

Calculating Family Expenses using Service Now

Team Members:

- Subarna sri.R (Team Leader)
- Rethna .R
- Sandhiya.B
- Srinidhi.S

Department: Information Technology

Course: ServiceNow Administrator

Institution: A.V.C. College of Engineering

Mentor : Mr.N.P.K.GaneshKumar, A/P, IT

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1. Abstract

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.

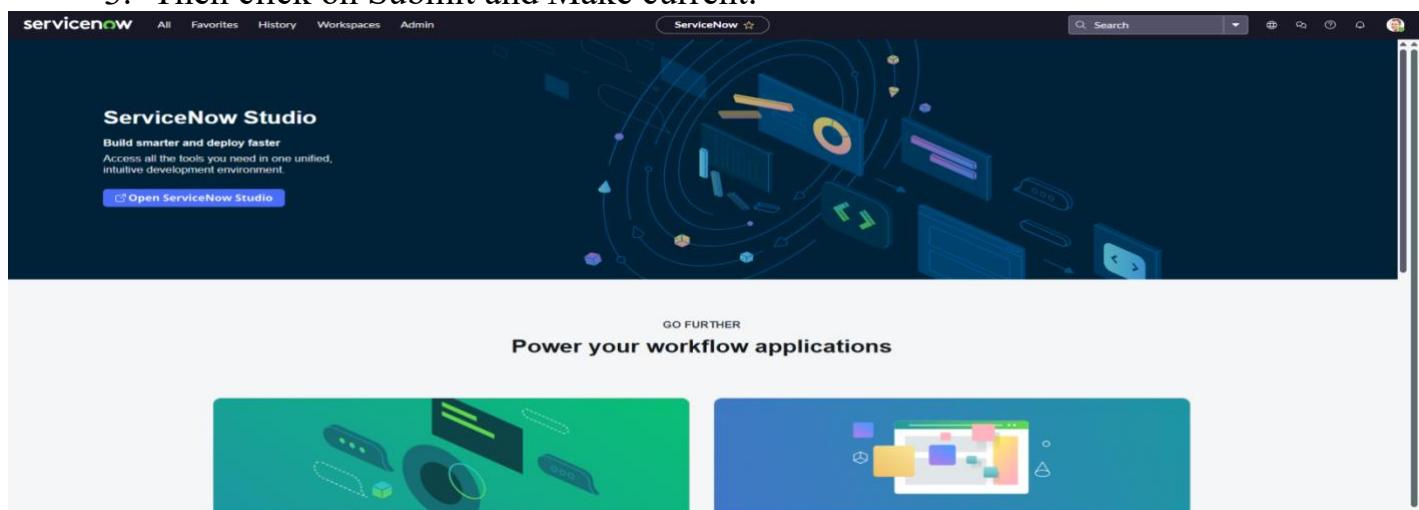
2. Tasks Dones With Explanation

Step 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.

Step 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.



Step 3: Creation of Table

1. Navigate 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. click on Save..

Step 4: Creations of columns

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

Give the details as:

1) Column label : Number

Type : String

2) Column label : Date

Type : Date

3) Column label : Amount

Type : Integer

4) Column label : Expense Details

Type : String

Max length : 800

2) click on Save.

The screenshot shows the 'Table' creation interface in ServiceNow. At the top, there are fields for 'Label' (Family Expenses), 'Name' (u_family_expenses), and 'Extends table'. On the right, there are options for 'Application' (Global), 'Create module' (checked), 'Create mobile module' (checked), 'Add module to menu' (dropdown set to 'Create new'), and 'New menu name' (Family Expenditure). Below this, the 'Columns' tab is selected, showing a table with columns for 'Column label', 'Type', 'Reference', 'Max length', 'Default value', and 'Display'. The table contains four rows: 'Number' (String), 'Date' (Date), 'Amount' (Integer), and 'Expense Details' (String with Max length set to 800).

Step 5: 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:
 - o Use dynamic default : check the box
 - o Dynamic default value : Get Next Padded Number
4. Click on Update.

The screenshot shows the 'Dictionary Entry - Number' advanced view. It displays the 'Table' (Family Expenses), 'Type' (String), 'Column label' (Number), 'Column name' (u_number), and 'Max length' (40). On the right, there are checkboxes for 'Active' (checked), 'Function field' (unchecked), 'Read only' (checked), 'Mandatory' (unchecked), and 'Display' (unchecked). A note at the bottom says 'Alters the behavior of a field or functionality that depends on the field.' Below this, there is a 'Attributes' section and a 'Default Value' tab. Under 'Default Value', the 'Use dynamic default' checkbox is checked, and the 'Dynamic default value' dropdown is set to 'Get Next Padded Number'. Navigation buttons at the bottom include 'Create Choice List', 'Delete Column', and 'Update'.

1. Go to All >> select Number Maintenance

2. Click on New.

Enter the below Details:

- o Table : Family Expenses
- o Prefix : MFE.

