

Calculating Family Expenses Using ServiceNow

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Team Members:4

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Problem Statement:

Families often struggle to track and manage their monthly expenses due to scattered data sources, manual record-keeping, and lack of real-time insights. This leads to overspending, missed savings opportunities, and financial stress. There is a need for a centralized, automated, and user-friendly system to monitor, categorize, and analyze family expenses.

Objective:

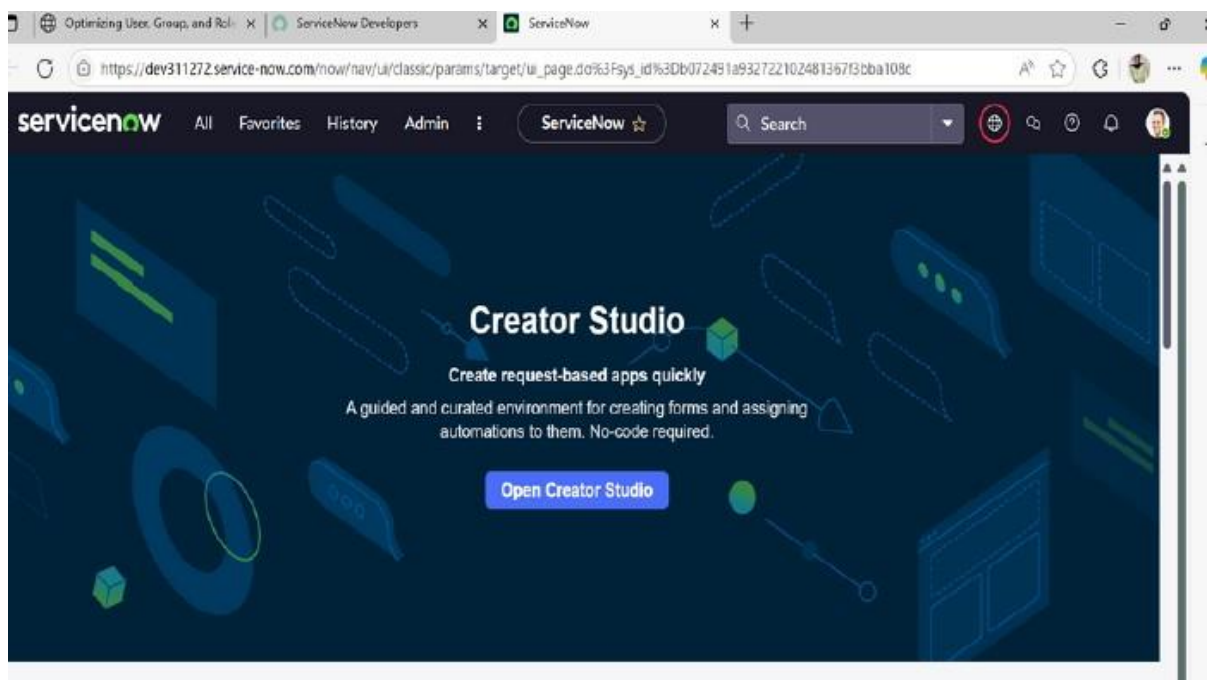
1. **Centralize Expense Tracking:** Create a single platform to log all family expenses.
2. **Automate Categorization:** Use workflows to automatically classify expenses (e.g., groceries, utilities, education).
3. **Enable Real-Time Reporting:** Provide dashboards and reports for monthly, quarterly, and yearly expense summaries.
4. **Set Budget Thresholds:** Alert users when spending exceeds predefined limits.
5. **Improve Financial Awareness:** Help families make informed decisions through data-driven insights.

