

# Calculating Family Expense

## Requirement Analysis Phase

### 1. System Requirements

The *Calculating Family Expense* system requires both hardware and software resources to function efficiently.

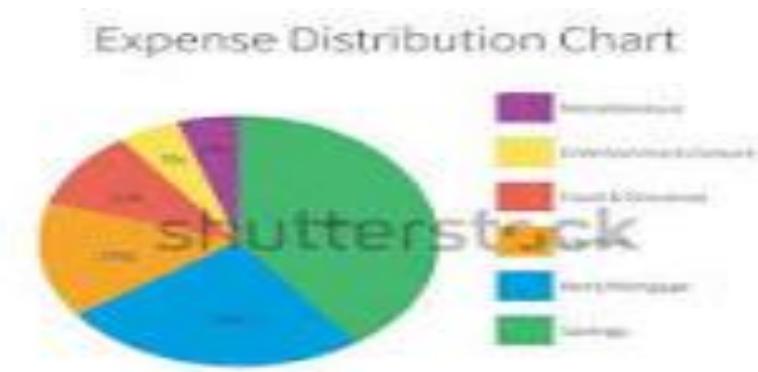
Below are the general requirements:

#### Hardware Requirements:

- Processor: Intel i5 or above
- RAM: Minimum 4 GB
- Storage: 250 GB HDD or higher
- Internet Connectivity: Required for ServiceNow platform access

#### Software Requirements:

- Operating System: Windows 10 / macOS / Linux
- Application Platform: ServiceNow instance
- Browser: Google Chrome or Microsoft Edge (latest version)
- Development Tools: Visual Studio Code, ServiceNow Studio



### 2. Functional Requirements

The system must fulfill the following functional requirements to meet user needs:

1. The user should be able to register and log in securely.

2. The user can input daily, weekly, and monthly expenses.
3. The system should categorize expenses automatically (e.g., groceries, utilities, transport).
4. The system must generate summary reports and visual charts of spending.
5. Admins can view overall user reports and manage permissions.
6. The platform should send alerts for high expenditure or nearing budget limits.

Home Budget Worksheet													
Summary	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
NET Income - Expenses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Beginning Balance	1,000												
Predicted Ending Balance	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Actual Ending Balance													
<b>Income Categories</b>													
Take Home Pay													0.00
Gifts Received													0.00
Tax Refunds													0.00
Interest Income													0.00
Refunds/Reimbursements													0.00
Savings Withdrawal													0.00
Other Income #1													0.00
Other Income #2													0.00
Total Income	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Deductible Expenses</b>													
Business Expenses													
Unreimbursed													0.00
Office At Home													0.00
Other Business Expenses													0.00
Charitable Contributions													
Religious													0.00
Other Non-Profit													0.00

### 3. Non-Functional Requirements

Non-functional requirements ensure the performance, reliability, and quality of the system:

- **Performance:** The system should load within 3 seconds for each user operation.
- **Scalability:** Must support multiple family accounts simultaneously without performance issues.
- **Usability:** The user interface should be simple and accessible for all age groups.
- **Security:** User data must be encrypted and securely stored.
- **Availability:** The system should be available 99.5% of the time.
- **Maintainability:** Updates and changes should be easily deployable.



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## 4. Use Case Diagram

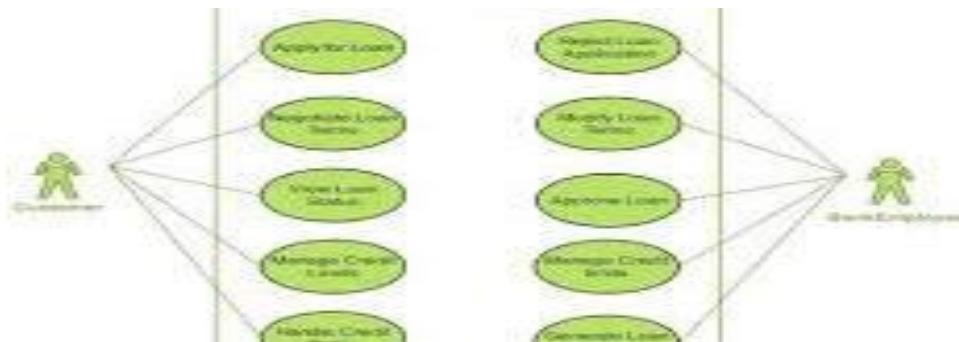
The Use Case Diagram describes the interactions between **family members (users)** and the **system**.

### Actors:

- Family Member (User)
- System (ServiceNow Application)
- Administrator

### Use Cases:

- Register / Login
- Add Expenses
- View Monthly Reports
- Categorize Expenses
- Manage them properly



## Conclusion

The Requirement Analysis phase defines the technical and functional foundation for the project.

It ensures that the system's structure aligns with user expectations, performance standards, and real-world usability.

This phase acts as a blueprint for the next stage — *Project Design Phase*.

