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Calculate family expenses using servicesnow

**Project Title**

**Team ID** **-NM2025TMID18646**

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## **Project Overview:**

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.

## **Project Flow:**

- Milestone 1 : Setting up ServiceNow Instance
- Milestone 2 : Creation of New Update Set
- Milestone 3 : Creation of Table(Family Expenses)
- Milestone 4 : Creation of Table(Daily Expenses)
- Milestone 5 : Creation of Relationship
- Milestone 6 : Configuring Related List on Family Expenses
- Milestone 7 : Creation of Business Rules
- Milestone 8 : Configure the Relationship
- Milestone 9 : Conclusion

### **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.

## 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.

The screenshot shows the ServiceNow interface for creating a new update set. The left sidebar has a 'Local' filter selected. The main form is titled 'Update Set - Create New Update Set' and shows the following fields:

- Name:** Family Expenses (highlighted with a red box)
- State:** In progress
- Parent:** (empty field)
- Release date:** (empty field)
- Description:** (empty field)

At the bottom of the form, there are two buttons: 'Submit' and 'Submit and Make Current' (highlighted with a red box). The status bar at the top right indicates 'Application: Global'.

## Milestone 3: Creation of Table(Family Expenses)

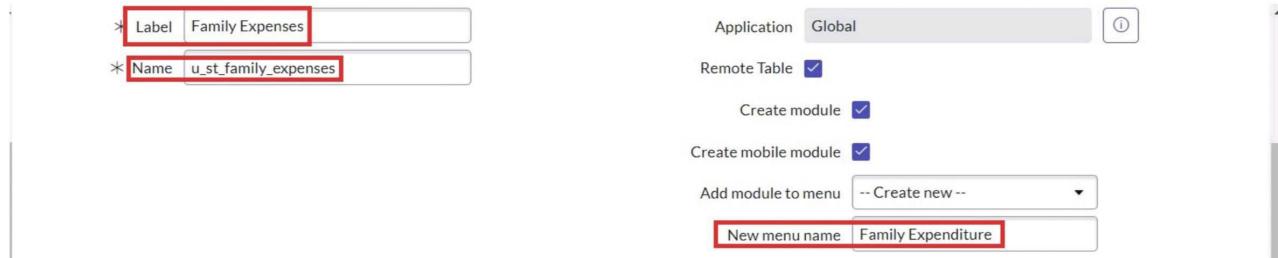
### Activity 1: Creation of Family Expenses Table

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.

### Activity 2: 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

Column label	Type	Reference	Max length	Default value	Display
Number	String				false
Date	Date				false
Amount	Integer				false
Expense Details	String		800		false

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

### Activity 3: 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 Default value specifies what value the field has when first displayed.

Use dynamic default  2

Dynamic default value: Get Next Padded Number 3

Delete Column Update 4

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

Table : Family Expenses

Prefix : MFE

Number MFE

\* Table Family Expenses

Prefix MFE

\* Number 1,000

Application Global

Number of digits 7

Update Delete

9. Click on Submit.

### Activity 4:

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 a user interface for managing expense data. At the top, there is a header bar with the title 'Family Expenses [u\_family\_expenses]'. Below this, there are two main sections. The first section, labeled 'Number', contains three fields: 'Date' and 'Amount'. The second section, labeled 'Expense Details', contains one field. Both sections have gear and close icons.

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 Table(Daily Expenses)

### Activity 1: 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

This screenshot shows the configuration for adding a module to a menu. It includes fields for 'Label' (Daily Expenses), 'Name' (u\_daily\_expenses), and 'Extends table'. On the right, there are checkboxes for 'Application' (Global), 'Create module' (checked), 'Create mobile module' (checked), and 'Application Menu'. A dropdown menu at the bottom is set to 'Add module to menu' with 'Family Expenditure' selected. Red arrows point to each of these three items: the 'Label' field, the 'Name' field, and the 'Add module to menu' dropdown.

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

### Activity 2: Creation of Columns(Fields):

10. Near Columns Double click near insert a new row.
11. Give the details as:

Column label : Number

Type : String

12. Double click on insert a new row again

13. Give the details as:

Column label : Date

Type : Date

14. Double click on insert a new row again

15. Give the details as:

Column label : Expense

Type : Integer

16. Double click on insert a new row again

17. Give the details as:

Column label : Family Member Name

Type : Reference

Max length : 800

18. Double click on insert a new row again

19. Give the details as:

Column label : Comments

Type : String

Max length : 800

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

### Activity 3: Making Number Field an Auto-Number

10. Double click on the Number Field/Column.

11. Go down and double click on Advanced view

12. In Default Value:

    Use dynamic default : check the box

    Dynamic default value : Get Next Padded Number

13. Click on Update.

The screenshot shows the 'Default Value' configuration screen. At the top, there are three tabs: 'Choice List Specification', 'Calculated Value', and 'Default Value'. The 'Default Value' tab is selected and highlighted with a red box and a red arrow pointing to it. Below the tabs, a message states: 'The Default value specifies what value the field has when first displayed.' Underneath this message, there are two input fields: 'Use dynamic default' (with a checked checkbox) and 'Dynamic default value' (set to 'Get Next Padded Number'). A red box and a red arrow point to the 'Use dynamic default' checkbox. Another red box and a red arrow point to the 'Dynamic default value' dropdown. At the bottom left, there are 'Delete Column' and 'Update' buttons. A red box and a red arrow point to the 'Update' button.

14.