TASK INITIATION

Milestone 1 : Setting up ServiceNow Instance

Activity : Setting up ServiceNow Instance

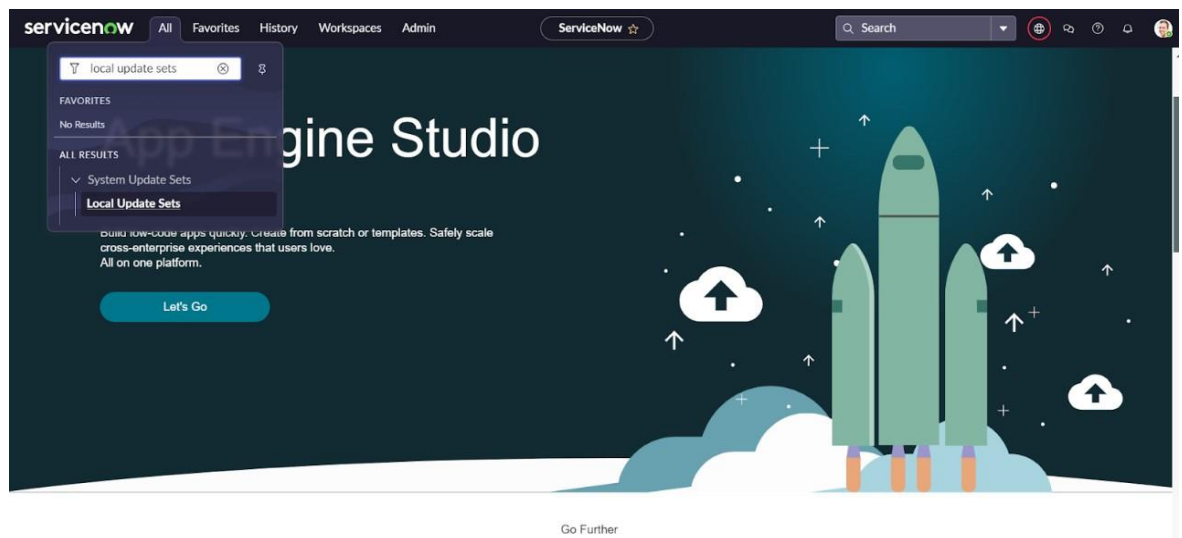
1. Sign up for a developer account on the ServiceNow Developer site
“<https://developer.servicenow.com>”.
2. Once logged in, navigate to the "Personal Developer Instance" section.
3. Click on "Request Instance" to create a new ServiceNow instance.
4. Fill out the required information and submit the request.
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.



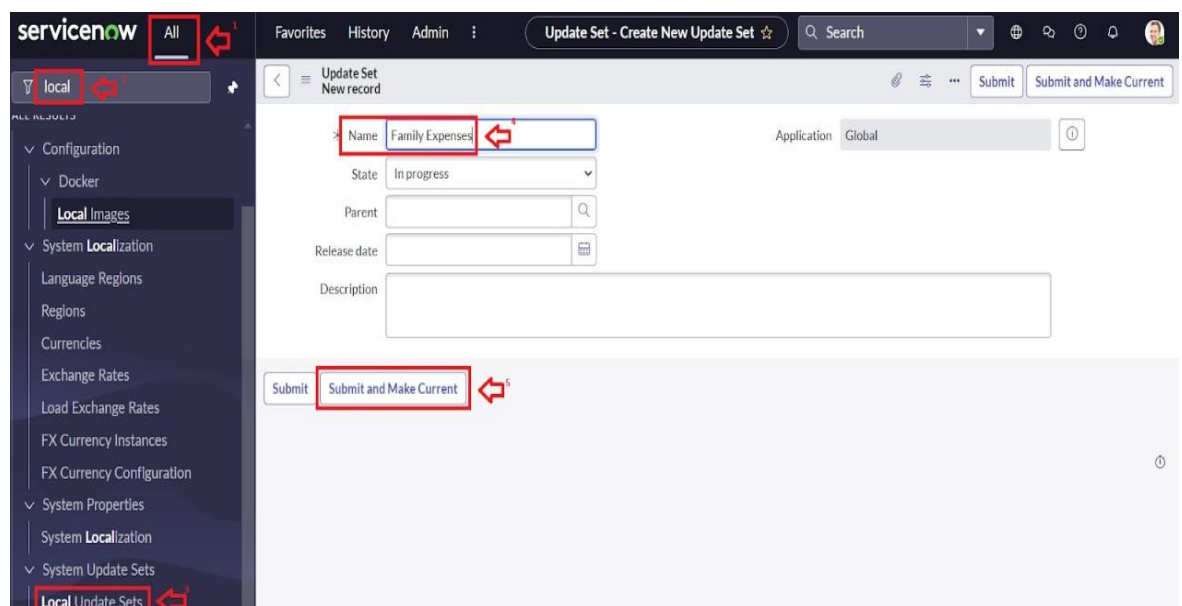
Milestone 2 : Creation of New Update Set

