

Project title : Calculating Family Expenses Using Servicenow

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CALCULATING FAMILY EXPENSES USING SERVICENOW

Aim of the project

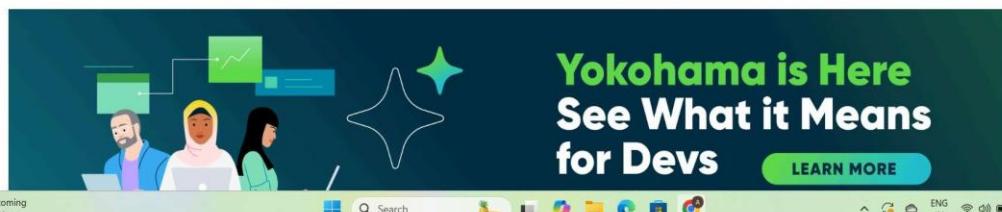
To develop a centralized and automated platform that helps individuals or families track, manage, and optimize their expenses with ease. The goal is to promote financial discipline and simplify budget planning by using the powerful features of ServiceNow like scripting, reporting, and process automation. 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.

Milestone-1

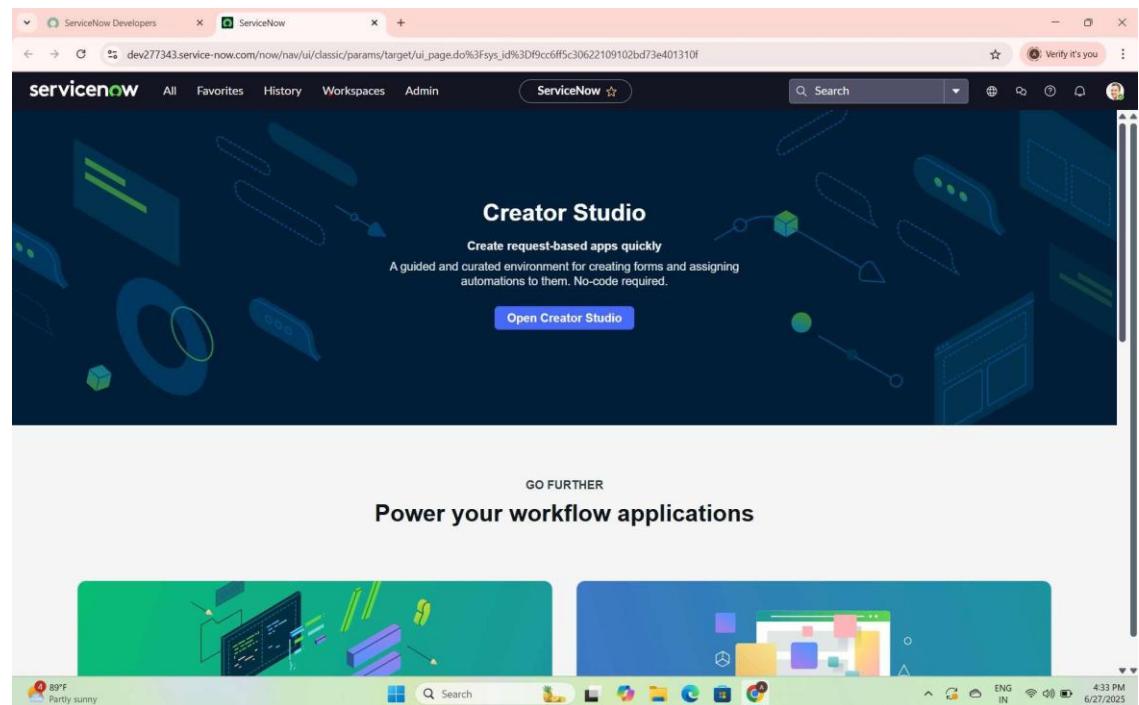
Setting up servicenow instance

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.

