

**Project Design Phase**  
**Solution Architecture**

Team ID	LTVIP2025TMID28803
Project Name	Calculating Family Expenses Using ServiceNow
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**Solution Architecture:**

Solution Architecture for Calculating Family Expenses using ServiceNow

The solution architecture for this project aims to bridge the gap between the business problem of inefficient family expense management and the technology solution offered by ServiceNow.

**Key Components**

1. **ServiceNow Platform:** Leverage the ServiceNow platform to build a customized application for family expense management.
2. **Integration with Financial Institutions:** Integrate with bank accounts and credit cards to automatically track expenses.
3. **Machine Learning-powered Categorization:** Utilize machine learning algorithms to categorize expenses accurately.
4. **Customized Dashboards and Reporting:** Provide personalized dashboards and reporting capabilities to enable data-driven insights.

**Solution Requirements**

1. **User Authentication and Authorization:** Ensure secure access to the application.
2. **Data Encryption:** Protect sensitive financial data.
3. **Integration APIs:** Develop APIs for integrating with financial institutions.
4. **Machine Learning Model:** Train and deploy machine learning models for expense categorization.

**Development Phases**

1. **Requirements Gathering:** Define the requirements for the solution.
2. **Design and Development:** Design and develop the customized application on ServiceNow.

3. Testing and Quality Assurance: Test the application to ensure it meets the requirements.
4. Deployment and Maintenance: Deploy the application and provide ongoing maintenance and support.

**Example - Solution Architecture Diagram:**

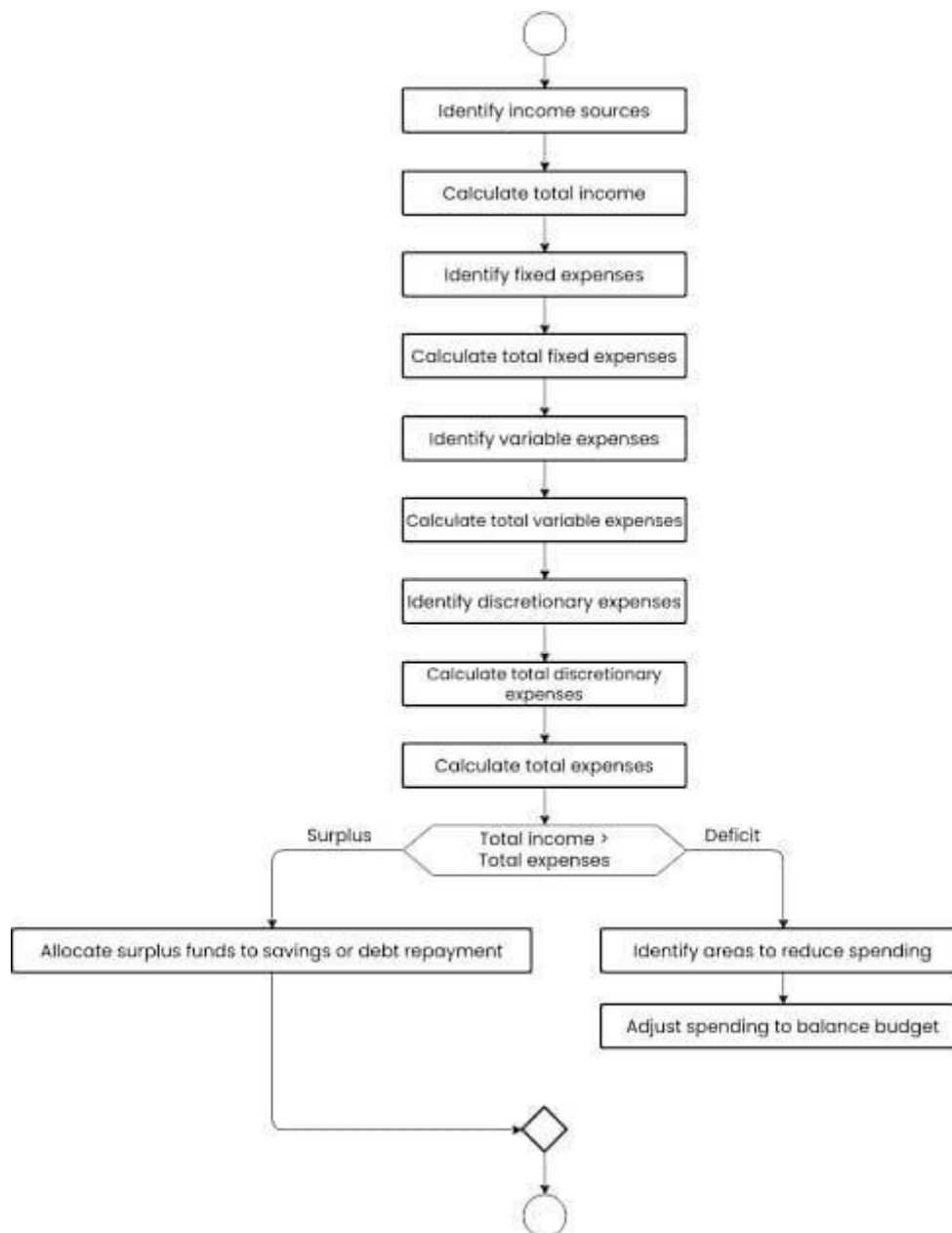


Figure 1: Architecture and data flow of the voice patient diary sample application

Reference: <https://aws.amazon.com/blogs/industries/voice-applications-in-clinical-researchpowered-by-ai-on-aws-part-1-architecture-and-design-considerations/>