REQUIREMENT ANALYSIS

Date   :   22.10.2025
Team ID   :   B7DB253E31303C393D5405F322D74E3
Project Name   :   Calculating the family expenses using service now
Max mark   :   4 Marks

1. Functional Requirements (FR)

These define what the system **must do**:

1. **Expense Submission**
   Family members can submit expenses through a **ServiceNow Expense Form**.

   - Fields: Date, Amount, Category, Description, Paid By, etc.

2. **Approval Flow**

   - Optional: Certain expenses need **approval** by a head of family.

   - Automatic notifications for pending approvals.

3. **Expense Storage**

   - All submitted expenses stored in **ServiceNow Tables** (`Family_Expense`, `Expense_Category`).

4. **Calculation**

   - Total expenses per member, category, or month.

   - Automatic summation and balance calculation.

5. **Reporting & Dashboard**

- Visual reports for **spending trends**, **category-wise breakdown**, and **family budget summary**.

- Export options (Excel, PDF).

📝 Requirement Analysis: Family Expense Calculation using ServiceNow

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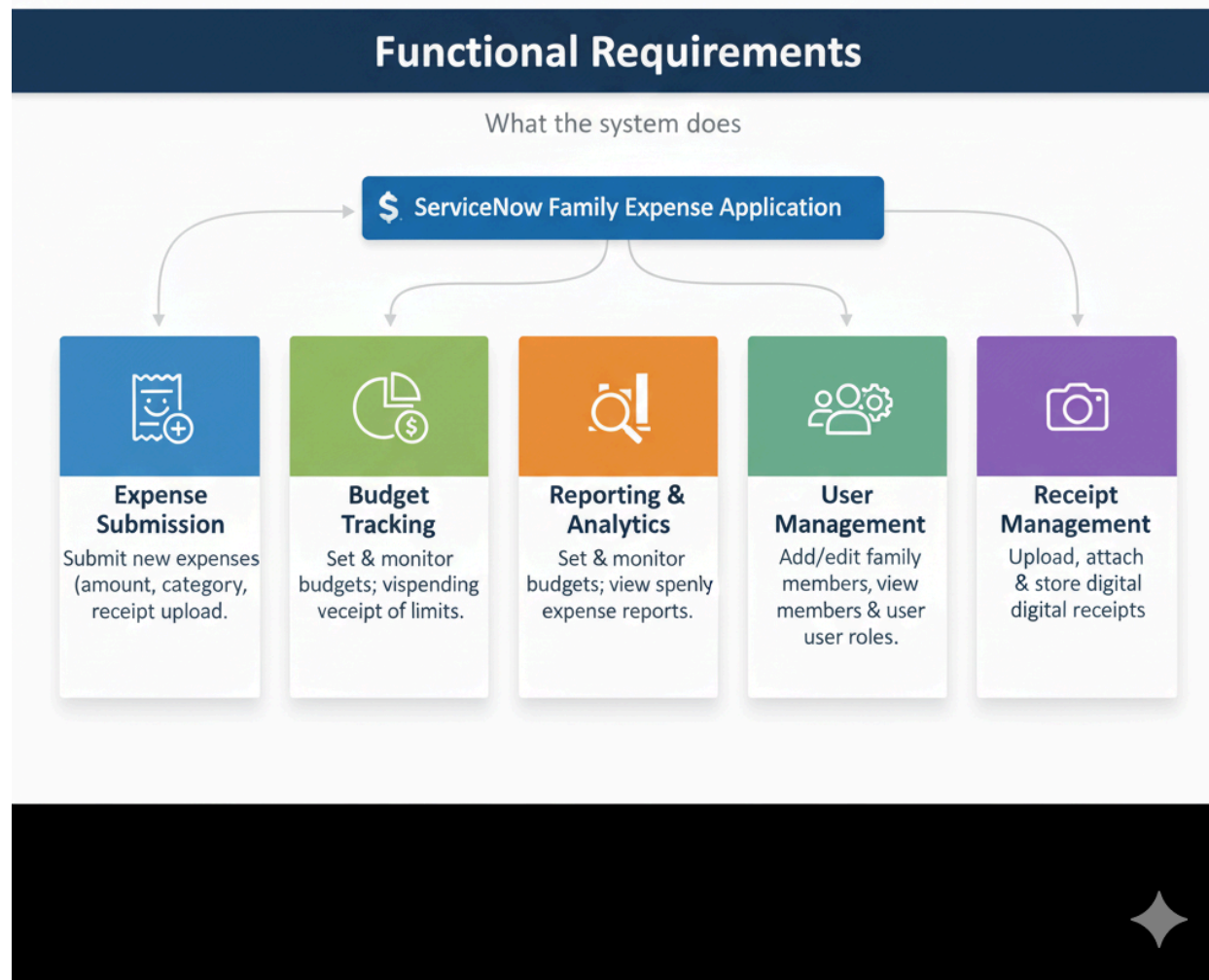   - All submitted expenses stored in **ServiceNow Tables** (`Family_Expense`, `Expense_Category`).