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

16. Click on New.

17. Enter the below Details:

    Table : Family Expenses

    Prefix : MFE

The screenshot shows the 'Number Maintenance' form for creating a new record. At the top, there are buttons for 'Back', 'New record', and 'Submit'. The main area contains several input fields: 'Table' (set to 'Daily Expenses'), 'Prefix' (set to 'DFE'), 'Number' (set to '1,000'), 'Application' (set to 'Global'), and 'Number of digits' (set to '7'). A red box and a red arrow point to the 'Table' dropdown. Another red box and a red arrow point to the 'Prefix' input field. A third red box and a red arrow point to the 'Submit' button at the bottom left.

18. Click on Submit.

### Activity 4: Configure the Form

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

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

The screenshot displays the configuration interface for the 'Daily Expenses' form. At the top, there's a header bar with a '2 Column' dropdown and other controls. Below it, the first row contains four fields: 'Number' (with a gear icon and a red 'X'), 'Family Member Name' (with a gear icon and a red 'X'), 'Date' (with a gear icon and a red 'X'), and 'Expense' (with a gear icon and a red 'X'). A horizontal line separates this from the second row, which contains a single 'Comments' field with a gear icon and a red 'X'. The entire interface is contained within a light gray border.

12. Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
13. Make Date, Family Member Name Mandatory Field by clicking on the gear icon and checking Mandatory
14. Click on Save.

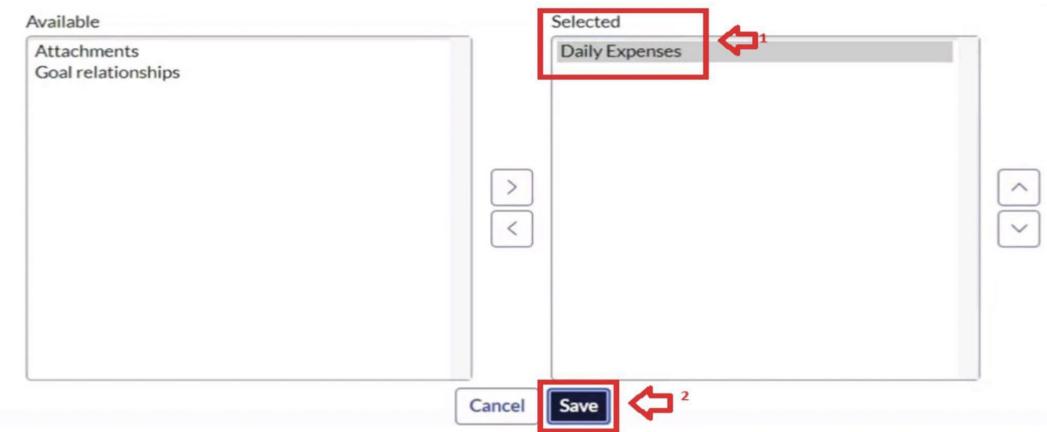
## Milestone 5: Creation of Relationship

### Activity 1: 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.

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



## 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

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);

```

Script [ | | | | | | | | | | | | ]

```

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

```

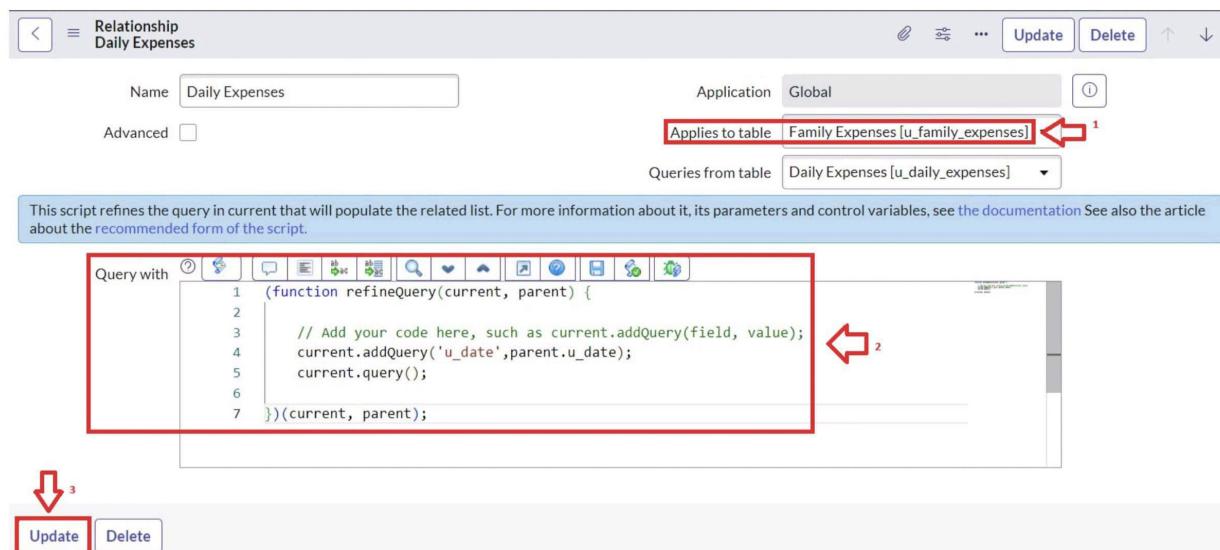
6. Go to the Header and right click there>> click on Save.

## Milestone 8: Configure the Relationship

1. Go to All >> In the filter search for Relationships >> Open Relationships.
2. In that, open a 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.



## Milestone 9: 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.