

Calculating Family Expenses using Service Now

Team Id:NM2025TMID13932

Team Members:4

Team Leader:

HARISH S

Team Member:

AKSHAYA S

Team Member:

ARIVUMATHI V

Team Member :

JANANI S

Problem Statement:

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.

Objective:

1. Develop a centralized expense management system in ServiceNow to record, categorize, and monitor family expenses.

2. Enable budget setting and real-time tracking with alerts to help users manage spending effectively.

3. Provide analytical reports and dashboards for better insights into spending patterns and financial planning.

4. Ensure scalability, security, and seamless integration with ServiceNow's platform features.

5. Design a user-friendly interface to promote ease of use and support informed financial decision-making.

Skills:

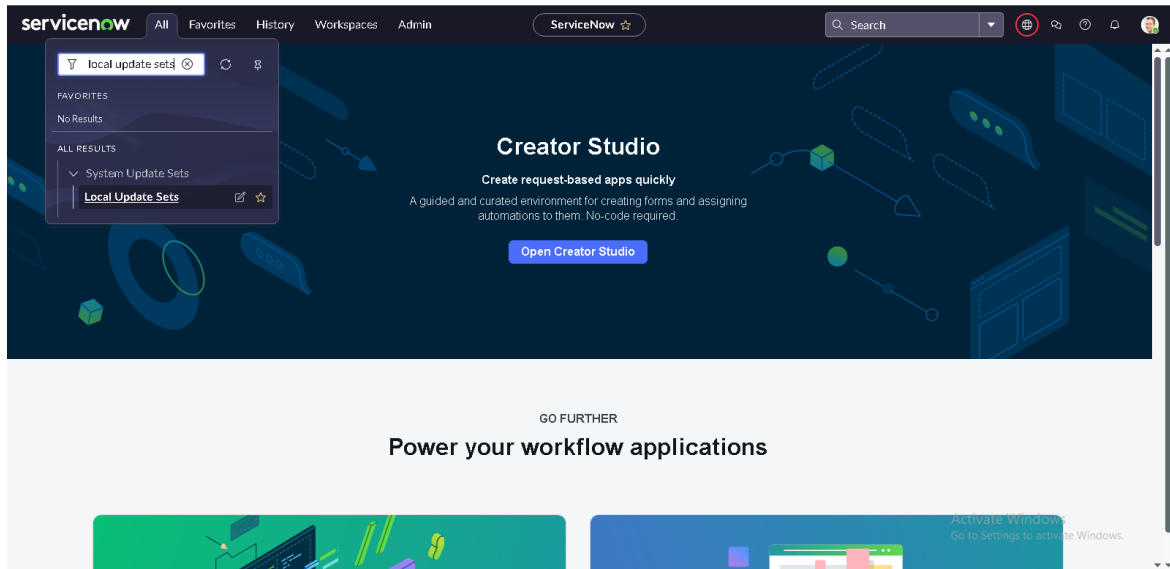
Setting up ServiceNow Instance,Creation of New Update Set,Creation of Table,Creation of Relationship,Configuring Related List,Creation of Business Rules,Configure the Relationship