Activity 1: Creation of New Update Set

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



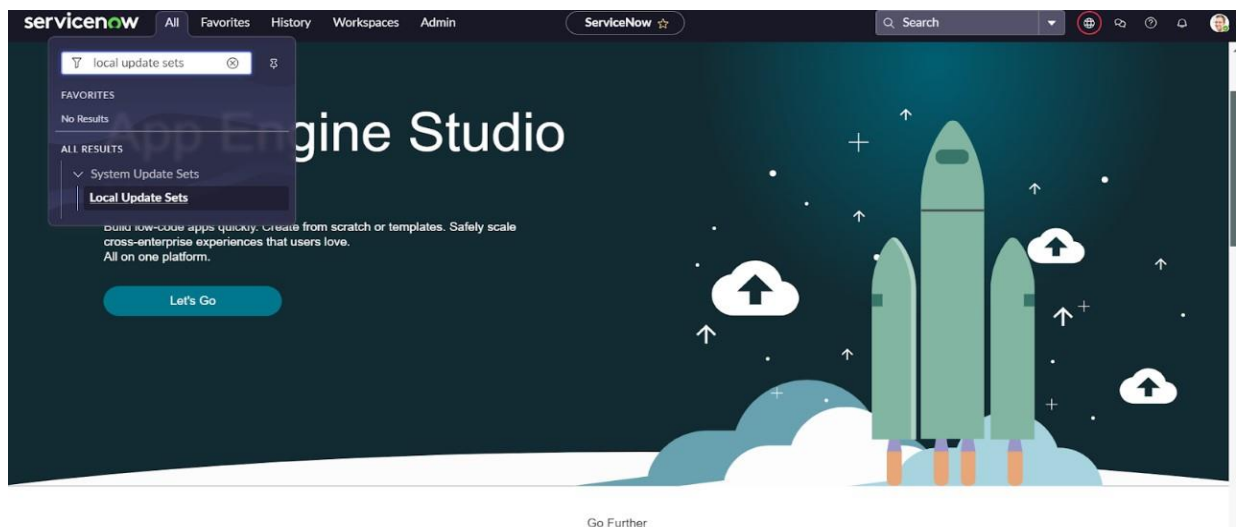
2. Enter the Details as:
 Name : Family Expenses
3. Then click on Submit and Make current.