The screenshot shows the ServiceNow Number Maintenance interface. At the top, there is a navigation bar with links for All, Favorites, History, Workspaces, and Admin. The title bar says "Number - MFE". Below the title bar, there is a search bar and several buttons for actions like Update and Delete. The main form has fields for Table (Family Expenses), Prefix (MFE), Number (1.000), Application (Global), and Number of digits (7). There are also buttons for Update and Delete at the bottom left. A sidebar on the left shows related links and a Show Counter.

3. Click Submit.

The screenshot shows the ServiceNow Numbers list view. The title bar says "Numbers". The list displays a single row with the following data: Prefix (MFE), Number (1.000), Number of digits (7), Table (Family Expenses), and Updated (2025-10-24 23:36:50). There are search and filter options at the top, and a "New" button on the right.

Step 5: 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.

The screenshot shows the ServiceNow Form Design tool. On the left, there is a sidebar with sections for Fields, Field Types, Filter, Fields (listing Created, Created by, Updated, Updated by, Updates), and Formatters (Activities (filtered), Contextual Search Results, Ratings). The main area is titled "Form Design" and shows the "Family Expenses [u_family_expenses]" form. The form contains fields for Number, Date, Amount, and Expense. There are icons for column settings and gear icons for field configuration. The gear icons for Date, Amount, and Expense are highlighted with red circles, indicating they are being configured as mandatory fields.

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.

Step 6: Creation of Daily Expenses Table

1. Go to All → Search Tables → click on New .
2. Enter the Details:
 - Label : Daily Expenses
 - Name : Auto-Populated
 - Add Module to menu : Family Expenditure

3. click on Save..

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

Step 7: Creation of Columns

Near Columns Double click near insert a new row.

Give the details as:

- 1) Column label : Number

Type : String

- 2) Column label : Date

Type : Date

- 3) Column label : Expense

Type : Integer

4) Column label : Family Member Name

Type : Reference

Max length : 800

5) Column label : Comments

Type : String

Max length : 800

6) click on Save.

Column label	Type	Reference	Max length	Default value	Display
Number	String				false
Family Member Name	Reference	User			false
Date	Date				false
Expense	Integer				false
Comments	String				false

Step 8: 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:
 - o Use dynamic default : check the box
 - o Dynamic default value : Get Next Padded Number
4. Click on Update.

* Table	Daily Expenses (u_daily_expenses)
* Type	String
* Column label	Number
* Column name	u_number
* Max length	40

1. Go to All >> Search Number Maintenance >> select Number Maintenance.
2. Click on New.
3. Enter the below Details:

Table : Daily Expenses

Prefix : MFE

The screenshot shows the ServiceNow interface for configuring a number sequence. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The current page is 'Number - MFE'. The form fields are as follows:

- * Table: Daily Expenses
- Prefix: MFE
- * Number: 1,000
- Application: Global
- Number of digits: 7

At the bottom of the form are 'Update' and 'Delete' buttons, along with 'Related Links' and 'Show Counter' options.

4. Click on Submit.

Step 9: 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.
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.

The screenshot shows the ServiceNow Form Design interface for the 'Daily Expenses' table. It displays two sections of the form:

- Section 1 (2 Column layout):**
 - Number (Read-Only)
 - Family Member Name (Mandatory)
 - Date (Mandatory)
 - Expense
- Section 2 (1 Column layout):**
 - Comments

Each field has a gear icon for configuration and an 'X' icon to delete the field.

Step 10: 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:
 - o Name : Daily Expenses
 - o Applies to table : Select Family Expenses
 - o Daily Expenses : Select Daily Expenses
 4. Click Save.

servicenow All Favorites History Workspaces Admin Relationship - Daily Expenses ⚡ Search     

Relationship Daily Expenses

Name Daily Expenses Application Global  

Advanced Applies to table Family Expenses [u.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 `2`
3 `3 // Add your code here, such as current.addQuery(field, value);`
4 `4 current.addQuery('u_date',parent.u_date);`
5 `5 current.query();`
6 `6`
7 `7`
8 `8 })(current, parent);`

Update Delete

Step 11: 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.

servicenow All Favorites History Workspaces Admin ServiceNow ★ Search     

[Configuring related lists on Family Expenses form](#)  

Available	Selected
Attachments	Daily Expenses

View name: 

Related Links
[Show versions](#)

Step 11: 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:
 - o Name : Family Expenses BR
 - o Table : Select Daily Expenses
4. Check Advanced
5. In when to run Check Insert and Update.
6. Go to the Header and right click there >> click on Save.