The screenshot shows the ServiceNow Developer portal homepage. At the top, there's a navigation bar with links for 'Developer', 'Learn', 'Reference', 'Guides', and 'Connect'. A search bar and a 'Sign In' button are also present. The main headline reads 'Build powerful apps. Solve real problems.' Below it, a sub-headline says 'Start coding, testing, and deploying on the ServiceNow Platform - fast. Build solutions that scale, automate workflows, integrate across systems, and make work simpler for everyone.' A 'Sign up and Start Building' button is visible. To the right, there's a promotional banner for 'CreatorCon' with the text 'Join Us at CreatorCon - Don't Miss Out!', 'BUILD. LEARN. CONNECT. IT'S ALL HAPPENING AT creatorcon', and a 'Watch on YouTube' link.



The screenshot shows the ServiceNow Developer Portal login page. The URL in the address bar is 'signon.servicenow.com/x_snc_sso.auth.do?pageld=login'. The page features a large illustration of a stylized human head composed of puzzle pieces, with small figures interacting with it. The text on the left side includes 'Solve problems.', 'Explore resources.', and 'Get help.'. On the right, there's a sign-in form with fields for 'Email' (containing 'varadharajunaya@gmail.com') and a 'Next' button. Below the form is a link 'New user? Get a ServiceNow ID'. At the bottom right, there's a link 'Need assistance with sign in?' and a small icon of a person with a question mark. The taskbar at the bottom shows various application icons and system status indicators.



Milestone-2

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.

Project

The screenshot shows two main windows from the ServiceNow platform.

The top window is titled "Creator Studio" and displays a search results page for "Local Update Sets". It includes a call-to-action button "Open Creator Studio". Below this, there's a section titled "GO FURTHER Power your workflow applications" with two preview images of different applications.

The bottom window is titled "Update Set - Family Expenses" and shows the details of a specific update set. The form fields include:

* Name	Family Expenses	Application	Global
State	In progress	Created	2025-06-20 01:47:09
Parent		Created by	admin
Release date		Merged to	
Install date			
Installed from			
Description			

Below the form, there's a "Related Links" section with links like "Make This My Current Set", "Merge With Another Update Set", and "Scan Update Set". A "Customer Updates (58)" tab is selected in the navigation bar, showing a list of recent updates:

Created	Type	View	Target name	Updated by	Remote update set	Action
2025-06-23 00:00:25	Password Reset Process	Service-Desk Password Reset for Local ServiceNow	admin	(empty)		INSERT_OR_UPDATE
2025-06-20 23:30:00	CMDB Workspace Multisource Class Metadata		admin	(empty)		INSERT_OR_UPDATE
2025-06-20 01:48:28	Application Menu	Family Expenditure	admin	(empty)		INSERT_OR_UPDATE

Milestone-3

Creation Of Family Expenses Table

1. Go to All > In the filter search for Tables > click on New.

Project

The screenshot shows the ServiceNow web interface. A red arrow points to the 'Tables' option in the 'Tables' menu, which is part of the 'System Definition' section. The main content area features a 'Creator Studio' banner with the text 'Create request-based apps quickly' and 'A guided and curated environment for creating forms and assigning automations to them. No-code required.' Below the banner is a 'GO FURTHER' section with the heading 'Power your workflow applications'.

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)

4. Near Columns Double click near insert a new row.
5. Give the details as: Column label : Number Type : String
6. Double click on insert a new row again
7. Give the details as: Column label : Date Type : Date
8. Double click on insert a new row again
9. Give the details as: Column label : Amount Type : Integer
10. Double click on insert a new row again
11. Give the details as: Column label : Expense Details Type : String Max length : 800
12. Go to the Header and right click there>> click on Save.

