SHREE CHANDRAPRABHU JAIN COLLEGE - MINJUR
(Affiliated to the University of Madras)
(Accredited by NAAC)

CALCULATING FAMILY EXPENSES USING SERVICE NOW

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Team Size : 4

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CALCULATING FAMILY EXPENSES

INTRODUCTION

Managing family expenses is an essential part of financial planning, ensuring that income is properly allocated towards daily needs, savings, and future goals. Traditionally, families depend on manual methods such as notebooks, spreadsheets, or mobile apps to track their spending. However, these methods often lack automation, centralized tracking, and analytical insights.

ServiceNow, a powerful cloud-based platform widely used in enterprises for IT service management and workflow automation, can also be adapted to manage personal and family-related financial tasks. By leveraging ServiceNow's database capabilities, forms, workflows, and reporting tools, families can record, categorize, and calculate their monthly expenses in a structured and automated manner. This approach not only simplifies expense management but also provides transparency, accuracy, and real time insights into financial health.

PROBLEM STATEMENT

Managing family expenses is often challenging due to lack of organization, manual tracking, and limited visibility into spending patterns. Many families rely on paper notes, spreadsheets, or memory to record daily expenses, which leads to errors, missing data, and poor financial planning.
There is a need for a digital, automated, and secure platform that can record, track, and analyze family expenses efficiently. ServiceNow, with its powerful workflow automation, reporting, and cloud capabilities, can provide a structured solution for managing family finances.

OBJECTIVE

- To develop a centralized system for recording and managing family expenses using ServiceNow.
- To categorize expenses (e.g., Food, Transport, Education, Utilities, Entertainment) for better financial visibility.
- To automate calculations of total expenses on a daily, monthly, and yearly basis.
- To set and monitor budgets for each category and notify users when limits are exceeded.
- To generate reports and dashboards that provide insights into spending patterns and trends.
- To ensure data security and role-based access so that only authorized family members can add or view expenses.

SKILLS

ServiceNow Platform – Creating custom applications, tables, and forms. Configuring workflows, business rules, and notifications..

UI Policies & UI Actions –Designing user-friendly forms and dashboards for expense tracking.

Scripting – Basic JavaScript for client scripts and server- side scripts in ServiceNow.

Workflow Design – Understanding data structures, relationships, and queries in ServiceNow tables.

Testing & Validation – Building charts, dashboards, and scheduled reports in ServiceNow.

