Calculating Family Expenses using Service Now

Category: ServiceNow System Administartor

Skills Required:
IOT Open Hardware platforms,Data Structures

Project Description:

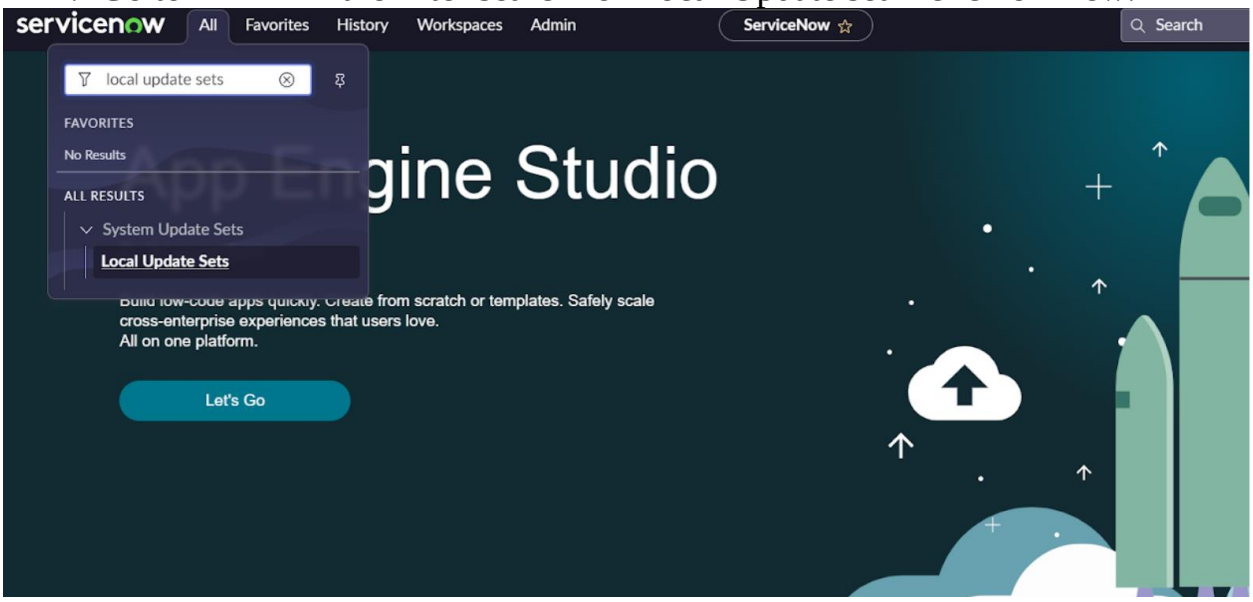
The project aims to develop a comprehensive expense calculation system using ServiceNow. This system will enable users to track and manage family expenses efficiently. It will include features such as expense categorization, budget setting, real-time tracking, and reporting capabilities. Utilizing ServiceNow's 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.

