CALCULATING FAMILY EXPENSES USING SERVICE NOW

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Team Members : 5

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Problem Statement : Managing family expenses can be a complex and time-consuming task, often lacking organization, real-time insights, and structured reporting. Traditional methods such as manual record-keeping or disconnected budgeting apps fail to provide a centralized, scalable, and customizable solution for families with diverse financial needs. There is a need for an integrated system that allows families to efficiently track, categorize, and analyze their spending habits in real time. This project seeks to address this gap by developing an expense calculation system on the ServiceNow platform, leveraging its workflow automation, integration capabilities, and user-friendly interface to provide a smart, scalable, and accessible financial management tool for households.

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
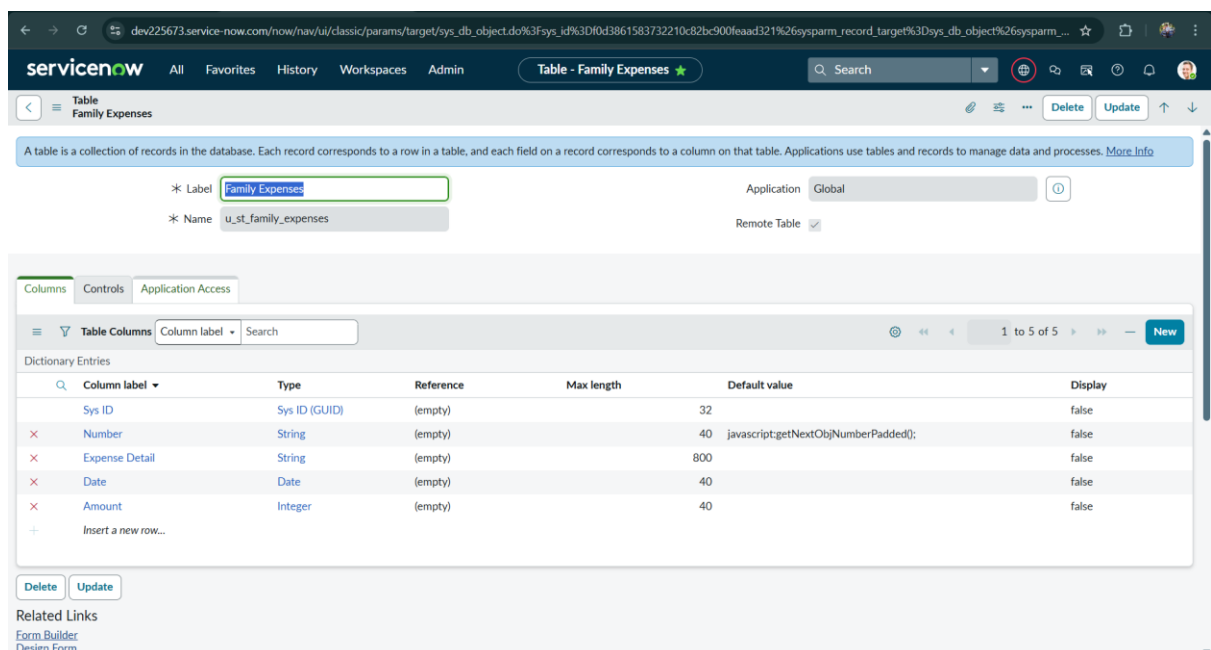
complexities. The end goal is to empower users with the tools they need to make informed financial decisions and promote financial well-being within the family unit.

Skills Required: IOT Open Hardware platforms, Data Structures

TASK INITIALATION

Activity 1 : Creation of New Update Set

1. Open Service Now
2. Go to All >> In the filter search for Local Update set > click on New.
3. Enter the Details as: Name : Family Expenses
4. Then click on Submit and Make current.

Activity 2 : Creation of Table.

1. **Creation of Family Expenses Table**
   ➢ Go to All > In the filter search for Tables > click on New.
   ➢ Enter the Details: Label : Family Expenses Name : Auto-Populated. New menu name : Family Expenditure
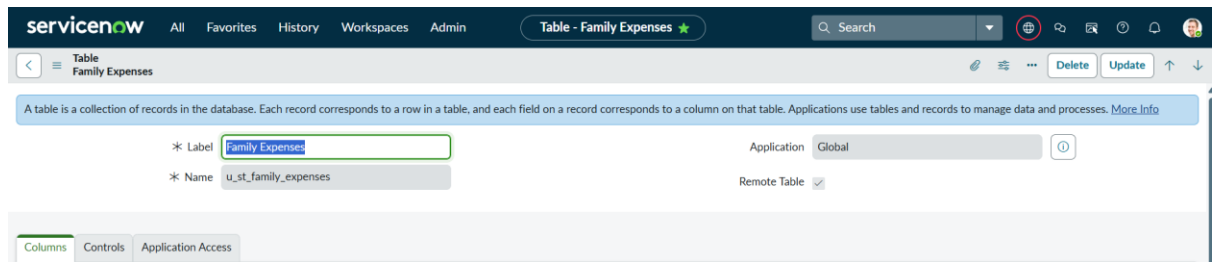
2. Creation of Columns(Fields)