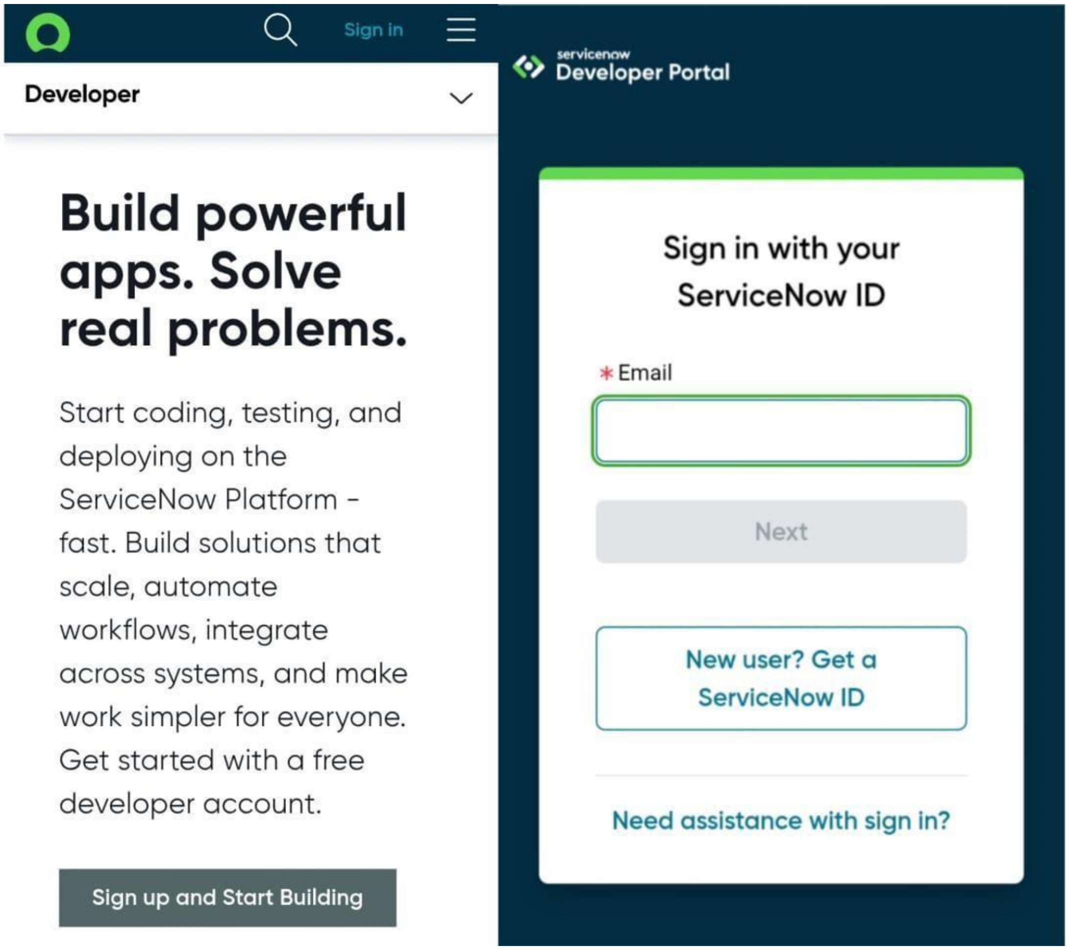
Problem-Solving – Identifying errors and resolving issues during development.

Communication & Documentation – Writing clear steps, capturing screenshots, and reporting results.

TASK INITIATION

Milestone 1: ServiceNow Instance
Activity 1: Setting up ServiceNow Instance

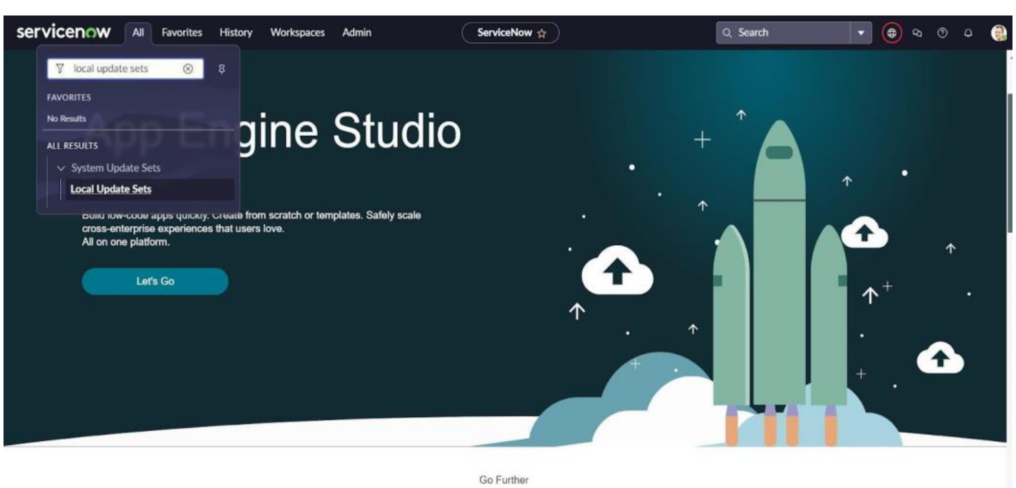
1. **Sign up for a developer account on the ServiceNow Developer site "https://developer.servicenow.com".**
2. **Once logged in, navigate to the "Personal Developer Instance" section.**
3. **Click on "Request Instance" to create a new ServiceNow instance.**
4. **Fill out the required information and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