The screenshot shows the ServiceNow 'Tables' screen. A new table named 'Family Expenses' is being created. In the top right, under 'Application', 'Global' is selected. Under 'New menu name', a dropdown menu is open with the option 'Create new'. The 'Columns' tab is selected, showing a table of columns with the following data:

Column label	Type	Reference	Max length	Default value	Display
Expense Details	String	(empty)	800		false
Amount	Integer	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Date	Date	(empty)	40		false
Number	String	(empty)	40	javascript:getNextObjNumberPadded();	false

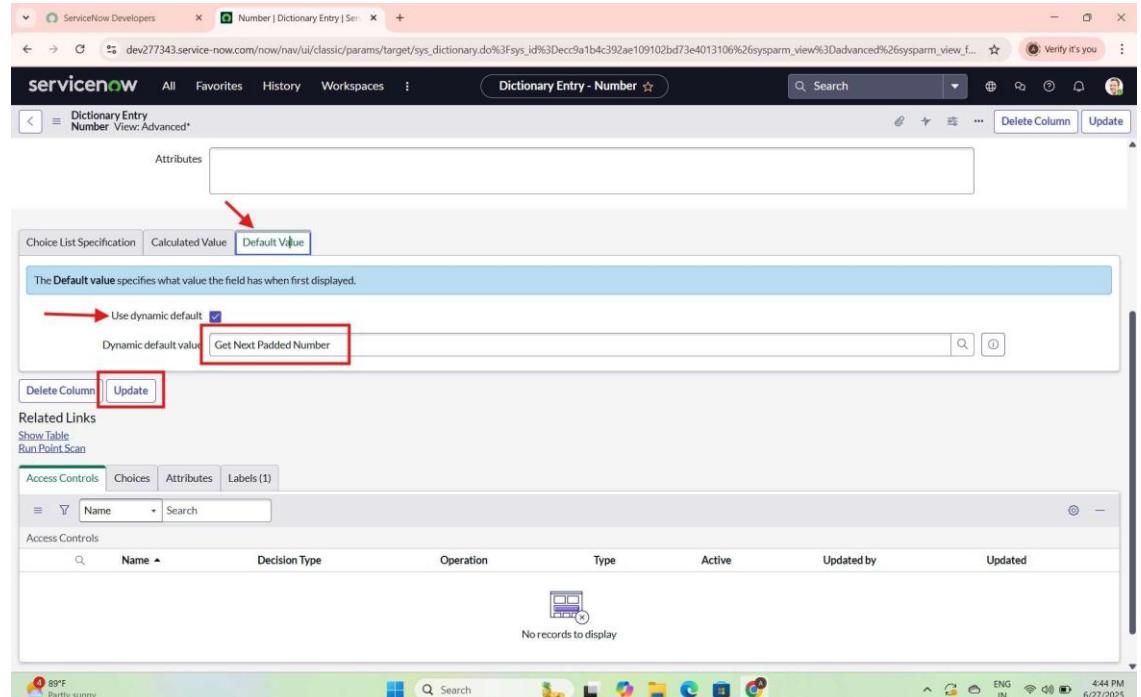
At the bottom left, there are 'Delete' and 'Update' buttons. At the bottom right, there is a 'New' button.