➢ Near Columns Double click near insert a new row.
➢ Give the details as:
   Column label : Number
   Type : String
➢ Double click on insert a new row again
➢ Give the details as:
   Column label : Date
   Type : Date
➢ Double click on insert a new row again
➢ Give the details as:
   Column label : Amount
   Type : Integer
➢ Double click on insert a new row again
➢ Give the details as:
   Column label : Expense Details
   Type : String
   Max length : 800
➢ Go to the Header and right click there>> click on Save.

3. Making Number Field an Auto-Number

➢ Double click on the Number Field/Column.
➢ Go down and double click on Advanced view
➢ In Default Value:
   Use dynamic default : check the box
   Dynamic default value : Get Next Padded Number
➢ Click on Update.
➢ Go to All >> In the filter search for Number Maintenance >> select Number Maintenance
➢ Click on New.
➢ Enter the below Details:
   Table : Family Expenses
   Prefix : MFE
➢ Click on Submit

4. Configure the Form

➢ Go to All >> In the filter search for Family Expenses >> Open Family Expenses
➢ Click on New
➢ Go to the Header and right click there>> click on Configure >> Select Form Design
➢ Customize or Drag Drop the form as per your requirement.
➢ Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
➢ Make Date, Amount Mandatory Field by clicking on the gear icon and checking Mandatory

> ➢ Click on Save.

Activity 3 : Creation of Table(Daily Expenses).

1. Creation of Daily Expenses Table.
> ➢ Go to All > In the filter search for Tables > click on New.
> ➢ Enter the Details:
>> Label : Daily Expenses
>> Name : Auto-Populated
>> Add Module to menu : Family Expenditure
> ➢ Go to the Header and right click there>> click on Save.

2. Creation of Columns(Fields)
> ➢ Near Columns Double click near insert a new row.
> ➢ Give the details as:
>> Column label : Number
>> Type : String
> ➢ Double click on insert a new row again
> ➢ Give the details as:
>> Column label : Date
>> Type : Date
> ➢ Double click on insert a new row again
> ➢ Give the details as:
>> Column label : Expense

Type : Integer
- ➢ Double click on insert a new row again
- ➢ Give the details as:
  Column label : Family Member Name

  Type : Reference

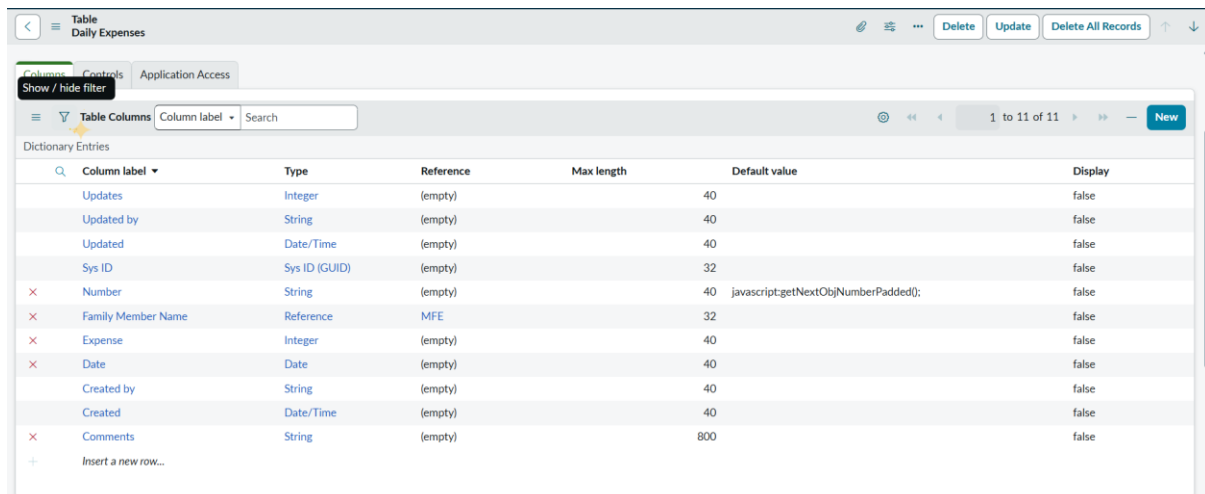 Max length : 800
- ➢ Double click on insert a new row again
- ➢ Give the details as:
  Column label : Comments

  Type : String

  Max length : 800
- ➢ Go to the Header and right click there>> click on Save.