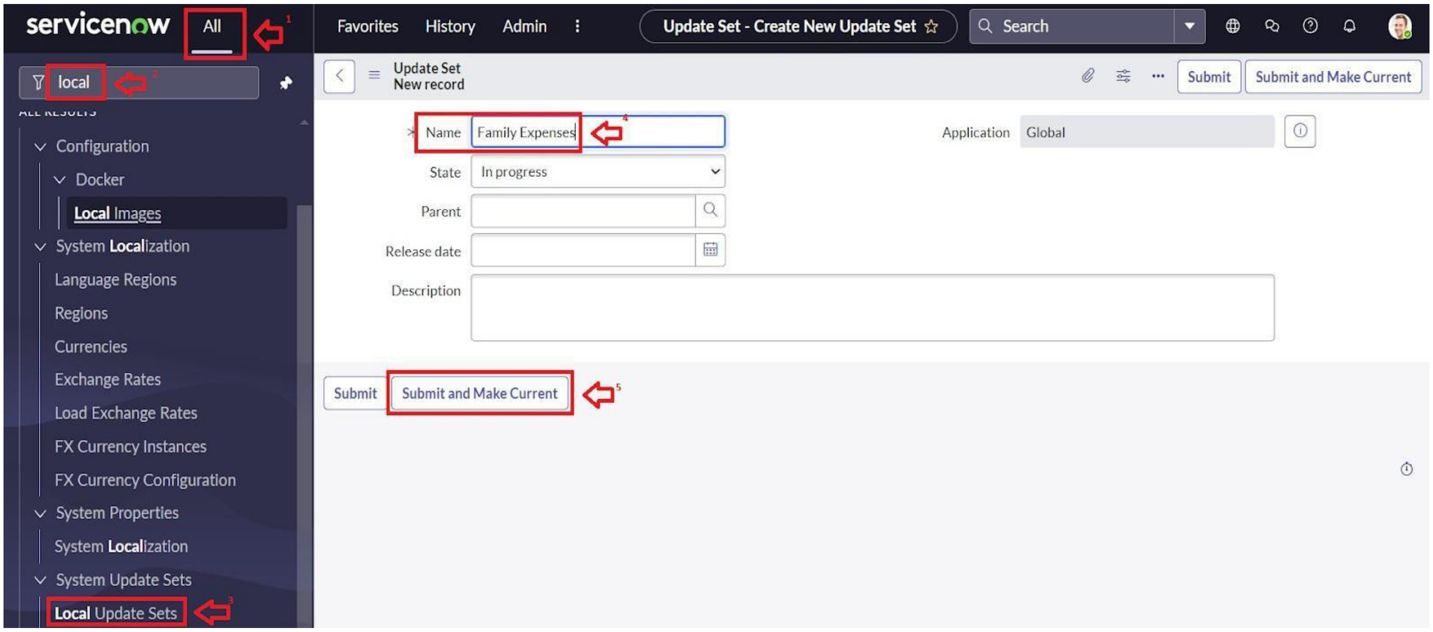
Activity 2: Creation of update set

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



2. Enter the Details as: Name : Family Expenses

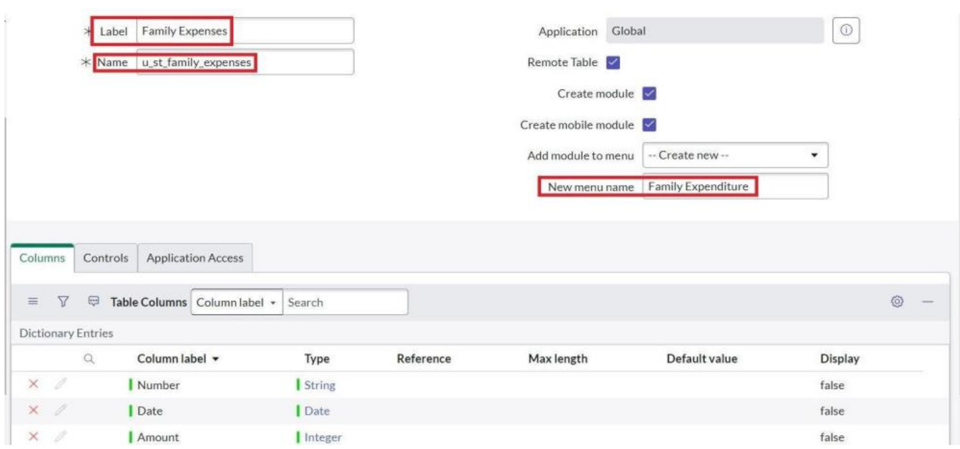
3. Then click on Submit and Make current.



