Project Design Phase for Calculating Family Expenses Using ServiceNow

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Team id	NM2025TMID00838
Project name	Calculating Family Expenses using service now
Team members	4

Project Design Phase for Calculating Family Expenses Using ServiceNow

1. Objectives of the Design Phase

- Define **how the system will work** technically and functionally.
- Create a **blueprint** for ServiceNow implementation.
- Ensure **usability**, **accuracy**, and **security** of family expense tracking.

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2. High-Level Functional Design

1. **Expense Input Module**
   - Users can add different types of expenses (e.g., groceries, utilities, rent, entertainment, education).
   - Fields: `Date`, `Category`, `Amount`, `Payment Method`, `Notes`.
   - Optionally, support recurring expenses.
2. **Income Tracking Module**
   - Record family income sources.
   - Fields: `Date`, `Source`, `Amount`.
3. **Expense Categories**
   - Predefined or customizable categories.
   - Supports reports and trend analysis.
4. **Dashboard & Reports**
   - Visual representation of expenses vs. income.
   - Pie charts, bar charts, monthly summaries.
   - Alerts for overspending.
5. **Approval/Notification Module (Optional)**
   - Notifications if expenses exceed budget limits.
   - Shared family alerts.

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3. Data Design

- **Tables**
  - `Expense` table
  - `Income` table
  - `Category` table
  - `User` table (if multi-user)
- **Relationships**
  - Each expense belongs to a user and a category.
  - Income can also be tied to a user.
- **Fields and Data Types**
  - `Amount` → Currency
  - `Date` → Date/Time
  - `Category` → Reference to Category table
  - `Notes` → String/Text

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4. ServiceNow Design Considerations

- **Platform Use**
  - Use **ServiceNow Table & Form Designer** for input forms.
  - Use **UI Pages / UI Builder** for dashboards.
- **Workflow/Automation**
  - Automatic monthly total calculations.
  - Alerts when thresholds are exceeded.
- **Reporting**
  - Use **Performance Analytics** or standard reports for trends.
- **Security & Access**
  - Access control rules per user/family member.
  - Role-based access if multiple family members are involved.

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5. Integration & Automation

- **Optional Integrations**
  - Bank statements import via APIs.
  - Budget apps or spreadsheets.
- **Automated Calculations**
  - Monthly totals
  - Category-wise expense distribution
  - Income vs. expense comparison

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6. User Interface Design

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- **Forms**
  - Simple expense input forms
  - Optional recurring expense setup
- **Dashboard**
  - Expense summary
  - Charts & graphs
  - Alerts or notifications

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7. Non-Functional Design

- **Performance**
  - Handle multiple users if needed.
- **Scalability**
  - Ability to expand categories or add more family members.
- **Security**
  - Ensure data privacy and user-specific data access.
- **Usability**
  - Intuitive UI/UX for non-technical users.

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8. Deliverables of the Design Phase

- **Functional Design Document (FDD)**
- **Data Model Diagram**
- **Process Flow Diagrams**
- **Wireframes / Mockups of Forms and Dashboards**
- **ServiceNow Table & Workflow Design**
- **Access Control & Security Plan**