Setting up ServiceNow Instance

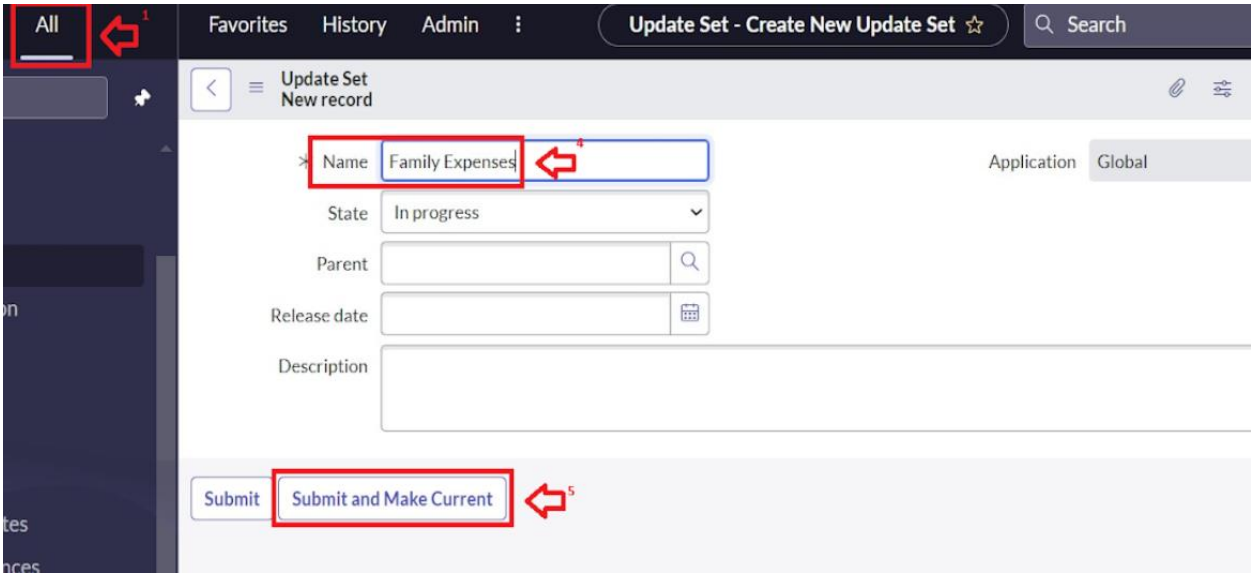
1. Sign up for a developer account on the ServiceNow Developer site “https://developer.servicenow.com”.
2. Once logged in, navigate to the "Personal Developer Instance" section.
3. Click on "Request Instance" to create a new ServiceNow instance.
4. Fill out the required information and submit the request.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

Creation of New Update Set

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

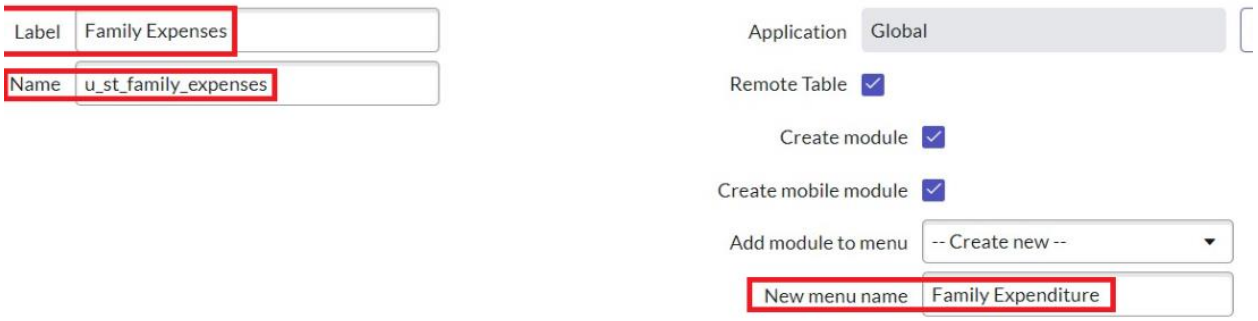


2. Enter the Details as:
   Name : Family Expenses
3. Then click on Submit and Make current.



Creation of Family Expenses Table

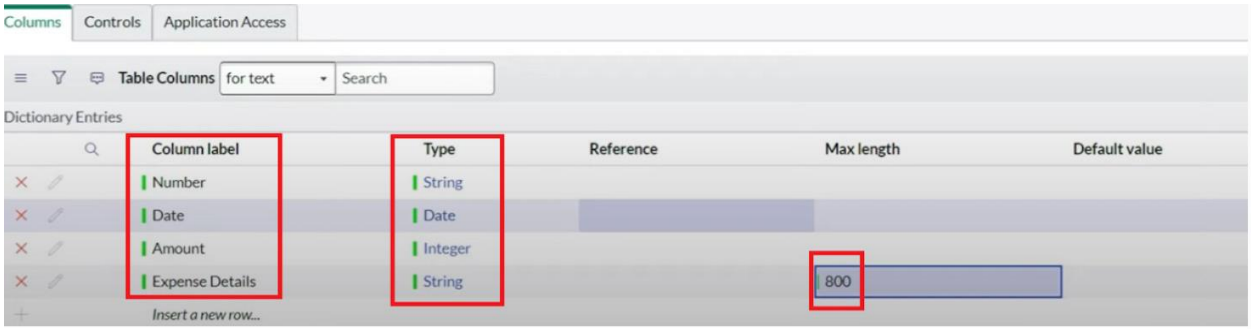
1. Go to All > In the filter search for Tables > click on New.
2. Enter the Details:
   Label : Family Expenses
   Name : Auto-Populated
   New menu name : Family Expenditure