TASK INITIATION

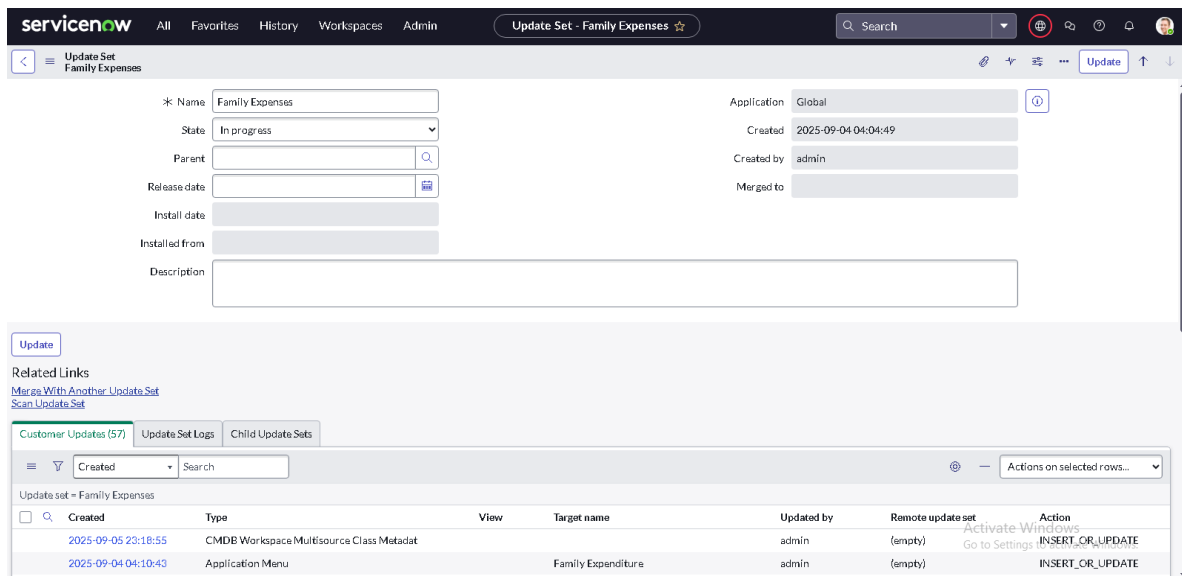
Milestone 1 : Update Set

Activity 1: Creation of New Update Set

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



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



Milestone 2 : Creation of Table

Activity 1: Creation of Family Expenses Table

- Go to All > In the filter search for Tables > click on New.
- Enter the Details:
- Label : Family Expenses
- Name : Auto-Populated
- New menu name : Family Expenditure

servicenow All Favorites History Workspaces Admin Table - Family Expenses ☆ Search

Table - Family Expenses Delete Update Delete All Records ↑ ↓

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 Application Global ⓘ

* Name u_family_expenses

Columns Controls Application Access

Table Columns for text Search 1 to 10 of 10 New

Column label	Type	Reference	Max length	Default value	Display
Created	DateTime	(empty)	40		false
Expense Details	String	(empty)	800		false
Updated by	String	(empty)	40		false
Updates	Integer	(empty)	40		false
Updated	DateTime	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Created by	String	(empty)	40		false
Amount	Integer	(empty)	40		false
Number	String	(empty)	40	javascript:getNextObj(NumberPadded);	false
Date	Date	(empty)	40		false

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

Activity 2: Creation of Columns(Fields)

- Near Columns Double click near insert a new row.
- Give the details as:
- Column label : Number
- Type : String
- Double click on insert a new row again
- Give the details as:
- Column label : Date
- Type : Date

- Double click on insert a new row again
- Give the details as:
- Column label : Amount
- Type : Integer
- Double click on insert a new row again
- Give the details as:
- Column label : Expense Details
- Type : String
- Max length : 800