3. Making Number Field an Auto-Number.

- ➢ Double click on the Number Field/Column.
- ➢ Go down and double click on Advanced view
- ➢ In Default Value:
  Use dynamic default : check the box

  Dynamic default value : Get Next Padded Number
- ➢ Click on Update.
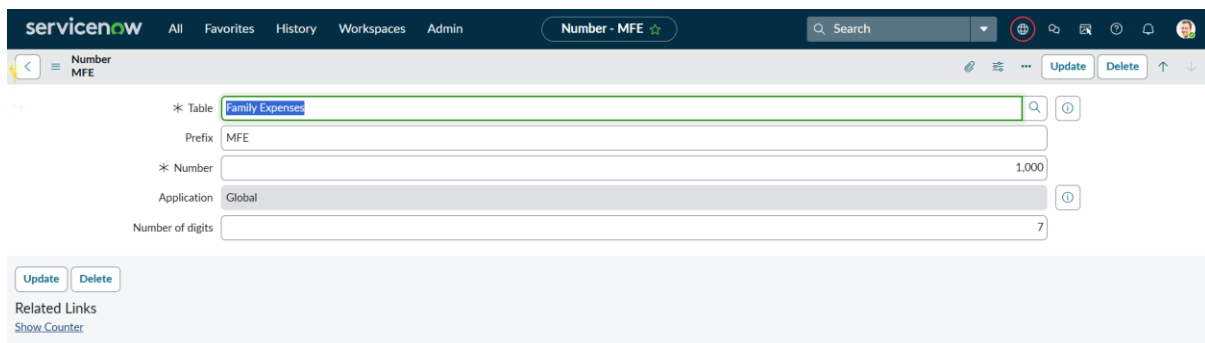- ➢ Go to All >> In the filter search for Number Maintenance >> select Number Maintenance
- ➢ Click on New.
- ➢ Enter the below Details:

Table : Family Expenses
Prefix : MFE

➢ Click on Submit.

4. Configure the Form

➢ Go to All >> In the filter search for Daily Expenses >> Open Daily Expenses
➢ Click on New
➢ Go to the Header and right click there>> click on Configure >> Select Form Design
➢ Customize or Drag Drop the form as per your requirement.
➢ Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
➢ Make Date, Family Member Name Mandatory Field by clicking on the gear icon and checking Mandatory
➢ Click on Save.

Activity 4 : Creation of Relationship.

1. Creation of Relationship between Family Expenses and Daily Expenses tables

➢ Go to All >> In the filter search for Relationships >> Open Relationships
➢ Click on New.
➢ Enter the details:
  Name : Daily Expenses
  Applies to table : Select Family Expenses
  Daily Expenses : Select Daily Expenses
➢ Click Save.

Activity 5 : Configuring Related List on Family Expenses.

1. Configuring Related List on Family Expenses

➢ Go to All >> In the filter search for Family Expenses >> Open Family Expenses
➢ Click on New
➢ Go to the Header and right click there>> click on Configure >> Select Related Lists
➢ Add Daily Expenses to the Selected Area.
➢ Click on Save

Activity 6 : Activity 4 : Creation of Relationship.

1. Creation of Business Rules

➢ Go to All >> In the filter search for Business Rules.

➢ Under System Definition Select Business Rules then click on New.

➢ Enter the Details:
   Name : Family Expenses BR
   Table : Select Daily Expenses
   Check Advanced