Making Number Field An Auto-Number

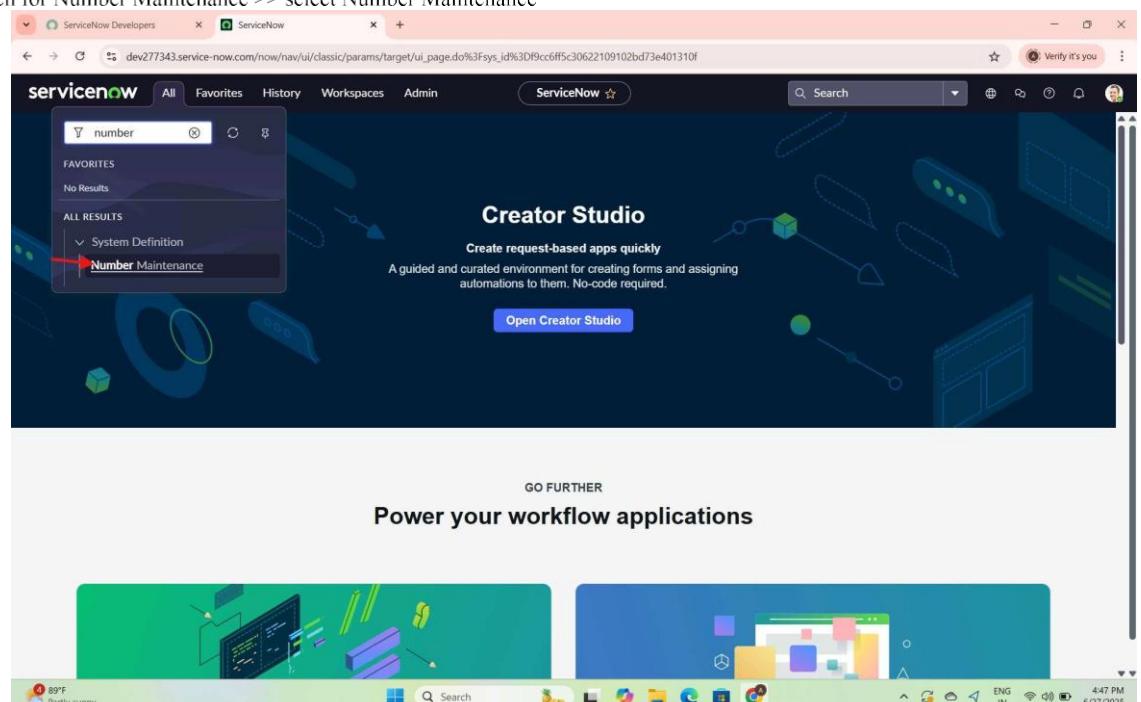
1. Double click on the Number Field/Column.
2. Go down and double click on Advanced view

Project

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 : Family Expenses Prefix : MFE
8. Click on Submit.

Project

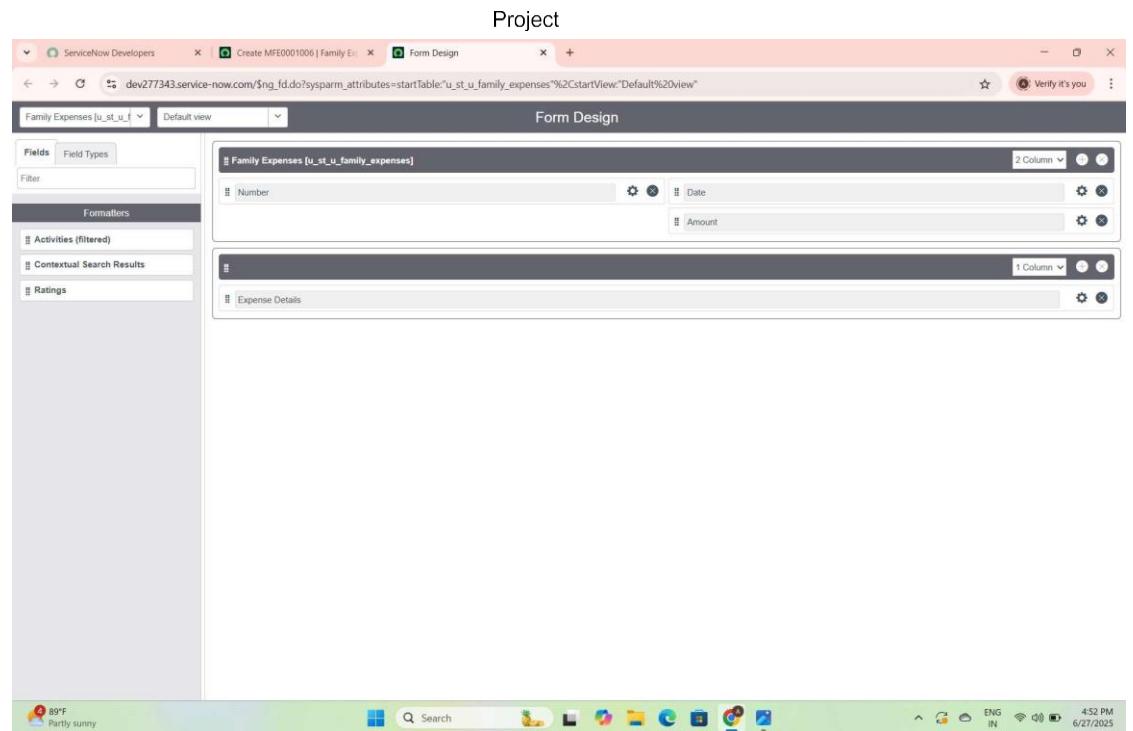
The screenshot shows the ServiceNow configuration interface for creating a new number series. The title bar says "Number - MFE". The main area has fields for "Table" (set to "Family Expenses"), "Prefix" (set to "MFE"), "Number" (set to "1,000"), "Application" (set to "Global"), and "Number of digits" (set to "7"). Below the form are "Update" and "Delete" buttons, and a "Related Links" section with a "Show Counter" link. The status bar at the bottom shows "Upcoming Earnings" and the date "6/27/2025".