The screenshot shows the ServiceNow configuration page for the 'Family Expenses' table. The 'Columns' tab is active, displaying a list of dictionary entries. The entries are organized into columns: Column label, Type, Reference, Max length, Default value, and Display. The 'Expense Details' column is highlighted with a red 'X' in the first column. The 'Amount' column is highlighted with a red 'X' in the second column. The 'Number' column is highlighted with a red 'X' in the third column. The 'Date' column is highlighted with a red 'X' in the fourth column. The 'Sys ID' column is highlighted with a red 'X' in the fifth column. The 'Created by' column is highlighted with a red 'X' in the sixth column. The 'Updated by' column is highlighted with a red 'X' in the seventh column. The 'Updated' column is highlighted with a red 'X' in the eighth column. The 'Created' column is highlighted with a red 'X' in the ninth column. The 'Expense Details' column is highlighted with a red 'X' in the tenth column. The 'Amount' column is highlighted with a red 'X' in the eleventh column. The 'Number' column is highlighted with a red 'X' in the twelfth column. The 'Date' column is highlighted with a red 'X' in the thirteenth column. The 'Sys ID' column is highlighted with a red 'X' in the fourteenth column. The 'Created by' column is highlighted with a red 'X' in the fifteenth column. The 'Updated by' column is highlighted with a red 'X' in the sixteenth column. The 'Updated' column is highlighted with a red 'X' in the seventeenth column. The 'Created' column is highlighted with a red 'X' in the eighteenth column. The 'Expense Details' column is highlighted with a red 'X' in the nineteenth column. The 'Amount' column is highlighted with a red 'X' in the twentieth column. The 'Number' column is highlighted with a red 'X' in the twenty-first column. The 'Date' column is highlighted with a red 'X' in the twenty-second column. The 'Sys ID' column is highlighted with a red 'X' in the twenty-third column. The 'Created by' column is highlighted with a red 'X' in the twenty-fourth column. The 'Updated by' column is highlighted with a red 'X' in the twenty-fifth column. The 'Updated' column is highlighted with a red 'X' in the twenty-sixth column. The 'Created' column is highlighted with a red 'X' in the twenty-seventh column. The 'Expense Details' column is highlighted with a red 'X' in the twenty-eighth column. The 'Amount' column is highlighted with a red 'X' in the twenty-ninth column. The 'Number' column is highlighted with a red 'X' in the thirtieth column. The 'Date' column is highlighted with a red 'X' in the thirty-first column. The 'Sys ID' column is highlighted with a red 'X' in the thirty-second column. The 'Created by' column is highlighted with a red 'X' in the thirty-third column. The 'Updated by' column is highlighted with a red 'X' in the thirty-fourth column. The 'Updated' column is highlighted with a red 'X' in the thirty-fifth column. The 'Created' column is highlighted with a red 'X' in the thirty-sixth column. The 'Expense Details' column is highlighted with a red 'X' in the thirty-seventh column. The 'Amount' column is highlighted with a red 'X' in the thirty-eighth column. The 'Number' column is highlighted with a red 'X' in the thirty-ninth column. The 'Date' column is highlighted with a red 'X' in the fortieth column. The 'Sys ID' column is highlighted with a red 'X' in the forty-first column. The 'Created by' column is highlighted with a red 'X' in the forty-second column. The 'Updated by' column is highlighted with a red 'X' in the forty-third column. The 'Updated' column is highlighted with a red 'X' in the forty-fourth column. The 'Created' column is highlighted with a red 'X' in the forty-fifth column. The 'Expense Details' column is highlighted with a red 'X' in the forty-sixth column. The 'Amount' column is highlighted with a red 'X' in the forty-seventh column. The 'Number' column is highlighted with a red 'X' in the forty-eighth column. The 'Date' column is highlighted with a red 'X' in the forty-ninth column. The 'Sys ID' column is highlighted with a red 'X' in the fiftieth column. The 'Created by' column is highlighted with a red 'X' in the fifty-first column. The 'Updated by' column is highlighted with a red 'X' in the fifty-second column. The 'Updated' column is highlighted with a red 'X' in the fifty-third column. The 'Created' column is highlighted with a red 'X' in the fifty-fourth column. The 'Expense Details' column is highlighted with a red 'X' in the fifty-fifth column. The 'Amount' column is highlighted with a red 'X' in the fifty-sixth column. The 'Number' column is highlighted with a red 'X' in the fifty-seventh column. The 'Date' column is highlighted with a red 'X' in the fifty-eighth column. The 'Sys ID' column is highlighted with a red 'X' in the fifty-ninth column. The 'Created by' column is highlighted with a red 'X' in the sixtyth column. The 'Updated by' column is highlighted with a red 'X' in the sixty-first column. The 'Updated' column is highlighted with a red 'X' in the sixty-second column. The 'Created' column is highlighted with a red 'X' in the sixty-third column. The 'Expense Details' column is highlighted with a red 'X' in the sixty-fourth column. The 'Amount' column is highlighted with a red 'X' in the sixty-fifth column. The 'Number' column is highlighted with a red 'X' in the sixty-sixth column. The 'Date' column is highlighted with a red 'X' in the sixty-seventh column. The 'Sys ID' column is highlighted with a red 'X' in the sixty-eighth column. The 'Created by' column is highlighted with a red 'X' in the sixty-ninth column. The 'Updated by' column is highlighted with a red 'X' in the seventieth column. The 'Updated' column is highlighted with a red 'X' in the seventy-first column. The 'Created' column is highlighted with a red 'X' in the seventy-second column. The 'Expense Details' column is highlighted with a red 'X' in the seventy-third column. The 'Amount' column is highlighted with a red 'X' in the seventy-fourth column. The 'Number' column is highlighted with a red 'X' in the seventy-fifth column. The 'Date' column is highlighted with a red 'X' in the seventy-sixth column. The 'Sys ID' column is highlighted with a red 'X' in the seventy-seventh column. The 'Created by' column is highlighted with a red 'X' in the seventy-eighth column. The 'Updated by' column is highlighted with a red 'X' in the seventy-ninth column. The 'Updated' column is highlighted with a red 'X' in the eightyth column. The 'Created' column is highlighted with a red 'X' in the eighty-first column. The 'Expense Details' column is highlighted with a red 'X' in the eighty-second column. The 'Amount' column is highlighted with a red 'X' in the eighty-third column. The 'Number' column is highlighted with a red 'X' in the eighty-fourth column. The 'Date' column is highlighted with a red 'X' in the eighty-fifth column. The 'Sys ID' column is highlighted with a red 'X' in the eighty-sixth column. The 'Created by' column is highlighted with a red 'X' in the eighty-seventh column. The 'Updated by' column is highlighted with a red 'X' in the eighty-eighth column. The 'Updated' column is highlighted with a red 'X' in the eighty-ninth column. The 'Created' column is highlighted with a red 'X' in the ninetyth column. The 'Expense Details' column is highlighted with a red 'X' in the ninety-first column. The 'Amount' column is highlighted with a red 'X' in the ninety-second column. The 'Number' column is highlighted with a red 'X' in the ninety-third column. The 'Date' column is highlighted with a red 'X' in the ninety-fourth column. The 'Sys ID' column is highlighted with a red 'X' in the ninety-fifth column. The 'Created by' column is highlighted with a red 'X' in the ninety-sixth column. The 'Updated by' column is highlighted with a red 'X' in the ninety-seventh column. The 'Updated' column is highlighted with a red 'X' in the ninety-eighth column. The 'Created' column is highlighted with a red 'X' in the ninety-ninth column. The 'Expense Details' column is highlighted with a red 'X' in the one hundredth column.