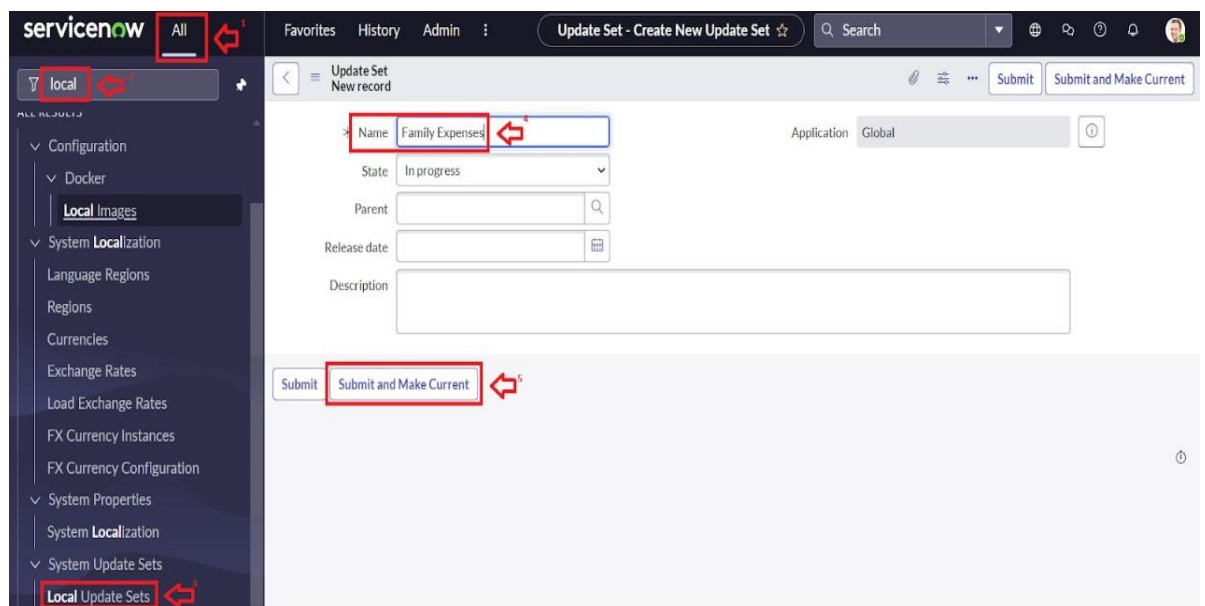
Milestone 3 : Creation of Table

Activity : 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.



Milestone 4 : Creation of Table

Activity 1: Creation of Family Expenses Table

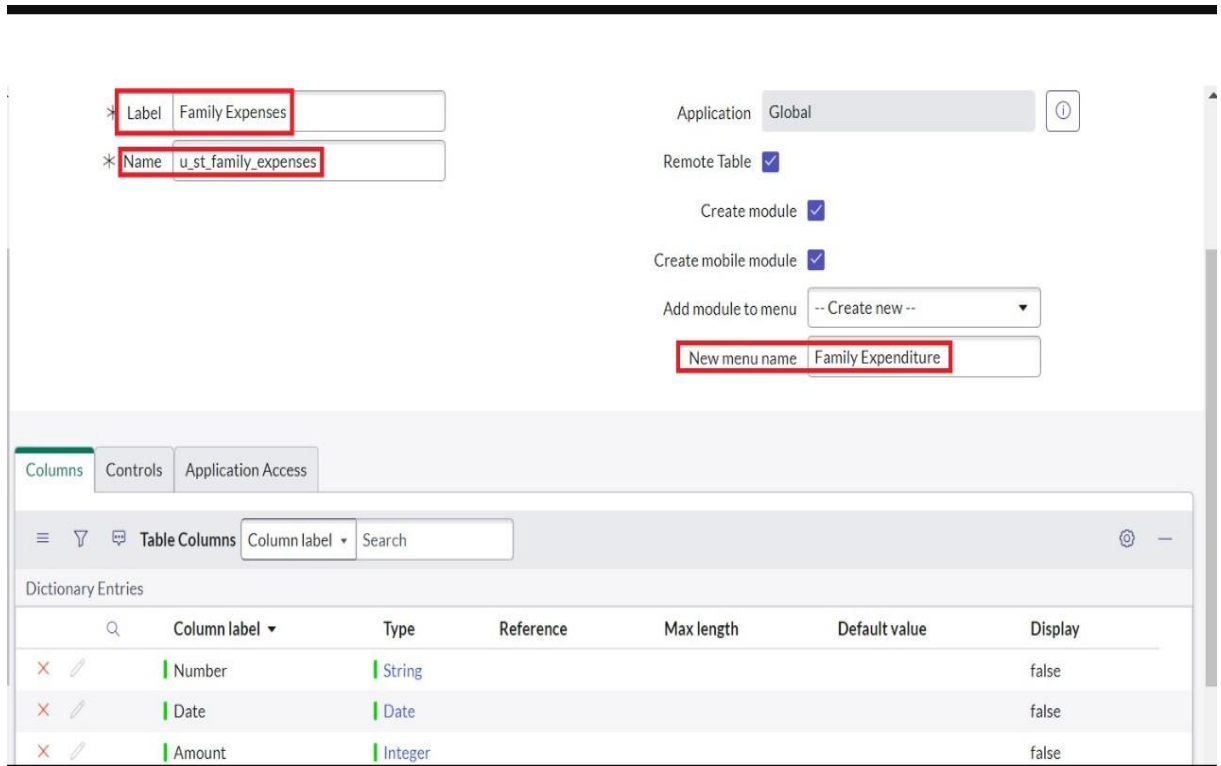
1. Go to All > In the filter search for Tables > click on New.

