

# CALCULATING FAMILY EXPENSES USING SERVICE NOW

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## **Problem Statement:**

Managing family expenses is a recurring challenge for households, as expenses often come from multiple categories such as groceries, utilities, rent, education, healthcare, and entertainment. Traditional manual methods like maintaining notebooks or spreadsheets can be time-consuming, error-prone, and lack real-time insights. This makes it difficult to make informed financial decisions, set budgets, and plan for future needs.

## **Objective:**

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.

## **Skills :**

IOT Open Hardware platforms, Data Structures.

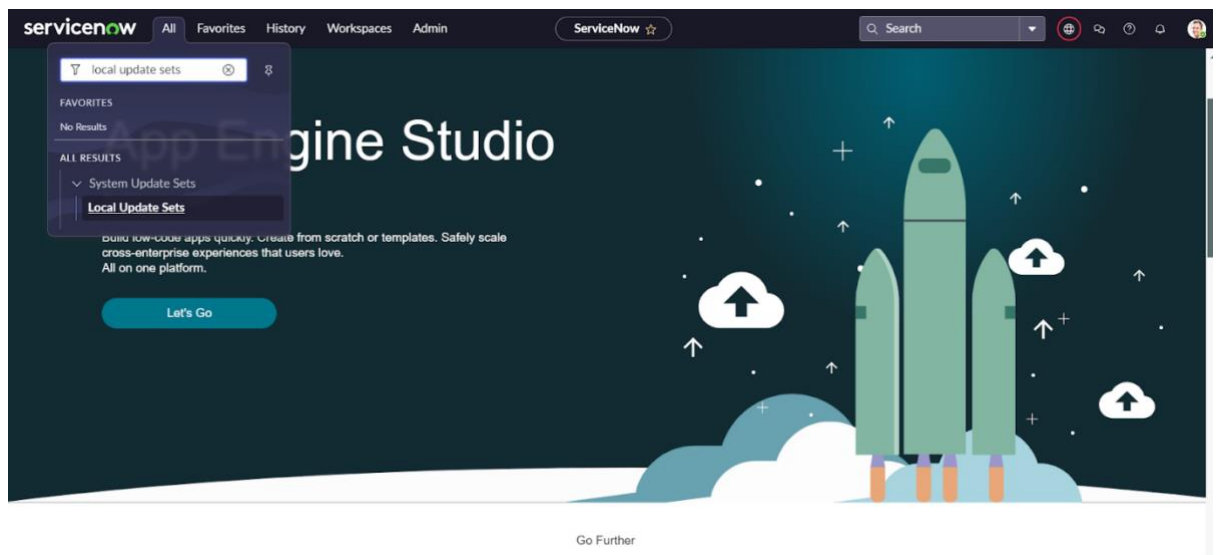
## Activitives:

### Setting up Service Now 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.

### 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.

ServiceNow interface showing the 'Update Set - Create New Update Set' form. The left sidebar shows the navigation menu with 'All' and 'Local' highlighted. The main form has fields for Name (Family Expenses), State (In progress), Parent, Release date, and Description. The 'Submit and Make Current' button is highlighted.

## Creation of Table:

### 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

Table configuration details:

- Label: Family Expenses
- Name: u\_st\_family\_expenses
- Application: Global
- Remote Table: ☒
- Create module: ☒
- Create mobile module: ☒
- Add module to menu: -- Create new --
- New menu name: Family Expenditure

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.

## 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



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

## 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.

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.

## **Creation of Table(Daily Expenses):**

### **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)**

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.

### **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** <sup>1</sup>

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

Use dynamic default ☒ <sup>2</sup>

Dynamic default value   Get Next Padded Number <sup>3</sup>

Delete Column   **Update** <sup>4</sup>

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 New record   **Submit**

\* Table   Daily Expenses <sup>1</sup>

Prefix   DFE <sup>2</sup>

\* Number   1,000

Application   Global

Number of digits   7

**Submit** <sup>3</sup>

8. Click on Submit.

## 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.

The screenshot displays two table configuration panels. The top panel is titled 'Daily Expenses [u\_daily\_expenses]' and shows a table with 2 columns. The first column contains the fields 'Number', 'Date', and 'Expense'. The second column contains the field 'Family Member Name'. Each field has a gear icon next to it, indicating it can be configured. The bottom panel shows a table with 1 column containing the field 'Comments', also with a gear icon for configuration.