. 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

The screenshot shows the ServiceNow create screen for a new family expense entry. The title bar says "Family Expenses - Create MFE0001006". A context menu is open under the "Configure" option in the header, with "Form Design" selected. The main area shows fields for "Date" and "Amount". The status bar at the bottom shows "Upcoming Earnings" and the date "6/27/2025".

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.



Milestone-4

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

Creation of columns(fields)

4. Near Columns Double click near insert a new row.
5. Give the details as: Column label : Number Type : String
6. Double click on insert a new row again
7. Give the details as: Column label : Date Type : Date
8. Double click on insert a new row again
9. Give the details as: Column label : Expense Type : Integer
10. Double click on insert a new row again
11. Give the details as: Column label : Family Member Name Type : Reference Max length : 800
12. Double click on insert a new row again
13. Give the details as: Column label : Comments Type : String Max length : 800
14. Go to the Header and right click there>> click on Save.

Project

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

. Making Number Field An Auto-Number

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

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

Use dynamic default

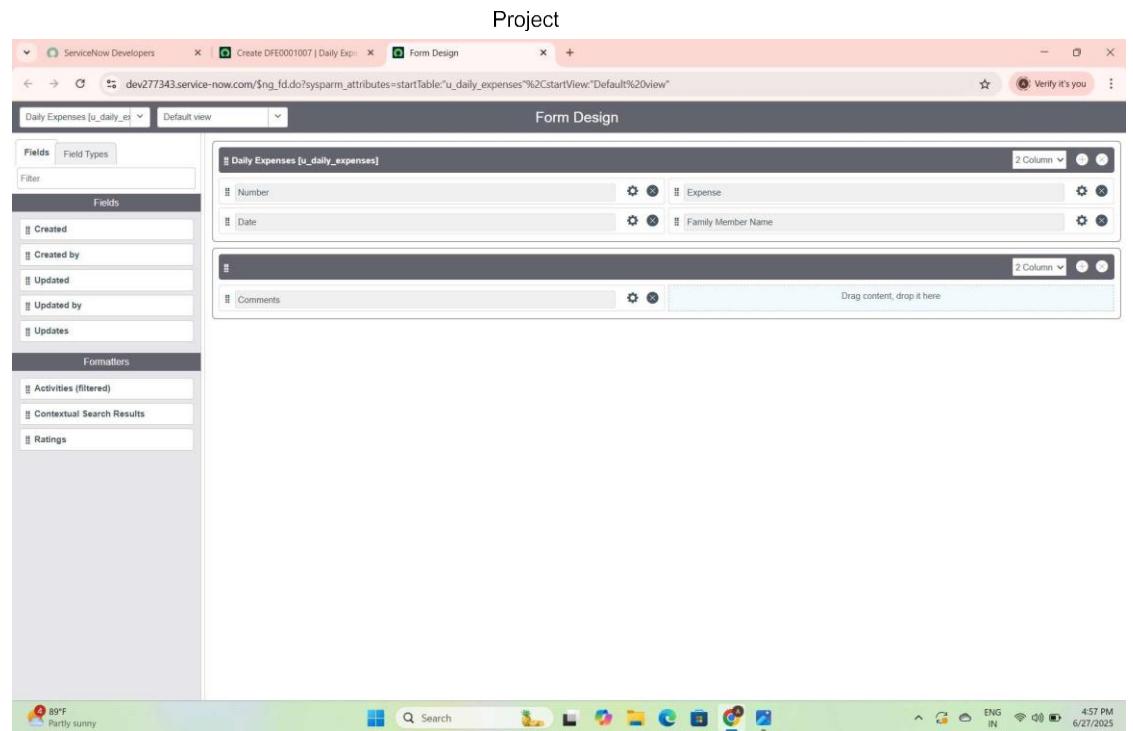
Dynamic default value: Get Next Padded Number

