

Project Report:

Calculating Family Expenses Using Service Now

Platform: ServiceNow (Global Application)

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Guided Project: Calculating Family Expenses Using ServiceNow

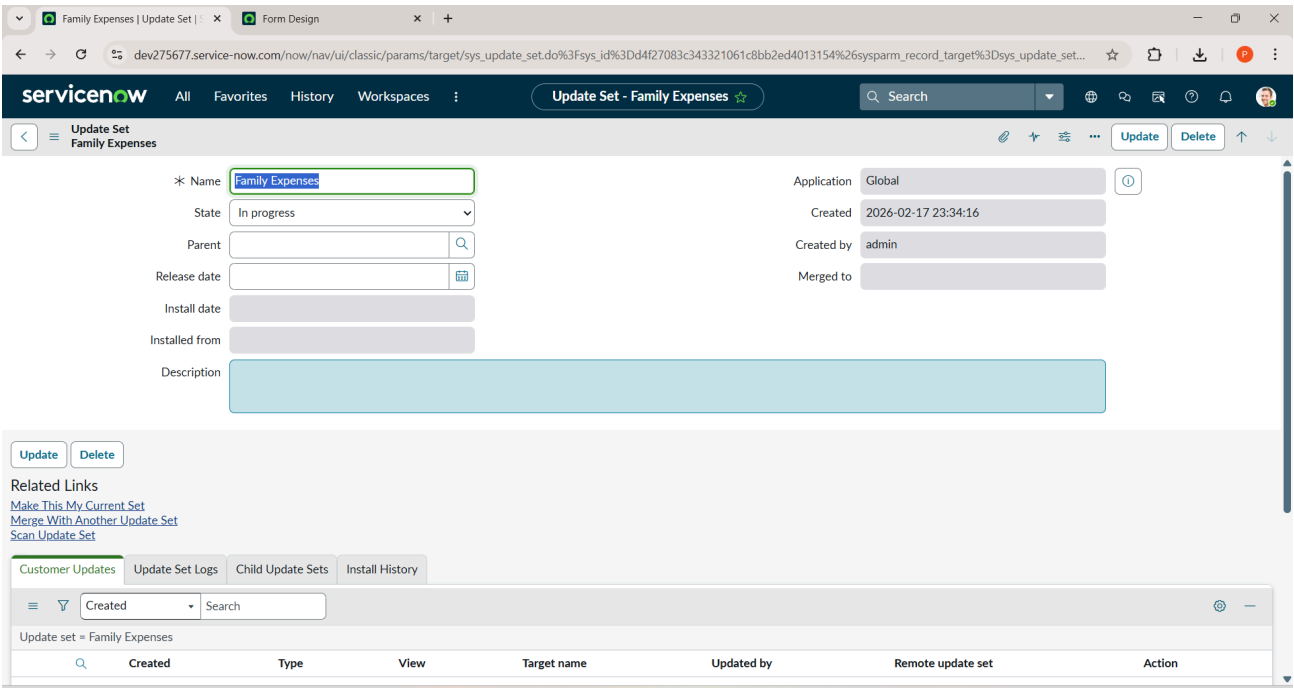
1. Introduction

The **Family Expenses Management** system is a custom-built ServiceNow application designed to streamline and automate household financial tracking. By utilizing custom database tables and automated backend logic, the application allows users to log daily expenditures and ensures data is synchronized across the family's financial records.

2. Development Lifecycle & Source Control

To maintain a clean development environment, all configurations were captured in a dedicated **Update Set**.

- **Name:** Family Expenses
- **State:** In progress
- **Application Scope:** Global



3. Database Design (Table Schema)

The application architecture is based on two primary custom tables to separate raw data entry from processed family records.

3.1 Family Expenses Table (u_auto_populated)

This table acts as the primary repository for consolidated expense data.

- **Key Fields:** Number, Family Member Name, Date, and Sys ID.

Table - Family Expenses

A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes. [More Info](#)

* Label: Family Expenses
* Name: u_auto_populated

Application: Global
Remote Table:

Columns | Controls | Application Access

Table Columns | Column label | Search

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
Updates	Integer	(empty)	40		false
Updated	Date/Time	(empty)	40		false
update	String	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Number	String	(empty)	40	javascript:getNextObjNumberPadded();	true
Family Member Name	Field Name	(empty)	80		false
Date	Date	(empty)	40		false
Created by	String	(empty)	40		false

3.2 Daily Expenses Table (u_daily_expenses)

Designed for high-frequency daily logging by various family members.

- **Key Fields:** Number, Family Member Name, Date, and Expense (Integer).

Table - Daily Expenses

A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes. [More Info](#)

* Label: Daily Expenses
* Name: u_daily_expenses

Application: Global
Remote Table:

Columns | Controls | Application Access

Table Columns | Column label | Search

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
Updates	Integer	(empty)	40		false
Updated by	String	(empty)	40		false
Updated	Date/Time	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Number	String	(empty)	40	javascript:getNextObjNumberPadded();	false
Family Member Name	Field Name	(empty)	80		false
Expense	Integer	(empty)	40		false
Date	Date	(empty)	40		false

4. Technical Implementation (Business Logic)

To automate the interaction between tables, a **Business Rule** was implemented to manage record synchronization.

- **Name:** Family Expenses BR
- **Table:** Daily Expenses [u_daily_expenses]
- **Logic:** The script utilizes GlideRecord('u_family_expenses') to query and process records based on the entry date (u_date).

The screenshot shows the ServiceNow Business Rules configuration interface. The rule is named 'Family Expenses BR' and is associated with the 'Daily Expenses [u_daily_expenses]' table. It is set to run globally and is active. The 'Advanced' tab is selected, showing a script that uses GlideRecord to query and process records based on the entry date (u_date). The script is as follows:

```
(function executeRule(current, previous /*null when async*/) {  
  
    var FamilyExpenses = new GlideRecord('u_family_expenses');  
    FamilyExpenses.addQuery('u_date', current.u_date);  
    FamilyExpenses.query();  
    if(FamilyExpenses.next())  
    {  
        // Logic to process records  
    }  
})
```

5. Support & Knowledge Management

To assist users, the application is supported by a robust **Knowledge Base** containing guides on system security and configuration.

- **Workstation Security Standard:** Outlines endpoint security and hardening.
- **Phishing Awareness:** Guides on avoiding common security scams.
- **Technical Setup:** Includes guides for Internet Explorer settings and Android development configuration

The screenshot shows the 'Knowledge & Catalog' page with a list of knowledge articles. The table has columns for Category, Number, and Updated. The articles are as follows:

Category	Number	Updated
IE	KB0000003	2022-12-05 20:46:33
Security	KB0000001	2017-02-24 05:16:27
Android	KB00000033	2022-12-05 20:46:33
Java	KB00000032	2022-12-05 20:46:33

6. Conclusion

The project successfully demonstrates the ability to create a functional, automated household management tool within ServiceNow. By separating daily inputs from master records, the system ensures data integrity while providing an easy-to-use interface for all family members.