



Requirement Analysis Phase

1. Purpose of the Requirement Analysis Phase

- The Requirement Analysis Phase identifies and documents all the functional and non-functional requirements of the project.
- It defines what the system should do and how it should perform those tasks.
- This phase ensures that the ServiceNow expense tracking system meets the needs of both the administrator (Anjali) and family members who use it to record expenses.

2. System Overview

- ❖ The system will help manage and calculate all family expenses by:
- ❖ Recording each expense entry (with date, category, and amount)
- ❖ Categorizing the expenses (e.g., rent, groceries, electricity)
- ❖ Generating reports and visual charts
- ❖ Monitoring total monthly spending

3. Functional Requirements

ID Requirement Description

- FR1 The system shall allow users to add new expense records using a ServiceNow form.
- FR2 The system shall store all expenses in a custom database table (u_family_expenses).
- FR3 The system shall allow the administrator (Anjali) to view, edit, and delete expense entries.
- FR4 The system shall automatically calculate total monthly and category-wise expenses.
- FR5 The system shall generate reports and visual charts (pie charts, bar charts) for expense distribution.

- FR6 The system shall allow users to filter reports by date range or category.
- FR7 The system shall notify the administrator if expenses exceed the predefined monthly limit.

4. Non-Functional Requirements

Type Requirement Description

- I. Performance - The system must process and display expense reports within 3 seconds.
- II. Usability - Forms and dashboards must have a simple and intuitive design for all users.
- III. Reliability - The system must store all expense data securely and prevent data loss.
- IV. Scalability - The application must handle an increasing number of expense records without lag.
- V. Security - Access control must restrict report editing to the administrator only.
- VI. Availability - The ServiceNow platform should maintain 99% uptime for consistent access.

5. User Requirements

User Role	Requirements
A. Administrator (Anjali)	Can view all records, generate reports, manage categories, and analyze spending trends.
B. Family Members (Users)	Can add or update their own daily expenses using a simple form.

6. Software and Hardware Requirements

Software Requirements:

- ServiceNow Platform (Developer Instance)
- Web Browser (Chrome / Edge / Firefox)
- Internet Connection

Hardware Requirements:

- ✓ Computer or Laptop (Minimum 4GB RAM)
- ✓ Internet Access Device for Mobile Users

7. Interface Requirements

- User Interface:
 - ServiceNow Form for Expense Entry
 - Dashboard with charts and totals
 - Report Generation Page
- Administrator Interface:
 - Dashboard with full control over entries
 - Expense Reports by Category/Month
 - Alert System for overspending

8. Data Requirements

- Each expense record must include:
- Date
- Category
- Amount
- Description
- User who added it

Example Input:

Date	Category	Amount	Description
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|----|------------|-----------|-------|-----------------|
| a. | 2025-10-01 | Groceries | ₹5000 | Monthly grocery |
| b. | 2025-10-05 | Rent | ₹8000 | House rent |

9. Output Requirements

The system should generate:

- Pie Chart: Category-wise expense distribution
- Bar Chart: Monthly spending comparison
- Total Summary: Total amount spent in a selected month
- Example Output:
- Total Expense (October 2025): ₹17,500

Pie Chart:

- Rent – 45%
- Groceries – 35%
- Electricity – 10%
- Education – 10%

10. Outcome of Requirement Analysis

- Clear understanding of user and system needs.
- Defined system boundaries and features.
- Identified performance and security constraints.
- Established a foundation for the design and testing phases.