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

Creation of Columns(Fields)

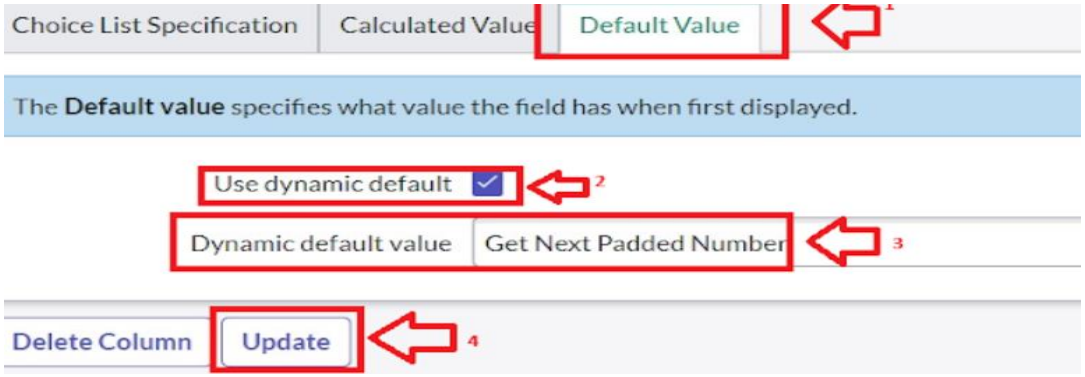
1. Near Columns Double click near insert a new row.
2. Give the details as:
   i. Column label : Number
   ii. Type : String
3. Double click on insert a new row again
4. Give the details as:
   i. Column label : Date
   ii. Type : Date
5. Double click on insert a new row again
6. Give the details as:
   i. Column label : Amount
   ii. Type : Integer
7. Double click on insert a new row again
8. Give the details as:
   i. Column label : Expense Details
   ii. Type : String
   iii. Max length : 800



9. 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.



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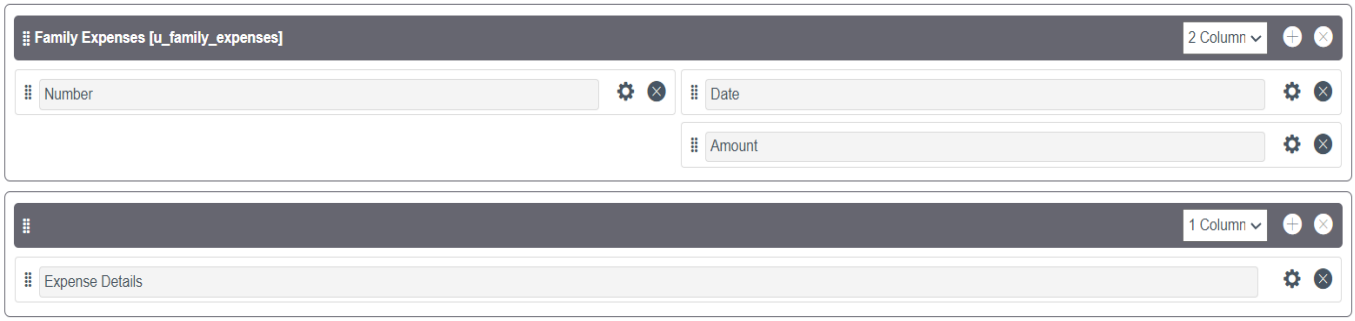
4. Go to All >> In the filter search for Number Maintenance >> select Number Maintenance
5. Click on New.
6. Enter the below Details:
   Table : Family Expenses
   Prefix : MFE

Click on Submit.