Milestone 3: Family expenses

Activity 3: 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

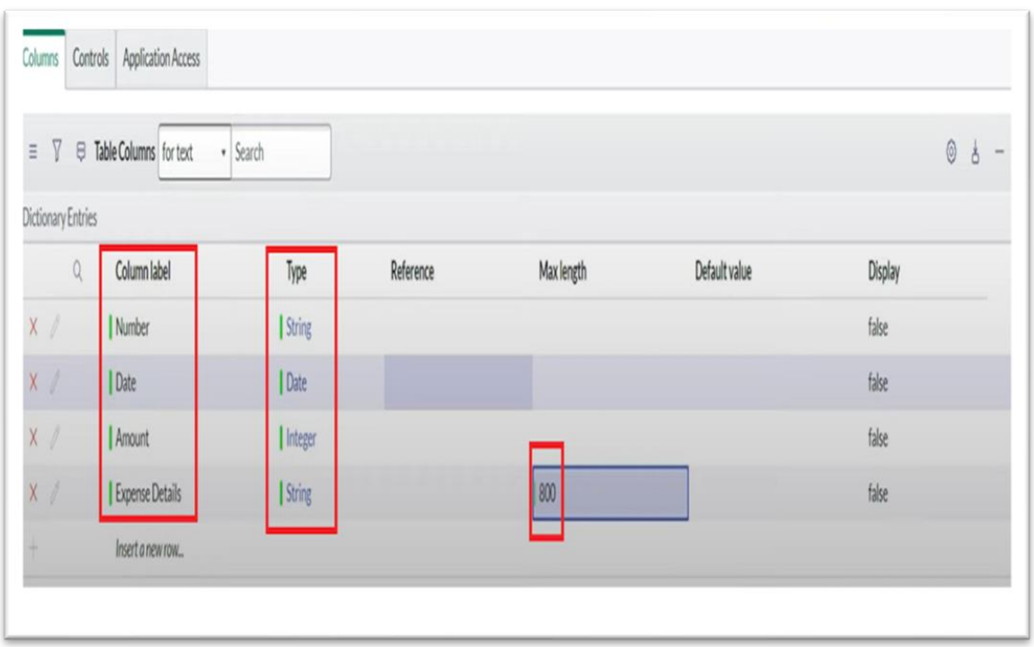


3. Go to the Header and right click there>> click on Save.

Creation of Columns(Fields)

1. Near Columns Double click near insert a new row.
2. Give the details as:
   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.



Milestone 5: Number field

Activity 5: 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.

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

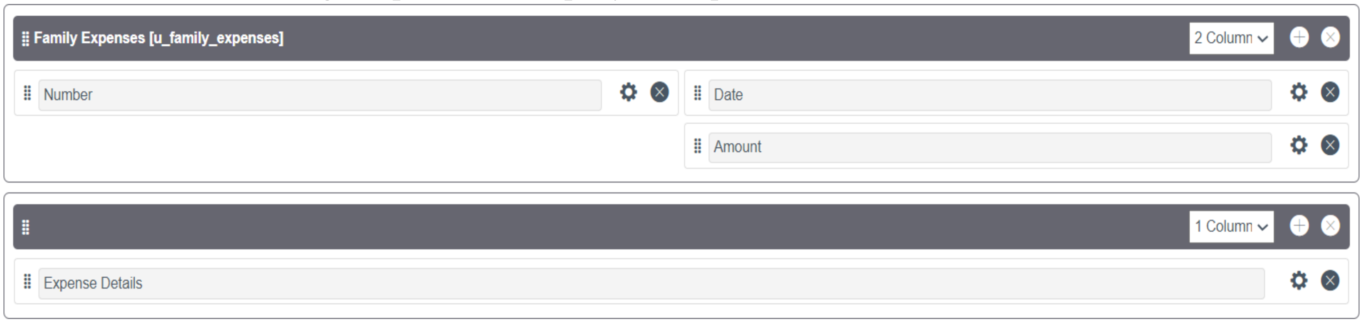
8. Click on Submit.