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

Activity 3: Making Number Field an Auto-Number

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

servicenow All Favorites History Workspaces Admin Dictionary Entry - Number ☆

Dictionary Entry Number View: Advanced*

* Column name u_number

* Max length 40

Read only ☒

Mandatory ☐

Display ☐

Alters the behavior of a field or functionality that depends on the field. [More Info](#)

Attributes

Choice List Specification Calculated Value **Default Value**

The **Default value** specifies what value the field has when first displayed.

Use dynamic default ☒

Dynamic default value Got Next Padded Number

Delete Column Update

Related Links

[Show Table](#)

[Run Point Scan](#)

Access Controls Choices Attributes Labels (1)

Activate Windows
Go to Settings to activate Windows.

- Go to All >> In the filter search for Number Maintenance >> select Number Maintenance
- Click on New.
- Enter the below Details:
- Table : Family Expenses
- Prefix : MFE

ServiceNow Develop project member | Role

Learning Course - N Siemens and others Preethi Optimizing (4) WhatsApp Playing a Game - O

dev196626.servicenow.com/now/nav/ui/classic/params/target/sys_user_role.do%3Fsys_id%3D7c4274b831152108663f83f6ead334%26sysparm_record_target%3Dsys_user_role%26sysparm_recor...

servicenow All Favorites History Workspaces Admin Role - project member ☆

Role project member

Name project member

Application Global

Elevated privilege ☐

Description

Update Delete

Related Links

[Run Point Scan](#)

Contains Roles Applications with Role (2) Modules with Role (2) Custom Tables

for text Search

Role = project member

Contains

No records to display

85% midcap -1.13%

Search

ENG IN 12:16 04-11-2024

- Click on Submit.