Update

19. Go to All >> In the filter search for Number Maintenance >> select Number Maintenance
20. Click on New.
21. Enter the below Details: Table : Family Expenses Prefix : DFE
22. Click on Submit.

. Configure the form

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



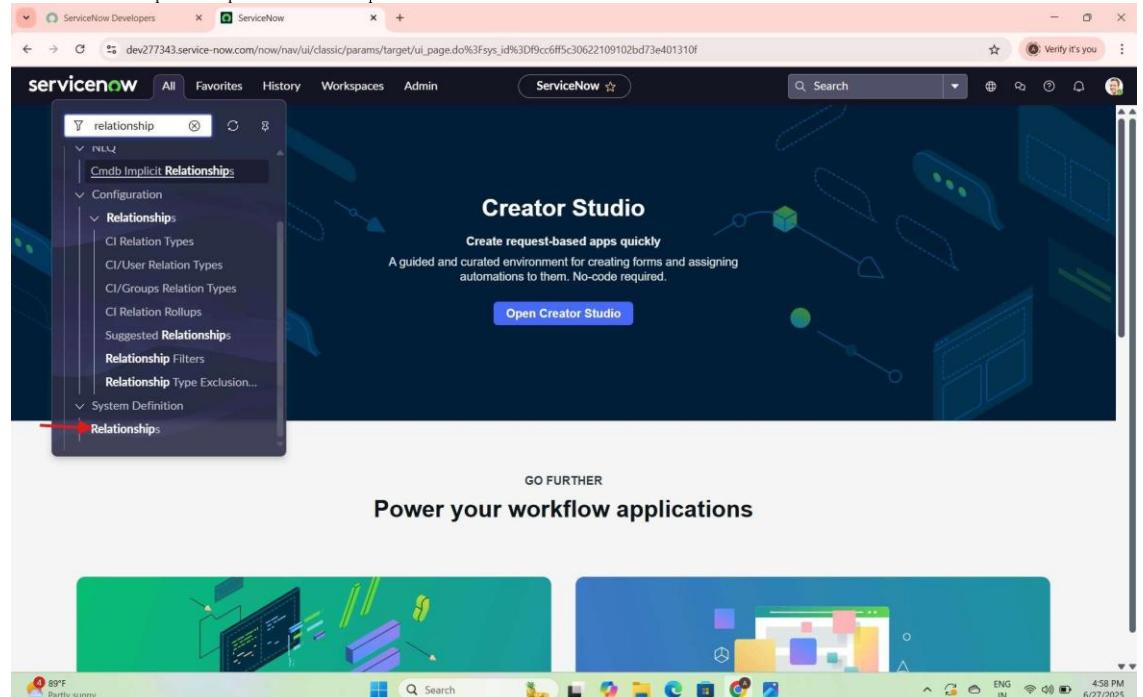
27. Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
28. Make Date, Family Member Name Mandatory Field by clicking on the gear icon and checking Mandatory
29. Click on Save.

Milestone-5

Creation Of Relationship

. Creation Of Relationship Between Family Expenses And Daily Expenses

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.