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 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)

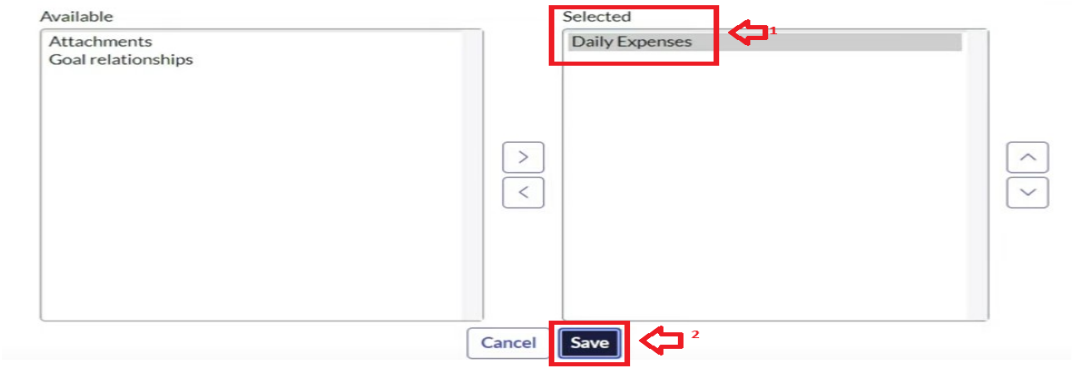
1) Near Columns Double click near insert a new row.
2) Give the details as:
    i. Column label : Number
    ii. Type : String
3) Double click on insert a new row again
4) Give the details as:
    i. Column label : Date
    ii. Type : Date
5) Double click on insert a new row again
6) Give the details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

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.

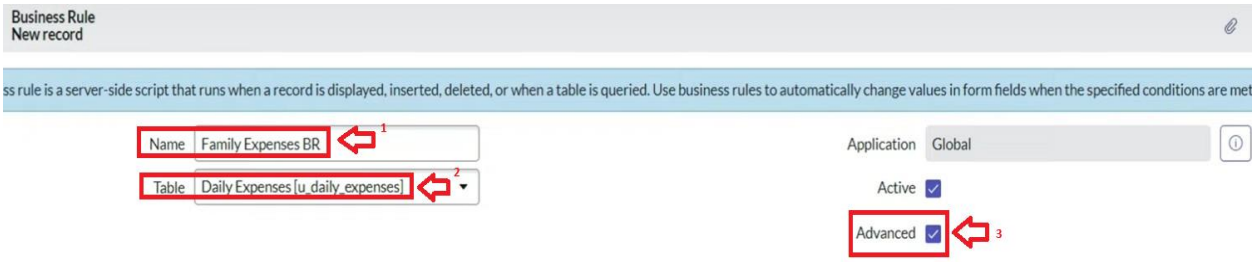
Configuring Related List on Family Expenses