Activity 4: Configure the Form

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

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

Milestone 3 : Creation of Table(Daily Expenses)

Activity 1: Creation of Daily Expenses Table

- Go to All > In the filter search for Tables > click on New.
- Enter the Details:
- Label : Daily Expenses
- Name : Auto-Populated
- Add Module to menu : Family Expenditure

servicenow All Favorites History Workspaces Admin Table - Daily Expenses

Search

Table - Daily Expenses

Delete Update Delete All Records

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 Application Global

* Name u_daily_expenses

Columns Controls Application Access

Table Columns for text Search

1 to 11 of 11 New

Q	Column label	Type	Reference	Max length	Default value	Display
X	Comments	String	(empty)	800		false
	Sys ID	Sys ID (GUID)	(empty)	32		false
	Created	Date/Time	(empty)	40		false
X	Expense	Integer	(empty)	40		false
X	Date	Date	(empty)	40		false
	Updated by	String	(empty)	40		false
	Updates	Integer	(empty)	40		false
X	Family Member Name	Reference	Family Expenses	800		false
	Updated	Date/Time	(empty)	40		false
	Created by	String	(empty)	40		false

Activate Windows
Go to Settings to activate Windows.

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

Activity 2: Creation of Columns(Fields)

- Near Columns Double click near insert a new row.
- Give the details as:
- Column label : Number
- Type : String
- Double click on insert a new row again
- Give the details as:
- Column label : Date
- Type : Date
- Double click on insert a new row again
- Give the details as:
- Column label : Expense
- Type : Integer
- Double click on insert a new row again
- Give the details as:
- Column label : Family Member Name
- Type : Reference
- Max length : 800
- Double click on insert a new row again
- Give the details as:
- Column label : Comments
- Type : String
- Max length : 800

servicenow All Favorites History Workspaces Admin Table - Daily Expenses

Search

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 Application: Global

* Name: u_daily_expenses

Columns Controls Application Access

Table Columns for text Search

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
Comments	String	(empty)	800		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Created	Date/Time	(empty)	40		false
Expense	Integer	(empty)	40		false
Date	Date	(empty)	40		false
Updated by	String	(empty)	40		false
Updates	Integer	(empty)	40		false
Family Member Name	Reference	Family Expenses	800		false
Updated	Date/Time	(empty)	40		false
Created by	String	(empty)	40		false

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

Activity 3: Making Number Field an Auto-Number

- Making Number Field an Auto-Number
- Double click on the Number Field/Column.
- Go down and double click on Advanced view
- In Default Value:
- Use dynamic default : check the box
- Dynamic default value : Get Next Padded Number
- Click on Update.

servicenow All Favorites History Workspaces Admin Dictionary Entry - Number

Search

Dictionary Entry - Number View: Advanced

A dictionary entry manages how ServiceNow stores data in tables and fields (columns). For new dictionary entries, select a Table and the field Type of the new column. Also enter a column label, which becomes the field label, and the column name. If necessary, set a Max length for text String type fields, make the field Mandatory to save a record, and make the field a Display Value for reference fields so it appears on records that reference this table. [More Info](#)

* Table: Daily Expenses [u_daily_expenses] Application: Global

* Type: String Active: ☒

* Column label: Number Function field: ☐

* Column name: u_number Read only: ☒

* Max length: 40 Mandatory: ☐

Display: ☐

Alters the behavior of a field or functionality that depends on the field. [More Info](#)

Attributes

Choice List Specification Calculated Value **Default Value**

The Default value specifies what value the field has when first displayed.

Use dynamic default: ☒

Dynamic default value: Get Next Padded Number

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

- Click on New.
- Enter the below Details:
- Table : Family Expenses
- Prefix : MFE

The screenshot shows the ServiceNow 'Number' configuration page for 'DFE'. The page has a dark header with the ServiceNow logo and navigation tabs: All, Favorites, History, Workspaces, Admin. A search bar is on the right. Below the header, there's a breadcrumb trail: < Number DFE. On the right side of the breadcrumb, there are icons for share, refresh, and a menu, followed by 'Update' and 'Delete' buttons. The main form contains the following fields:

- * Table: Daily Expenses (with a search icon and a help icon)
- Prefix: DFE
- * Number: 1,000
- Application: Global (with a help icon)
- Number of digits: 7

Below the form, there are 'Update' and 'Delete' buttons, followed by 'Related Links' and a 'Show Counter' link. At the bottom right, there is an 'Activate Windows' watermark.

- Click on Submit.