2. Enter the Details:

Label : Family Expenses

Name : Auto-Populated

New menu name : Family Expenditure



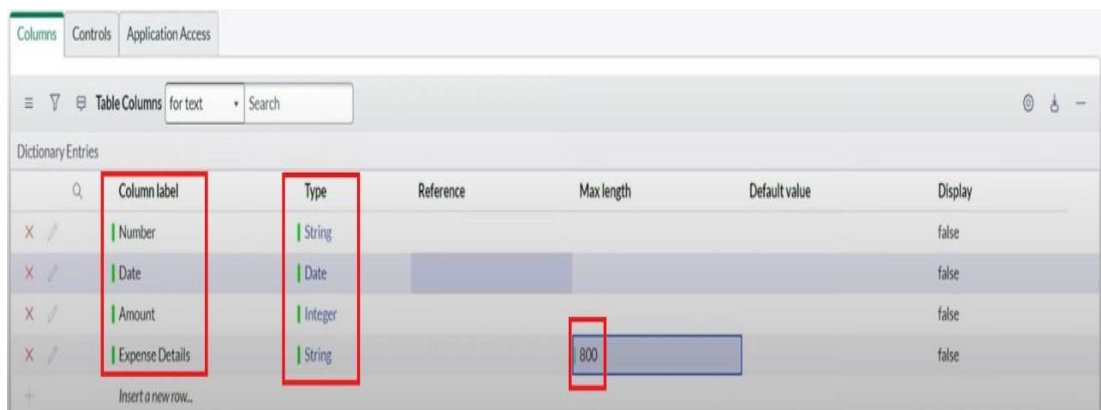
The screenshot shows the configuration interface for creating a new table. The 'Label' field is set to 'Family Expenses' and the 'Name' field is set to 'u_st_family_expenses'. The 'Application' is set to 'Global'. The 'Remote Table' checkbox is checked. The 'Create module' checkbox is checked. The 'Create mobile module' checkbox is checked. The 'Add module to menu' dropdown is set to '-- Create new --'. The 'New menu name' field is set to 'Family Expenditure'. Below the configuration fields, there is a 'Columns' tab with a table of dictionary entries.

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

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



Dictionary Entries	Column label	Type	Reference	Max length	Default value	Display
X	Number	String				false
X	Date	Date				false
X	Amount	Integer				false
X	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.



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

Delete Column **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

< ≡ Number
MFE

  ...

Update Delete

* Table | Family Expenses

Prefix | MFE

* Number 1,000

Application Global


Number of digits 7

Update Delete

8. Click on Submit.

Activity 4: 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 configuration interface for a form titled "Family Expenses [u_family_expenses]". The form is set to a "2 Column" layout. It contains three fields: "Number", "Date", and "Amount". Each field has a gear icon for configuration. Below this, there is a section for "Expense Details" with a "1 Column" layout.

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 5 : 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



* Label ↩ 1

* Name ↩ 2

Extends table



Application

Create module ☒

Create mobile module ☒

Add module to menu ↩ 3

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 : 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
- 11.** 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.