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.

## Creation of Relationship:

### 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.

## 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



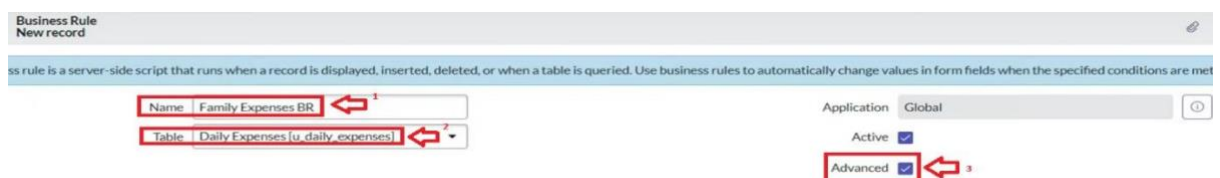
## Creation of Business Rules

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

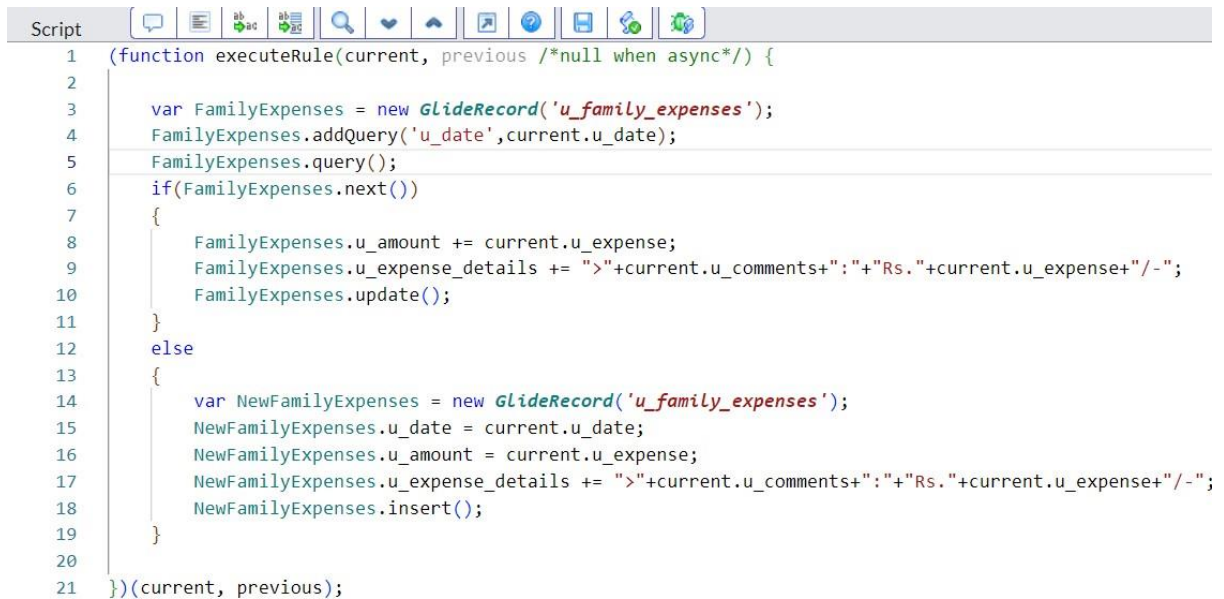


4. In when to run Check Insert and Update

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

## 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: 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

```
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);
```

Update Delete

## Conclusion:

Implementing a **Family Expenses Tracking System** using **ServiceNow** demonstrates the flexibility and power of the platform beyond its traditional ITSM use cases. By leveraging ServiceNow's capabilities—such as custom applications, form design, workflow automation, and reporting—you can create a structured and userfriendly solution to manage and monitor household spending.