

Calculating Family Expenses using ServiceNow

Name: Attili Avinash

College: Vishnu Institute of Technology, Bhimavaram.

Skillwallet ID: SWUID20250151359

Introduction:

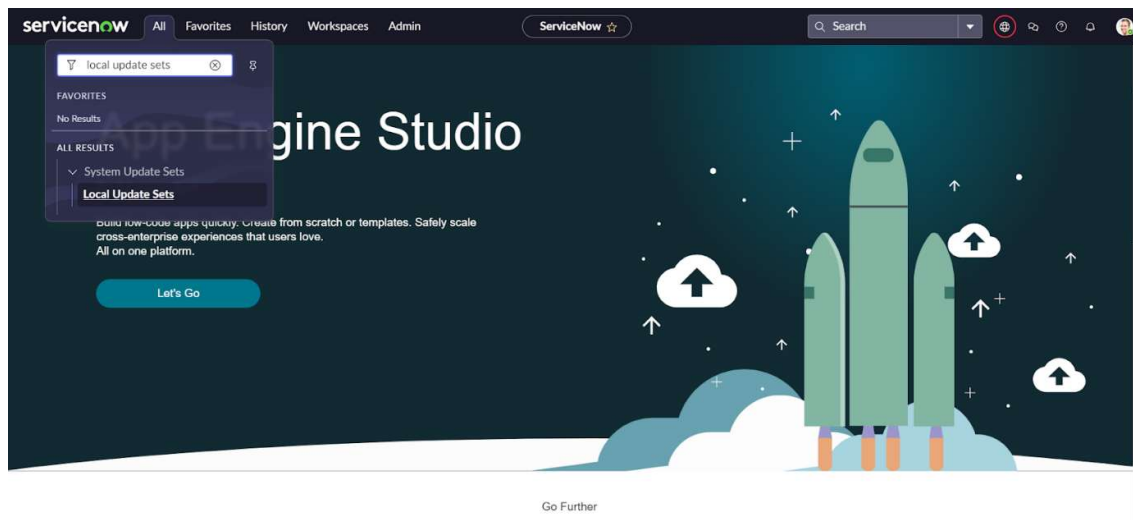
The project aims to develop a comprehensive expense calculation system using ServiceNow. This system will enable users to track and manage family expenses efficiently. It will include features such as expense categorization, budget setting, real-time tracking, and reporting capabilities. Utilizing ServiceNow's robust platform, the project will ensure seamless integration, user-friendly interface, and scalability to accommodate varying family sizes and financial complexities. The end goal is to empower users with the tools they need to make informed financial decisions and promote financial well-being within the family unit.

Setting up ServiceNow Instance:

1. Sign up for a developer account on the ServiceNow Developer site "<https://developer.servicenow.com>".
2. Once logged in, navigate to the "Personal Developer Instance" section.
3. Click on "Request Instance" to create a new ServiceNow instance.
4. Fill out the required information and submit the request.
5. You'll receive an email with the instance details once it's ready.
6. Log in to your ServiceNow instance using the provided credentials.
7. Now you will navigate to the ServiceNow

Creation of New Update Set:

1. Go to All >> In the filter search for Local Update set > click on New.



2. Enter the Details as:
Name : Family Expenses
3. Then click on Submit and Make current.

Creation of Table:

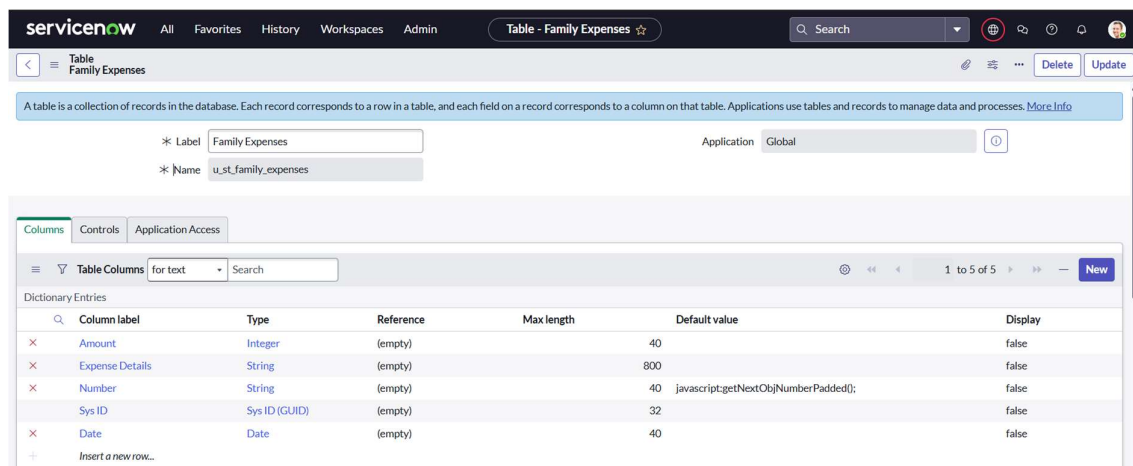
Creation of Family Expenses Table

1. Go to All > In the filter search for Tables > click on New.
2. Enter the Details:

Label : Family Expenses

Name : Auto-Populated

New menu name : Family Expenditure



3. Go to the Header and right click there>> click on Save.

Creation of Columns(Fields)

1. Near Columns Double click near insert a new row.

2. Give the details as:

Column label : Number

Type : String

3. Double click on insert a new row again

4. Give the details as:

Column label : Date

Type : Date

5. Double click on insert a new row again

6. Give the details as:

Column label : Amount

Type : Integer

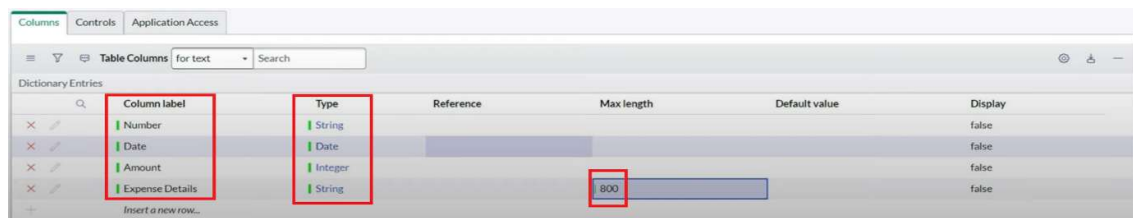
7. Double click on insert a new row again

8. Give the details as:

Column label : Expense Details

Type : String

Max length : 800



9. Go to the Header and right click there>> click on Save.

Making Number Field an Auto-Number

1. Double click on the Number Field/Column.

2. Go down and double click on Advanced view

3. In Default Value:

Use dynamic default : check the box

Dynamic default value : Get Next Padded Number

4. Click on Update.

The screenshot shows the 'servicenow' interface for configuring a 'Dictionary Entry - Number'. The 'Default Value' tab is active, displaying a text input field containing 'Get Next Padded Number' and a checked 'Use dynamic default' checkbox. The interface includes navigation tabs like 'Choice List Specification', 'Calculated Value', and 'Default Value'. At the bottom, there are 'Delete Column' and 'Update' buttons.

5. Go to All >> In the filter search for Number Maintenance >> select Number Maintenance

6. Click on New.

7. Enter the below Details:

Table : Family Expenses

Prefix : MFE

The screenshot displays the 'Number MFE' configuration form. It contains several input fields: 'Table' with the value 'Family Expenses', 'Prefix' with 'MFE', 'Number' with '1,000', 'Application' with 'Global', and 'Number of digits' with '7'. The form has 'Update' and 'Delete' buttons at the bottom. The 'Table' and 'Prefix' fields are highlighted with red boxes in the original image.

8. Click on Submit.

Configure the Form

1. Go to All >> In the filter search for Family Expenses >> Open Family Expenses
2. Click on New
3. Go to the Header and right click there>> click on Configure >> Select Form Design
4. Customize or Drag Drop the form as per your requirement.

5. Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
6. Make Date, Amount Mandatory Field by clicking on the gear icon and checking Mandatory
7. Click on Save.