Activity 4: Configure the Form

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

The screenshot shows the ServiceNow 'Form Design' page for 'Daily Expenses'. The page has a dark header with the ServiceNow logo and navigation tabs: All, Favorites, History, Workspaces, Admin. A search bar is on the right. Below the header, there's a breadcrumb trail: < Daily Expenses [u_daily_e] Default view. On the right side of the breadcrumb, there are icons for share, refresh, and a menu, followed by 'Update' and 'Delete' buttons. The main form contains the following fields:

- * Table: Daily Expenses (with a search icon and a help icon)
- Prefix: DFE
- * Number: 1,000
- Application: Global (with a help icon)
- Number of digits: 7

Below the form, there are 'Update' and 'Delete' buttons, followed by 'Related Links' and a 'Show Counter' link. At the bottom right, there is an 'Activate Windows' watermark.

- Make Number Read-Only Field by clicking on the gear icon and checking Read-Only

- Make Date, Family Member Name Mandatory Field by clicking on the gear icon and checking Mandatory
- Click on Save.

Milestone 4 : Creation of Relationship

Activity 1: Creation of Relationship between Family Expenses and Daily Expenses tables

- Go to All >> In the filter search for Relationships >> Open Relationships
- Click on New.
- Enter the details:
 - Name : Daily Expenses
 - Applies to table : Select Family Expenses
 - Daily Expenses : Select Daily Expenses
- Click Save.

Milestone 5 : Configuring Related List on Family Expenses

Activity 1: Configuring Related List on Family Expenses

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

servicenow All Favorites History Workspaces Admin ServiceNow Search

< Configuring related lists on Family Expenses form Cancel Save

Available		Selected
Attachments	<div>></div> <div><</div>	Daily Expenses
Daily Expenses -> Family Member Name		

View name: Default view

Cancel Save

Related Links
[Show versions](#)

Activate Windows
 Go to Settings to activate Windows.

Milestone 6 : Creation of Business

Rules

Activity 1: Creation of Business

Rules

- Go to All >> In the filter search for Business Rules.
- Under System Definition Select Business Rules then click on New.
- Enter the Details:
- Name : Family Expenses BR
- Table : Select Daily Expenses
- Check Advanced

The screenshot shows the ServiceNow Business Rules configuration interface. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', 'Admin', and a 'Business Rules' tab. Below the navigation bar, the breadcrumb trail shows 'Business Rule' > 'Family Expenses BR'. The main form contains the following fields:

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

Below these fields are three tabs: 'When to run', 'Actions', and 'Advanced'. The 'When to run' tab is selected, showing a description: 'Specify whether the business rule should run on Insert or Update. Use Filter Conditions to specify under which conditions the business rule should run.' The configuration includes:

- When:** before
- Order:** 100
- Filter Conditions:** Add Filter Condition, Add "OR" Clause
- Role conditions:**
- Insert:** ☒
- Update:** ☒
- Delete:** ☐
- Query:** ☐

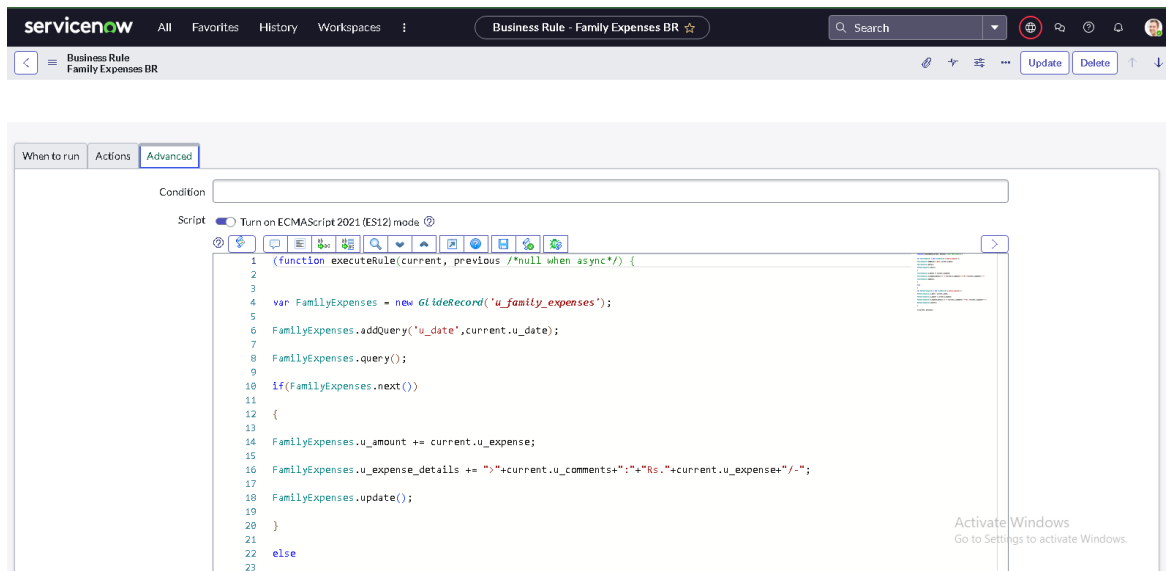
A watermark 'Activate Windows Go to Settings to activate Windows.' is visible in the bottom right corner.

