Project Design Phase II
Data flow methodology diagram and User stories

Team ID: NM2025TMID01129

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Project Name: Calculating Family Expenses using Service Now

Maximum Marks: 4

Project Title: Calculating Family Expenses Using ServiceNow

1. Methodology:

The implementation of this project is carried out in several structured steps:

Step 1: Creating Family Members

• Navigate to: **All** → **Family Members** → **New**
• Create records such as *John (Father)*, *Mary (Mother)*, and *Emma (Daughter)*.
• Assign each member a unique ID or relationship type (e.g., Earner, Dependent).
• Save the records.

Step 2: Creating Tables for Income and Expenses

• Navigate to: **System Definition** → **Tables** → **New**
• Create custom tables:

- **Income Table** (for recording all income sources)
- **Expense Table** (for daily or monthly expenses)
  • Check:
- *Create Module*
- *Create Mobile Module*
  • Submit and verify both tables in the **Application Navigator**.

Step 3: Establishing Relationships

• Navigate to: **System Definition** → **Tables** → **Relationships**
• Link the **Family Member Table** with **Income** and **Expense Tables**.

• This relationship ensures that all income and expenses are associated with the correct family member.

Step 4: Configuring Business Rules

• Navigate to: **System Definition** → **Business Rules** → **New**
• Create rules for automatic total calculation:

- Trigger: *After insert or update* on Expense Table.
- Action: Update total expenses and remaining balance fields in the Family Member record.
  • Test with sample data to ensure real-time updates.

Step 5: Creating Flow Designer Workflow

• Navigate to: **Flow Designer** → **New Flow**
• Name the flow: *Expense Tracker Flow.*
• Trigger: *When a new expense record is created or updated.*
• Condition: *If total expenses exceed income threshold, send an alert.*
• Action:

- Update the balance field in the Family Member record.
- Send notification to the user.

Step 6: Configuring Reports and Dashboards

• Navigate to: **Reports** → **Create New Report.**
• Choose data source: *Expense Table / Income Table*.
• Visualize data using **Bar Charts**, **Pie Charts**, and **Trend Graphs**.
• Combine reports into a single **Dashboard** titled *Monthly Expense Overview*.

Step 7: Testing and Validation

• Add sample income and expense records.
• Verify if total income, total expenses, and remaining balance update correctly.
• Validate flow triggers and notification accuracy.

Below is the workflow architecture of the automation system

User Stories:

Functional User Type	Requirement (Epic)
Family Member	Record and manage personal income and expenses
Family Head	Monitor total income, expenses, and balance
System (Flow Designer)	Automate updates and notifications
Admin	Configure tables, relationships, and business rules
Dashboard Viewer	View expense reports and monthly summaries

User Story Details

User Story / Task No.	User Story Description
FESN-1	As a family member, I want to record my daily expenses so that I can track my spending accurately.
FESN-2	As a family member, I want to enter my income details so that total family income is updated automatically.
FESN-3	As a family head, I want to view total income, total expenses, and remaining balance so that I can plan monthly budgets.
FESN-4	As a system, I want to automatically update total expenses and balance when a new expense is added.
FESN-5	As a family member, I want to receive alerts when expenses exceed budget limits.
FESN-6	As an admin, I want to generate monthly expense reports and dashboards for visual analysis.