Milestone 6: Drag and Drop

Activity 6: 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.

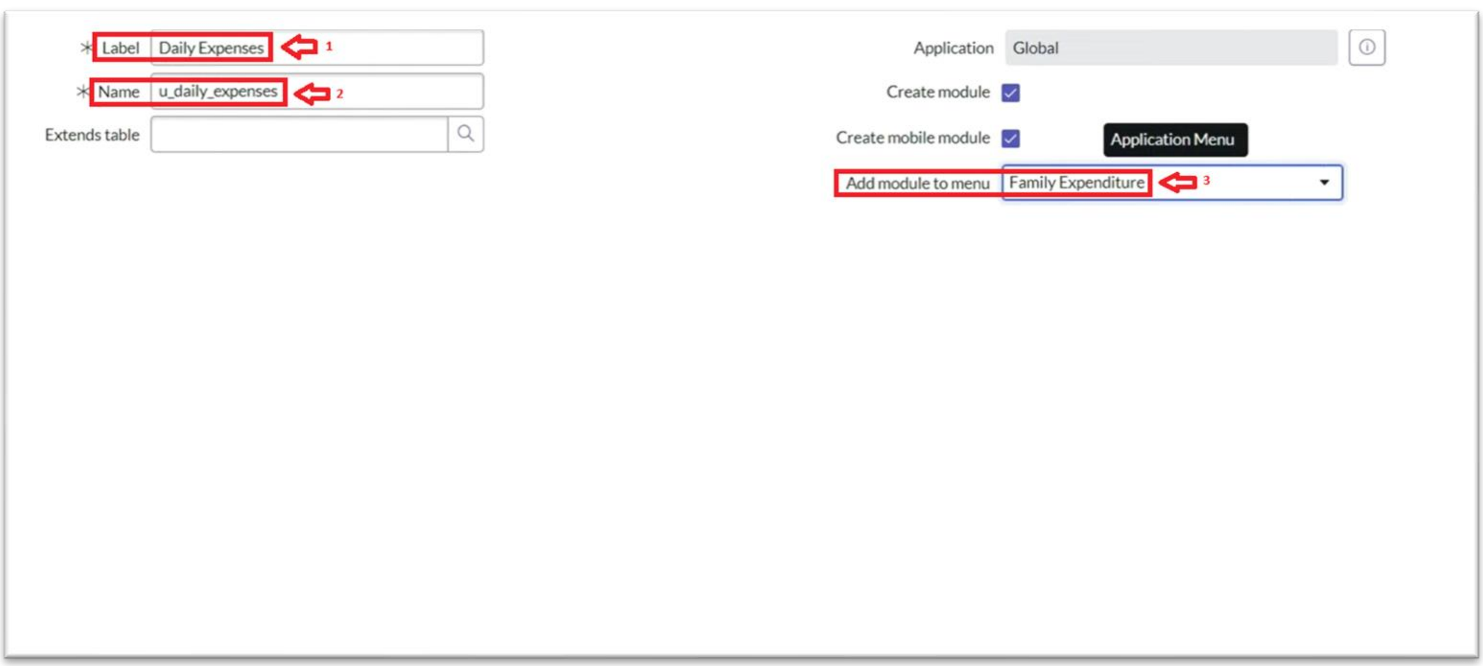


5 .Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
6. Make Date, Amount Mandatory Field by clicking on the gear icon and checking Mandatory
7. Click on Save.

Milestone 7: Daily expenses

Activity 7: Creation of Daily Expenses Table

a. Go to All > In the filter search for Tables > click on New.
b. Enter the Details:
Label : Daily Expenses
Name : Auto-Populated
Add Module to menu : Family Expenditure



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

Milestone 8: Column

Activity 8: 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.