- In when to run Check Insert and Update

The screenshot shows the ServiceNow interface for configuring a Business Rule named 'Family Expenses BR'. The rule is set to run 'Before' on the 'Daily Expenses [u_daily_expenses]' table. The 'When' dropdown is set to 'before' and the 'Order' is 100. The 'Filter Conditions' section is empty, with buttons for 'Add Filter Condition' and 'Add "OR" Clause'. The 'Role conditions' section has an edit icon. The 'Advanced' tab is selected, showing options for 'Insert', 'Update', 'Delete', and 'Query', all of which are unchecked. The 'Application' is set to 'Global'. At the bottom, there are 'Update' and 'Delete' buttons, and a 'Related links' section.

- 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);
```



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

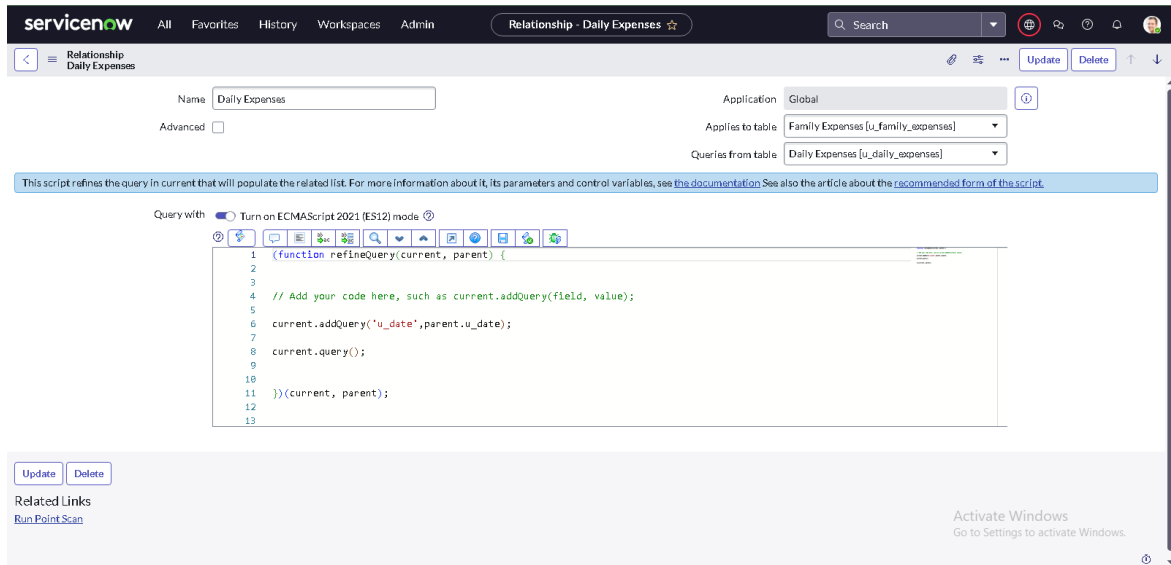
Milestone 7 : Configure the Relationship

Activity 1: Configure the Relationship

- Go to All >> In the filter search for Relationships >> Open Relationships.
- In that, open Daily Expenses Relationship.
- For Applies to table : Select Family Expenses.
- 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);
```

Click on Update.



Conclusion :

The Family Expense Calculation system developed using ServiceNow provides an efficient and user-friendly platform to track, manage, and analyze family expenses. With features like expense categorization, budget management, and real-time reporting, it helps families make informed financial decisions. This solution promotes better financial planning, ensures transparency, and supports long-term financial well-being.