Creation of Table(Daily Expenses):

Creation of Daily Expenses Table

1. Go to All > In the filter search for Tables > click on New.
2. Enter the Details:

Label : Daily Expenses

Name : Auto-Populated

Add Module to menu : Family Expenditure

* Label 1

* Name 2

Extends table

Application

Create module ☒

Create mobile module ☒

Application Menu

Add module to menu 3

3. Go to the Header and right click there>> click on Save.

Creation of Columns(Fields)

1. Near Columns Double click near insert a new row.

2. Give the details as:

Column label : Number

Type : String

3. Double click on insert a new row again

4. Give the details as:

Column label : Date

Type : Date

5. Double click on insert a new row again

6. Give the details as:

Column label : Expense

Type : Integer

7. Double click on insert a new row again

8. Give the details as:

Column label : Family Member Name

Type : Reference

Max length : 800

9. Double click on insert a new row again

10. Give the details as:

Column label : Comments

Type : String

Max length : 800

Column label	Type	Reference	Max length	Default value	Display
Number	String	(empty)	40	false	false
Sys ID	Sys ID (GUID)	(empty)	32	false	false
Created	Date/Time	(empty)	40	false	false
Date	Date	(empty)	40	false	false
Updated by	String	(empty)	40	false	false
Comments	String	(empty)	800	false	false
Updates	Integer	(empty)	40	false	false
Updated	Date/Time	(empty)	40	false	false
Expense	Integer	(empty)	40	false	false
Created by	String	(empty)	40	false	false
Insert a new row...					

11. Go to the Header and right click there>> click on Save.

Making Number Field an Auto-Number

1. Double click on the Number Field/Column.
2. Go down and double click on Advanced view
3. In Default Value:
Use dynamic default : check the box
Dynamic default value : Get Next Padded Number
4. Click on Update.



5. Go to All >> In the filter search for Number Maintenance >> select Number Maintenance
6. Click on New.
7. Enter the below Details:

Table : Daily Expenses

Prefix : DFE



8. Click on Submit.

Configure the Form

1. Go to All >> In the filter search for Daily Expenses >> Open Daily Expenses

2. Click on New
3. Go to the Header and right click there>> click on Configure >> Select Form Design
4. Customize or Drag Drop the form as per your requirement.

The screenshot shows the 'Form Design' interface for a table named 'Daily Expenses [u_daily_exp]'. On the left, there is a sidebar with 'Fields' and 'Formatters' sections. The 'Fields' section lists 'Created', 'Created by', 'Updated', 'Updated by', and 'Updates'. The 'Formatters' section lists 'Activities (filtered)', 'Contextual Search Results', and 'Ratings'. The main area displays a form layout with two columns. The first column contains 'Number', 'Date', and 'Created'. The second column contains 'Family Member Name', 'Expense', and 'Updated by'. Each field has a gear icon for configuration. The 'Comments' field is located below the main columns.

5. Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
6. Make Date, Family Member Name Mandatory Field by clicking on the gear icon and checking Mandatory
7. Click on Save.

Creation of Relationship:

Creation of Relationship between Family Expenses and Daily Expenses tables

1. Go to All >> In the filter search for Relationships >> Open Relationships
2. Click on New.
3. Enter the details:

Name : Daily Expenses

Applies to table : Select Family Expenses

Daily Expenses : Select Daily Expenses

4. Click Save.

Configuring Related List on Family Expenses:

1. Go to All >> In the filter search for Family Expenses >> Open Family Expenses
2. Click on New
3. Go to the Header and right click there>> click on Configure >> Select Related Lists
4. Add Daily Expenses to the Selected Area.
5. Click on Save

Creation of Business Rules:

1. Go to All >> In the filter search for Business Rules.
2. Under System Definition Select Business Rules then click on New.
3. Enter the Details:
Name : Family Expenses BR
Table : Select Daily Expenses
Check Advanced
4. In when to run Check Insert and Update

The screenshot shows the ServiceNow interface for configuring a Business Rule. The header includes the ServiceNow logo and navigation tabs: All, Favorites, History, Workspaces. The current page is titled 'Business Rule - Family Expenses BR'. Below the header, there's a description of a business rule. The configuration fields are as follows:

- Name: Family Expenses BR
- Table: Daily Expenses [u_daily_expenses]
- Application: Global
- Active: ☒
- Advanced: ☒