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Functional Requirements

What the system does

ServiceNow Family Expense Application

Expense Submission	**Budget Tracking**	**Reporting & Analytics**	**User Management**	**Receipt Management**
Submit new expenses (amount, category, receipt upload.	Set & monitor budgets; vispending veceipt of limits.	Set & monitor budgets; view spenly expense reports.	Add/edit family members, view members & user user roles.	Upload, attach & store digital digital receipts

2. Non-Functional Requirements (NFR)

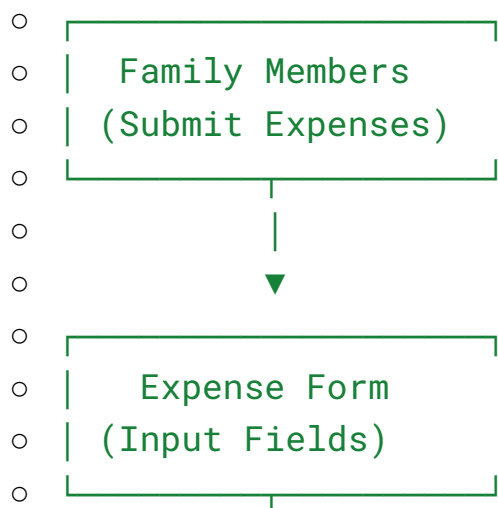These define **how the system performs**:

- **Usability:** Simple, easy-to-use forms for family members.

- **Reliability:** Accurate calculation and storage.

- **Security:** Only authorized family members can submit/view expenses.

- **Performance:** Fast data entry and report generation.

- **Scalability:** Should handle growing number of expenses and members.

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3. Actors

- **Family Members:** Submit expenses, view their own data.

- **Family Head / Admin:** Approve expenses, monitor reports.

- **ServiceNow System:** Stores data, executes flows, generates dashboards.

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4. Requirement Analysis Diagram (Simple Flow)

Here's the **textual layout** of the diagram I'll generate:

```
○  ┌─────────────────────┐
○  │   Family Members    │
○  │  (Submit Expenses)  │
○  └──────────┬──────────┘
○             │
○             ▼
○  ┌─────────────────────┐
○  │    Expense Form     │
○  │   (Input Fields)    │
○  └──────────┬──────────┘
```

```
            |
            ▼
      ┌─────────────────┐
      | ServiceNow Tables  |
      | (Store & Retrieve) |
      └─────────────────┘
            |
            ▼
      ┌─────────────────┐
      |   Flows & Logic    |
      | (Approval, Calc)   |
      └─────────────────┘
            |
            ▼
      ┌─────────────────┐
      | Dashboards & Reports|
      | (Insights & Trends)|
      └─────────────────┘
            |
            ▼
      ┌─────────────────┐
      | Requirement Output |
      | (Accurate Family   |
      | Expense Summary)   |
      └─────────────────┘
```
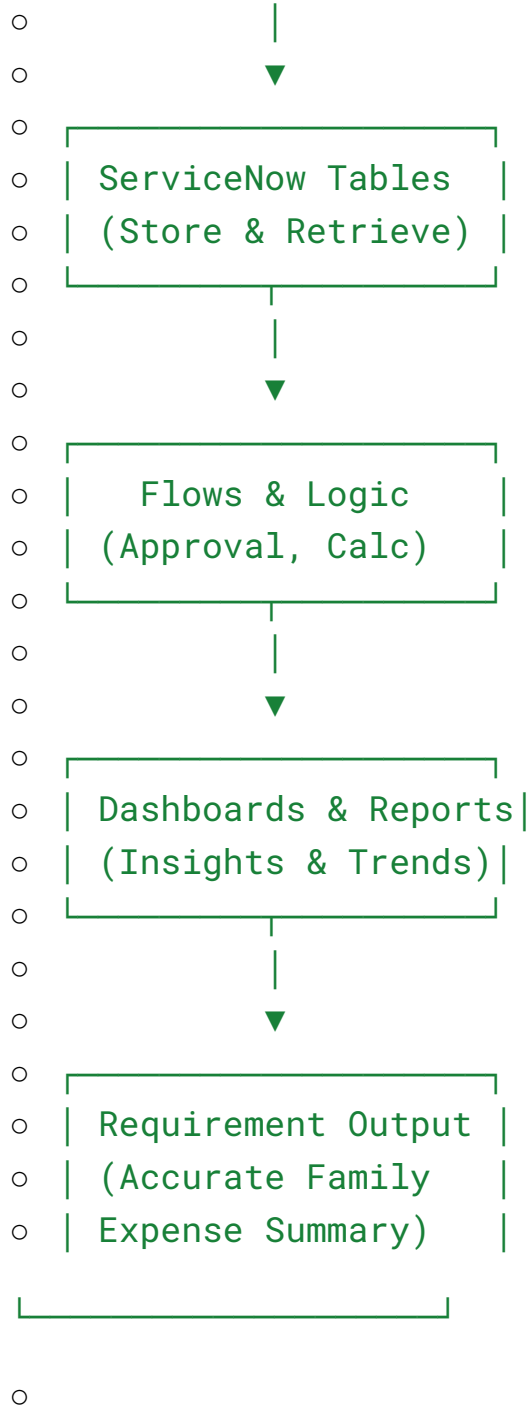
Non-Functional Requirements (NFRs)

How the system performs

ServiceNow Family Expense Application

Usability	Reliability	Security	Performance	Scalablity
Simple, easy-to-use forms for family members.	Accurate calculation and storage.	Only authorized family members can submit/view expenses.	Fast data entry and report generation.	Should handle growing number of expenses and members.