➢ In when to run Check Insert and Update

➢ 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);
- ➢ Go to the Header and right click there>> click on Save.
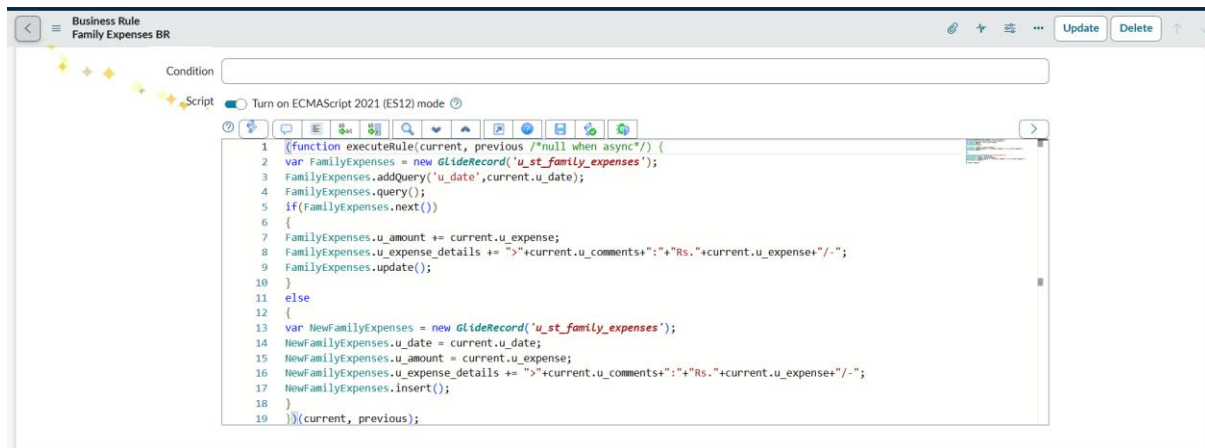
Activity 7 : Configure the Relationship.

1. **Configure the Relationship**
- ➢ Go to All >> In the filter search for Relationships >> Open Relationships.
- ➢ In that, open Daily Expenses Relationship.
- ➢ For Applies to table : Select Family Expenses.
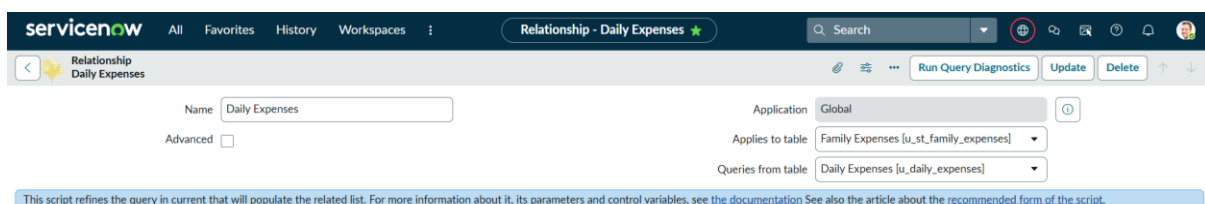- ➢ In Query with : write the below Query.
  (function refineQuery(current, parent) {
  // Add your code here, such as current.addQuery(field, value);
  current.addQuery('u_date',parent.u_date);
  current.query();
  })(current, parent);
- ➢ Click on Update

```
1  (function refineQuery(current, parent) {
2    current.addQuery('u_date',parent.u_date);
3    current.query();
4  })(current, parent);
```

Run Query Diagnostics | Update | Delete
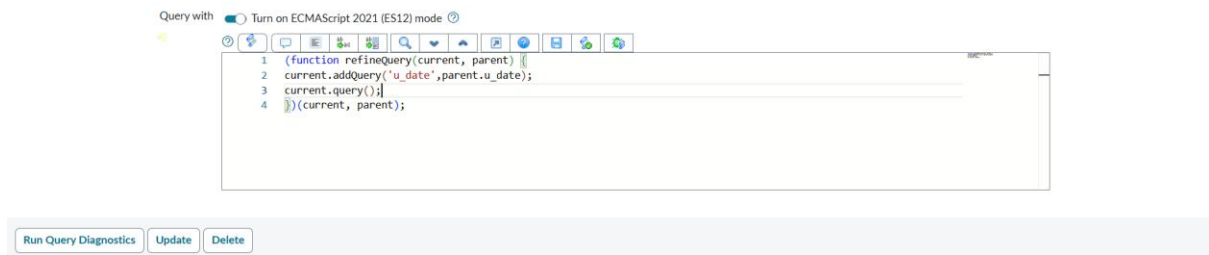
Conclusion :

By leveraging the capabilities of the ServiceNow platform, this project will deliver a robust, user-centric solution for managing family expenses. With features like real-time expense tracking, intelligent categorization, budget management, and comprehensive reporting, the system aims to simplify financial oversight for families of all sizes. The integration of IoT open hardware platforms and efficient data structures ensures enhanced functionality, automation, and scalability. Ultimately, this project will not only streamline household financial management but also foster responsible spending habits and improved financial literacy among users, contributing to long-term financial stability and well-being.