ServiceNow
Team ID:	NM2025TMID08734

Data Flow Diagram (DFD) and User Stories

Phase: Requirement Analysis

1. Data Flow Diagram (DFD)

Level 0: Context Diagram
• Represents the system as a single process interacting with external entities.
• **Entities:** User, System (ServiceNow), Administrator.
• **Data Flows:**
• User → Expense Details → System
• System → Summary Reports → User
• Admin → Configuration → System

Level 1: Detailed Data Flow
1. Input Expense Data – User enters expense details (amount, category, date).
2. Categorize Expense – System automatically assigns a category.
3. Budget Tracking – Compares total expenses with set budget; sends alerts.
4. Generate Reports and Dashboard – Displays visual summaries and downloadable reports.

Main Data Stores:
• User Table – Stores user credentials and profile info.
• Expense Table – Stores expense records.
• Budget Table – Stores budget limits.

2. User Stories

User Role	User Story	Acceptance Criteria
As a user	I want to log in securely to the ServiceNow portal	User can access after authentication
As a user	I want to add daily expenses with category and amount	System saves expense data correctly
As a user	I want to set a monthly budget	
As a user	I want to view categorized expenses	
As a user	I want to receive alerts when exceeding my budget	
As a user	I want to generate and download reports	
As an admin	I want to view all user expense data	Admin can see all user records
As an admin	I want to manage user accounts and permissions	Admin can add or deactivate users

stores
the

System
and tracks
defined
budget

Dashboard
displays
categorized
expense data

System
triggers

notifications automatically

Reports available in PDF or Excel format

3. Summary

The Data Flow Diagram provides a visual overview of how data moves between the user, system, and database, while the User Stories outline clear functional expectations and acceptance criteria to guide the system's development in ServiceNow.