Project

The screenshot shows the ServiceNow interface for creating a relationship named "Daily Expenses". The "Name" field is set to "Daily Expenses". The "Advanced" checkbox is unchecked. The "Application" is "Global" and "Applies to table" is "Family Expenses [u_st_u_family_expenses]". The "Queries from table" is "Daily Expenses [u_daily_expenses]". A note at the bottom says: "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](#)." Below the note is a code editor with the following ECMAScript code:

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

At the bottom of the page are "Update" and "Delete" buttons. Below the main content is a "Related Links" section with a "Run Point Scan" link. The status bar at the bottom shows the weather as 89°F Partly sunny.

Milestone-6

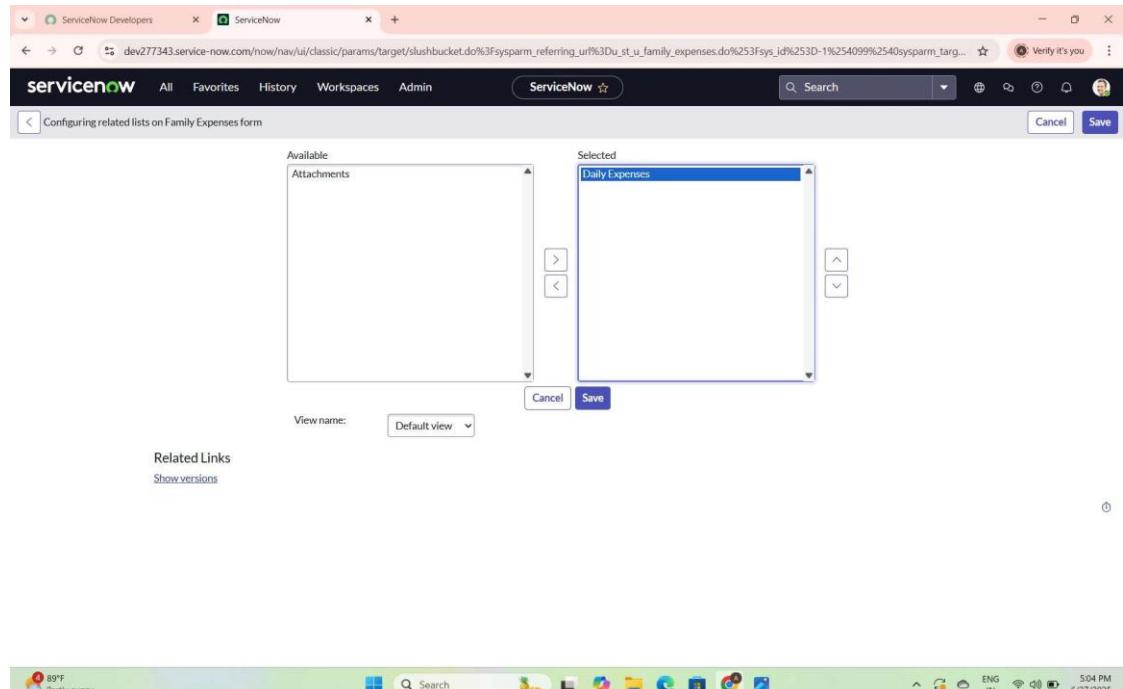
Configuring Related List On Family Expenses

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

The screenshot shows the ServiceNow interface for creating a new Family Expense record. The "Number" field is "MFE0001007". A context menu is open over the header area, with "Related Lists" highlighted. Other options in the menu include Save, Configure, Export, Create Favorite, Copy URL, Copy sys_id, and Reload form. To the right of the menu, there is a sidebar with links to Form Builder, Form Design, Form Layout, All, Table, Security Rules, Business Rules, Client Scripts, UI Policies, Data Policies, UI Actions, Notifications, and Dictionary. At the bottom of the page is a "Submit" button. The status bar at the bottom shows the weather as 89°F Partly sunny.