The screenshot shows the ServiceNow interface for creating a business rule. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The title bar says 'Business Rule - Family Expenses BR'. The main content area has a header: '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](#)'. Below this are fields for 'Name' (Family Expenses BR), 'Table' (Daily Expenses [u_daily_expenses]), 'Application' (Global), 'Active' (checked), and 'Advanced' (checked). A large text area contains the ECMAScript code for the business rule:

```
1  (function executeRule(current, previous /*null when async*/){  
2      var FamilyExpenses = new GlideRecord('u_family_expenses');  
3      FamilyExpenses.addQuery('u_date',current.u_date);  
4      FamilyExpenses.query();  
5      if(FamilyExpenses.next())  
6      {  
7          FamilyExpenses.u_amount += current.u_expense;  
8          FamilyExpenses.u_expense_details += ">"+current.u_comments+": "+Rs."+current.u_expense+"/-";  
9          FamilyExpenses.update();  
10     }  
11     else  
12     {  
13         var NewFamilyExpenses = new GlideRecord('u_family_expenses');  
14         NewFamilyExpenses.u_date = current.u_date;  
15         NewFamilyExpenses.u_amount = current.u_expense;  
16         NewFamilyExpenses.u_expense_details += ">"+current.u_comments+": "+Rs."+current.u_expense+"/-";  
17         NewFamilyExpenses.insert();  
18     }  
19 })(current, previous);  
20  
21  
22
```

Step 11: 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 Query.

The screenshot shows the ServiceNow interface for configuring a relationship. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The title bar says 'Relationship - Daily Expenses'. The main content area has fields for 'Name' (Daily Expenses), 'Application' (Global), 'Applies to table' (Family Expenses [u_family_expenses]), and 'Queries from table' (Daily Expenses [u_daily_expenses]). A note at the bottom states: '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.' A large text area contains the ECMAScript code for the relationship query:

```
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  }  
6  )(current, parent);  
7  
8 })
```

5. Click on Update.

Result / Output

1. Enter the details and then submit it.

The screenshot shows the ServiceNow interface for creating a new daily expense. The top navigation bar includes links for All, Favorites, History, Workspaces, and Admin. The title bar says "Daily Expenses - Create MFE0001025". The main form has fields for Number (MFE0001025), Family Member Name (Waldo Sisk), Date (2025-10-01), Expense (15,000), and Comments (Courses fee). A "Submit" button is at the bottom left.

2. Detail will be updated on Daily Expenses .

The screenshot shows the ServiceNow list view for Daily Expenses. The table includes columns for Number, Comments, Date, Expense, and Created by. A row for "MFE0001025" with the comment "Courses fee" is highlighted with a red border, indicating it is the newly created record from the previous step.

Number	Comments	Date	Expense	Created by
MFE0001018	party	2025-10-15	13,333	admin
MFE0001015	EMI	2025-10-23	5,000	admin
MFE0001017	college fees	2025-10-22	20,000	admin
MFE0001013	traveling	2025-10-30	500	admin
MFE0001020	petrol	2025-11-05	500	admin
MFE0001016	mobile	2025-10-23	10,000	admin
MFE0001025	Courses fee	2025-10-01	15,000	admin
MFE0001014	Netflix	2025-10-21	2,500	admin

3. Daily Expenses Details will be automatically updated on Family Expenses .

The screenshot shows the ServiceNow list view for Family Expenses. The table includes columns for Number, Amount, Date, and Expense. A row for "MFE0001018" with the amount 15,000 and date 2025-10-01 is highlighted with a red border, indicating it is the newly created record from the previous steps.

Number	Amount	Date	Expense
MFE0001018	15,000	2025-10-01	
MFE0001010	2,500	2025-10-21	
MFE0001011	15,000	2025-10-23	
MFE0001009	1,000	2025-11-20	subscription
MFE0001012	20,000	2025-10-22	
MFE0001013	13,333	2025-10-15	
MFE0001008	500	2025-10-30	travelling
MFE0001014	500	2025-11-05	

4. Output will be successfully updated.

The screenshot shows the ServiceNow interface for managing family expenses. At the top, there's a navigation bar with links for All, Favorites, History, Workspaces, and Admin. The title bar says "Family Expenses - MFE0001018". Below the title bar, there's a form with fields for Number (MFE0001018), Date (2025-10-01), and Amount (15,000). There's also a large text area for Expense. Below the form is a button bar with Update and Delete. Underneath the form is a list view titled "Daily Expenses" with a single row of data:

Number	Comments	Date	Expense
MFE0001025	Courses fee	2025-10-01	15,000

At the bottom of the list view, there's a pagination indicator showing "1 to 1 of 1".

Conclusion

In conclusion, the “**Calculating Family Expenses using ServiceNow**” project effectively demonstrates how ServiceNow can be used to manage and track family expenses in an organized way. By creating custom tables, relationships, and business rules, the system allows users to record daily expenses and automatically update total family expenses. Features like auto-numbering, mandatory fields, and form customization make the application accurate and user-friendly. Overall, the project provides a simple and efficient solution for monitoring family budgets and supports better financial planning through automation on the ServiceNow platform.