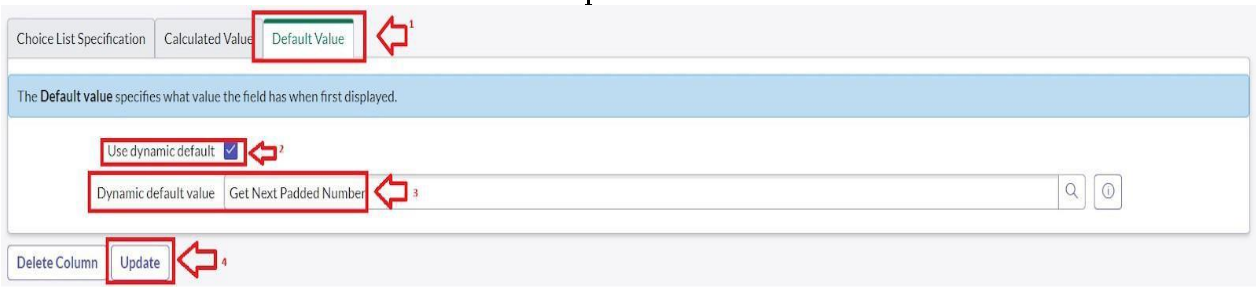
To create columns, select the text or area you want to format in programs like Microsoft Word and then go to the Layout or Page Layout tab and click Columns to choose the number of columns.

For software like Power Apps, open the form designer, and use the Add column button or drag fields from the Columns pane onto the form preview to create them.

In a database context, like Beaver, you create new columns by accessing the table's properties or the Database Navigator, right-clicking, and selecting an option to add a new column to the table structure.

Activity 9: 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
   b. Click on Update.



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

8.Click on Submit.

Milestone 10: Drag and Drop

Activity 10: Configure the Form

i. Go to All >> In the filter search for Daily Expenses >> Open Daily Expenses
ii. Click on New
iii. Go to the Header and right click there>> click on Configure >> Select Form Design
iv. Customize or Drag Drop the form as per your requirement.

v. Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
vi. Make Date, Family Member Name Mandatory Field by clicking on the gear icon and checking Mandatory
vii. Click on Save.

Milestone 11: creation of relationship

Activity 11: 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.