4. Add Daily Expenses to the Selected Area.
5. Click on Save

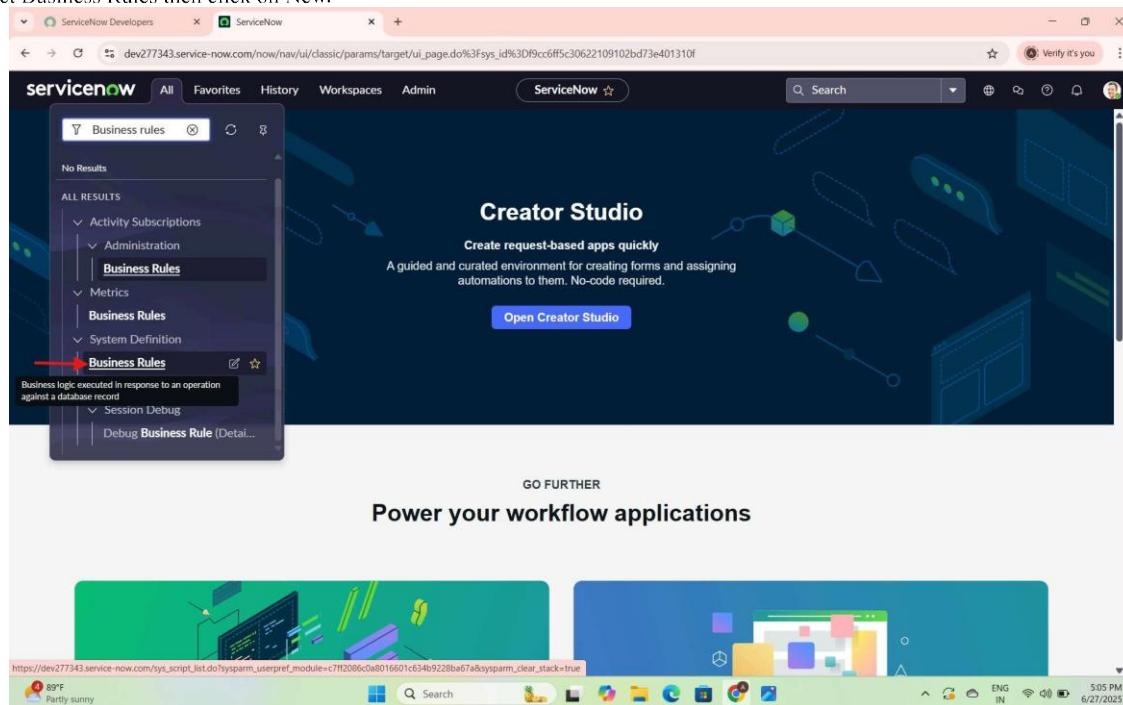
Project



Milestone-7

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

Project

A business rule is a server-side script that runs when a record is displayed, inserted, deleted, or when a table is queried. Use business rules to automatically change values in form fields when the specified conditions are met. [More Info](#)

Name: Family Expenses
Table: Daily Expenses [u_daily_expenses]

When to run:

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

Filter Conditions: Add Filter Condition, Add OR Clause

Role conditions:

- 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.

```

(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);

```

Milestone-8

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);

Project

5. Click on Update.

The screenshot shows the ServiceNow Developers interface with the following details:

- Page Title:** Relationship - Daily Expenses
- Header:** Name: Daily Expenses, Application: Global, Applies to table: Family Expenses [u_st_u_family_expenses], Queries from table: Daily Expenses [u_daily_expenses]
- Script Editor:** Contains a script block with the following code:

```
1 (function refineQuery(current, parent) {  
2 // Add your code here, such as current.addQuery(field, value);  
3 current.addQuery('u_date',parent.u_date);  
4 current.query();  
5 }){current, parent};
```
- Action Buttons:** Update (highlighted with a red box), Delete
- Bottom Bar:** Shows system status (90°F, Partly sunny), search bar, and various icons.

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.