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

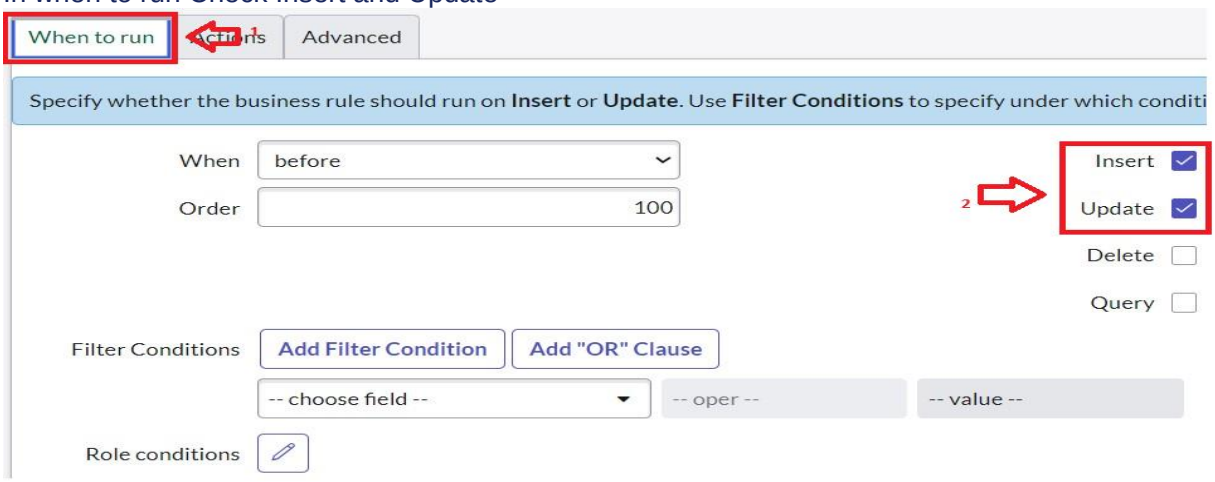


Creation of Business Rules

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

```
(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);
```

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

Configure the Relationship

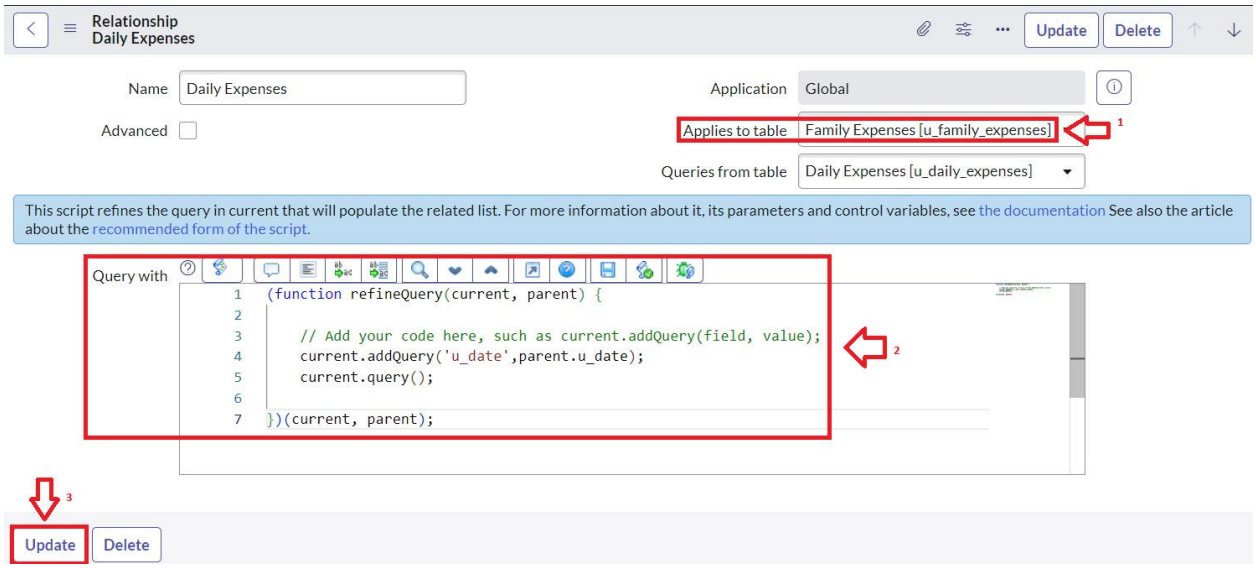
1. Go to All >> In the filter search for Relationships >> Open Relationships.
2. In that, open Daily Expenses Relationship.
3. For Applies to table : Select Family Expenses.
4. In Query with : write the below Query.

```
(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.



Conclusion

The initiative to calculate family expenses using the **ServiceNow platform** successfully demonstrates the platform's exceptional **flexibility, customization, and powerful workflow automation capabilities**, effectively proving its value beyond standard IT Service Management. The implementation allows the family to replace manual, error-prone spreadsheets with a **centralized, automated system** that leverages custom tables, forms, and the Flow Designer to streamline expense entry, categorization, and calculation. Crucially, it provides **real-time visibility and proactive control** over finances through custom dashboards and reports, which offer immediate insights into spending across different categories and trigger automated alerts when budget thresholds are approached. By transforming a complex, manual household task into a **structured, secure, and insightful digital workflow**, this project not only validates the application of core ServiceNow development skills in a non-traditional setting but also positions the platform as a highly viable tool for achieving enhanced personal and family financial discipline and governance.