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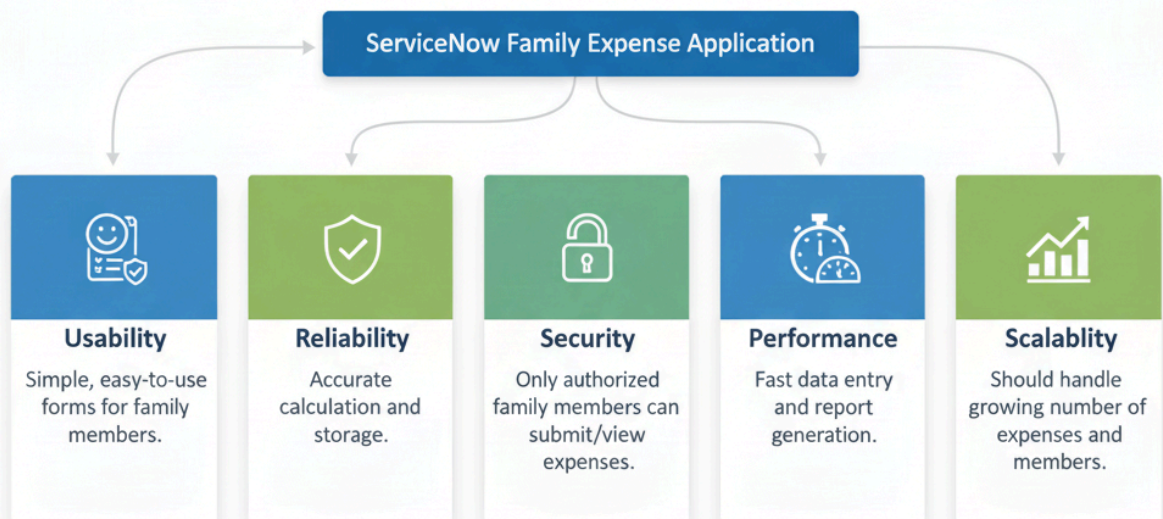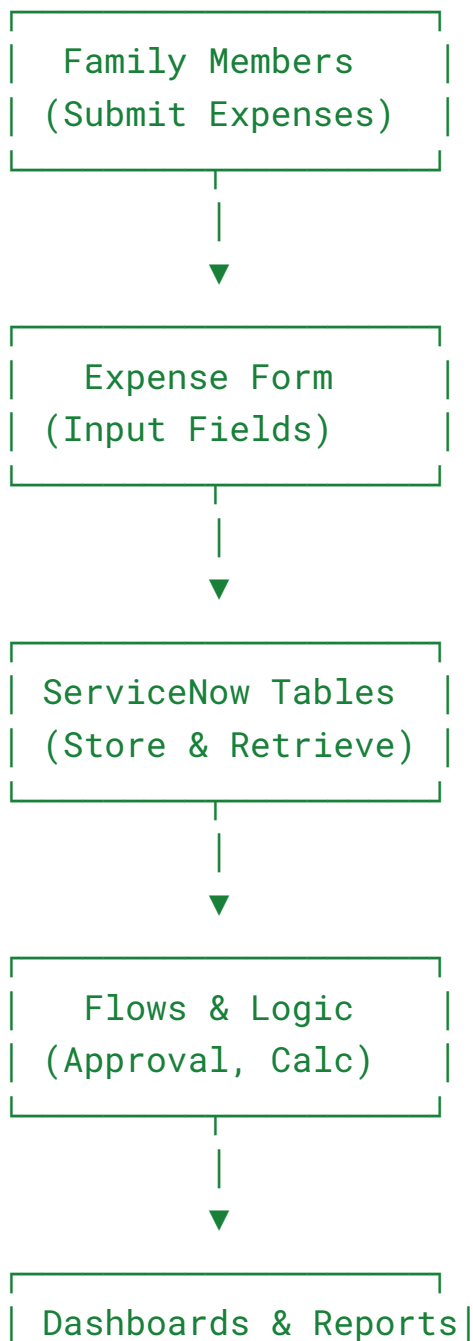
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└─────────────────────┘
           │
           ▼
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└─────────────────────┘
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           ▼
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│ ServiceNow Tables   │
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           │
           ▼
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└─────────────────────┘
           │
           ▼
┌─────────────────────┐
│ Dashboards & Reports│
```

```
| (Insights & Trends)|
 └─────────┬─────────┘
           │
           ▼
 ┌───────────────────┐
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