Below these fields, there are tabs for 'When to run', 'Actions', and 'Advanced'. The 'When to run' tab is selected, showing a configuration box with the following details:

- When: before
- Order: 100
- Insert: ☒
- Update: ☒
- Delete: ☐
- Query: ☐

5. In Advance (we write the code): Write the below code >>

```
(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())  
    {  
        FamilyExpenses.u_amount += current.u_expense;  
        FamilyExpenses.u_expense_details +=  
        ">" + current.u_comments + ":" + "Rs." + current.u_expense + "/-";  
        FamilyExpenses.update();  
    }  
}
```

```

else
{
var NewFamilyExpenses = new GlideRecord('u_family_expenses');

NewFamilyExpenses.u_date = current.u_date;

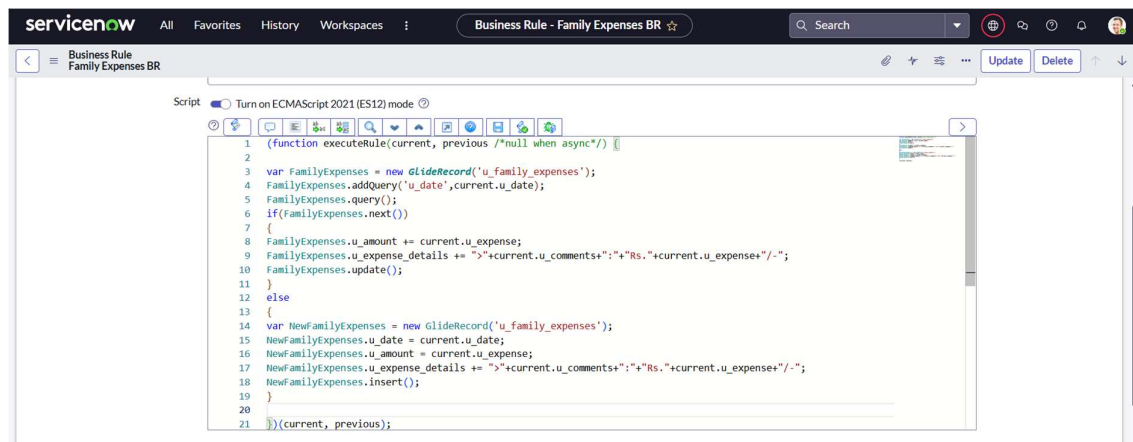
NewFamilyExpenses.u_amount = current.u_expense;

NewFamilyExpenses.u_expense_details+=
">"+current.u_comments+": "+ "Rs." +current.u_expense+"/-";

NewFamilyExpenses.insert();

}}(current, previous);

```



6. Go to the Header and right click there>> click on Save.

Configure the Relationship:

1. Go to All >> In the filter search for Relationships >> Open Relationships.
2. In that, open Daily Expenses Relationship.
3. For Applies to table : Select Family Expenses.
4. In Query with : write the below Query.

```

(function refineQuery(current, parent) {
// Add your code here, such as current.addQuery(field, value);
current.addQuery('u_date',parent.u_date);
current.query();

```

```
})(current, parent);
```

5. Click on Update.

servicenow All Favorites History Workspaces Relationship - Daily Expenses Search

Relationship Daily Expenses

Name: Daily Expenses

Advanced ☐

Application: Global

Applies to table: Family Expenses [u_st_family_expenses]

Queries from table: Daily Expenses [u_daily_expenses]

This script refines the query in current that will populate the related list. For more information about it, its parameters and control variables, see [the documentation](#). See also the article about the [recommended form of the script](#).

Query with ☐ Turn on ECMAScript 2021 (ES12) mode

```
1 (function refineQuery(current, parent) {
2
3
4 // Add your code here, such as current.addQuery(field, value);
5
6 current.addQuery('u_date',parent.u_date);
7
8 current.query();
9
10
11 })(current, parent);
```

Conclusion:

In conclusion, implementing the "Calculation of Family Expenses Using ServiceNow" project offers numerous benefits to the household. By leveraging the robust capabilities of ServiceNow, family members can efficiently submit, track, and manage their expenses in a centralized and streamlined manner.