Choice List Specification | Calculated Value | **Default Value**

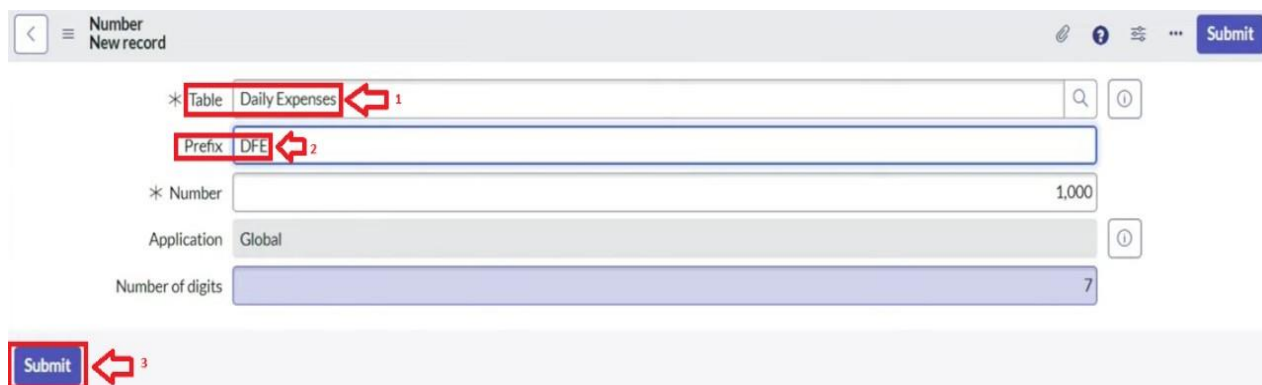
The **Default value** specifies what value the field has when first displayed.

Use dynamic default ☒

Dynamic default value: Get Next Padded Number

Delete Column | **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



The screenshot shows a web form titled "Number New record". The form contains several fields with red boxes and arrows indicating where to enter data:

- A red box around the "Table" field, which contains "Daily Expenses", with a red arrow labeled "1" pointing to it.
- A red box around the "Prefix" field, which contains "DFE", with a red arrow labeled "2" pointing to it.
- A red box around the "Submit" button at the bottom left, with a red arrow labeled "3" pointing to it.

Other fields in the form include:

- * Number: 1,000
- Application: Global
- Number of digits: 7

8. Click on Submit.

Activity 4: 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.

Milestone 6 : Creation of Relationship

Activity : 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 7 : Configuring Related List on Family Expenses

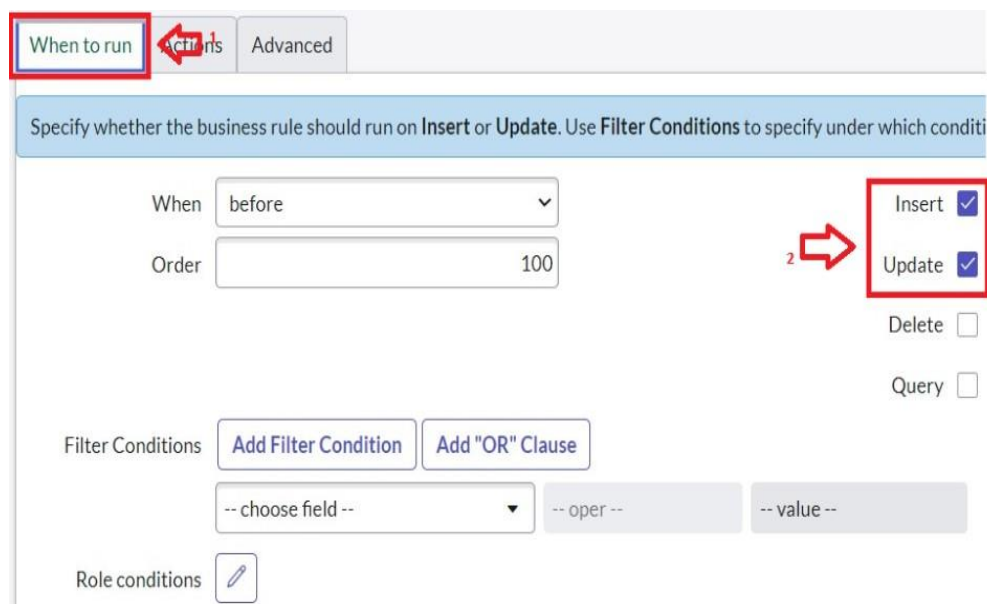
Activity : Configuring Related List on Family Expenses

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 8 : Creation of Business Rules

Activity : 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



When to run

Specify whether the business rule should run on Insert or Update. Use Filter Conditions to specify under which condition

When: before

Order: 100

Insert ☒

Update ☒

Delete ☐

Query ☐

Filter Conditions: Add Filter Condition Add "OR" Clause

-- choose field -- -- oper -- -- value --

Role conditions

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.

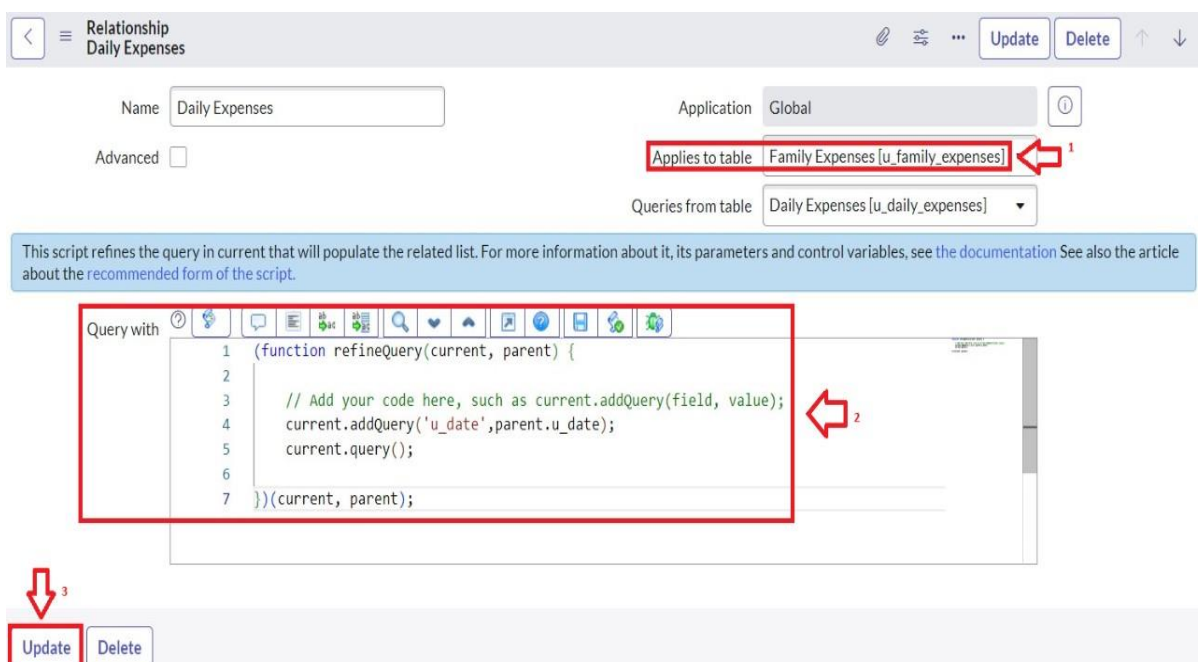
Milestone 9 :Configure the Relationship

Activity : 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.



Relationship
Daily Expenses

Name:

Application:

Advanced: ☐

Applies to table: ¹

Queries from table:

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

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

²

³

Conclusion

The project “Calculating Family Expenses Using ServiceNow” successfully demonstrates how a powerful ITSM platform like ServiceNow can be adapted beyond traditional IT workflows to manage and track personal or household financial data. By leveraging features such as custom tables, relationships, and business rules, we created a structured and automated system to record, relate, and monitor daily expenses under a centralized Family Expenses module.

This approach not only improves data visibility and accuracy but also enables real-time tracking, reporting, and scalability for future enhancements like notifications, dashboards, or integrations with external financial tools. Overall, this project highlights the flexibility of ServiceNow in solving real-world problems beyond enterprise IT, making it a valuable tool for both professional and personal process automation.