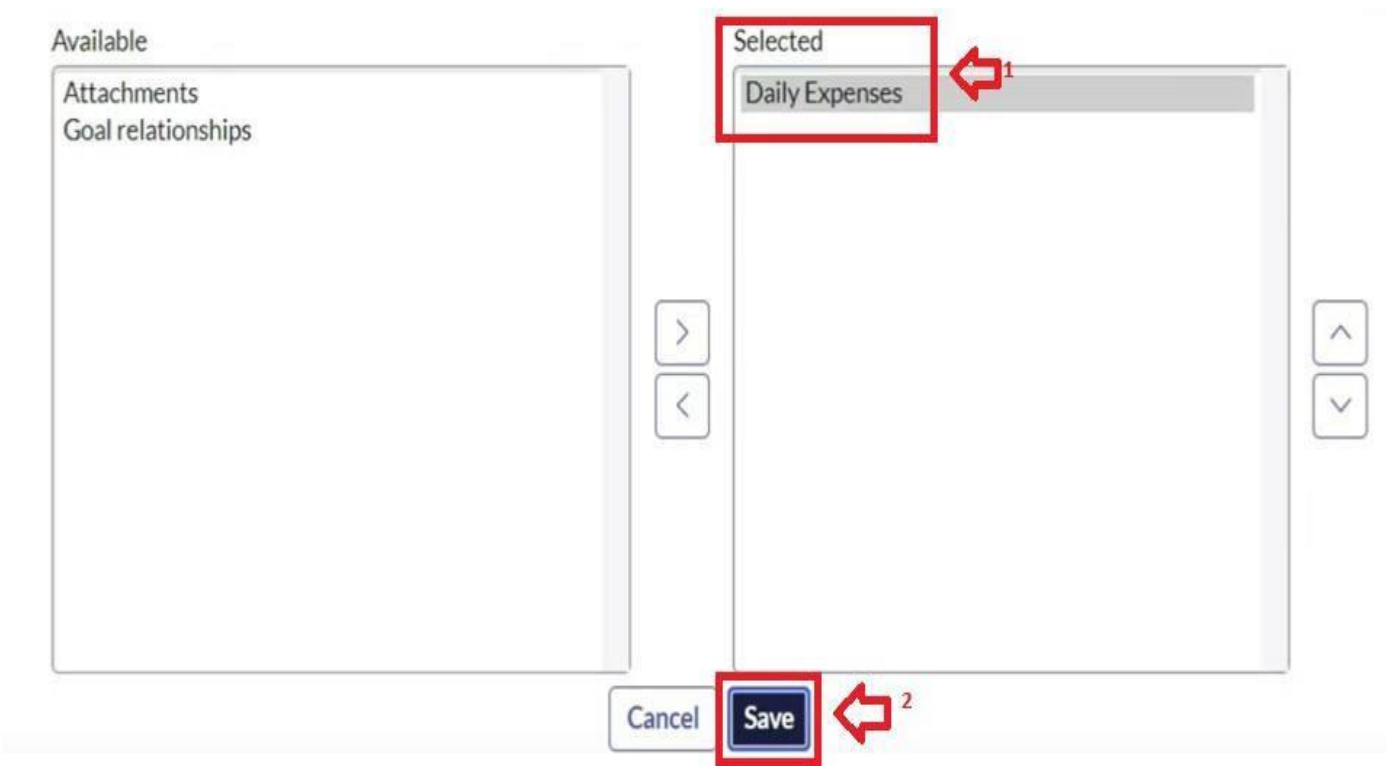
3.Enter the details:
 Name : Daily Expenses
 Applies to table : Select Family Expenses
 Daily Expenses : Select Daily Expenses

4.Click Save.

Milestone 12: Related list of family expenses

Activity 12: Configuring Related List on Family Expenses

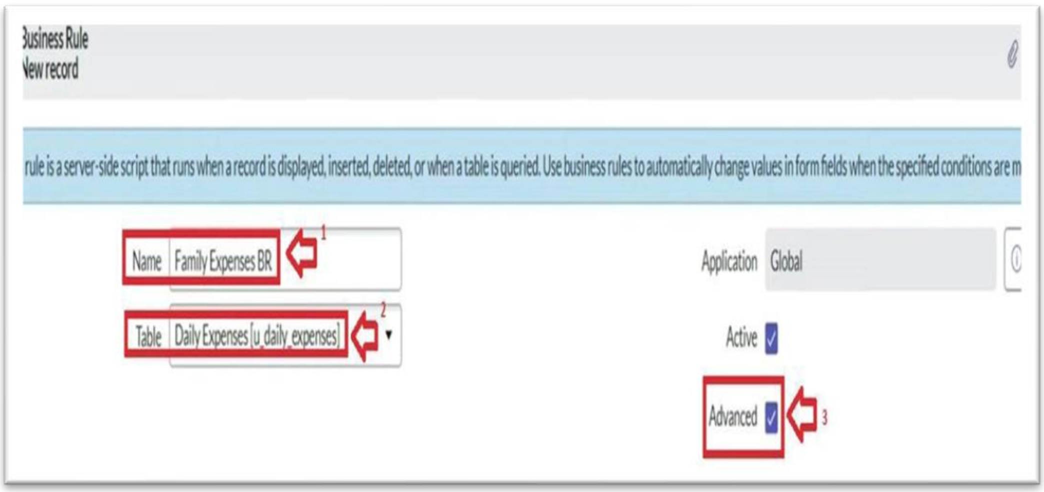
ii. Go to All >> In the filter search for Family Expenses >> Open Family Expenses
iii. Click on New
iv. Go to the Header and right click there>> click on Configure >> Select Related Lists
v. Add Daily Expenses to the Selected Area.
vi. Click on Save



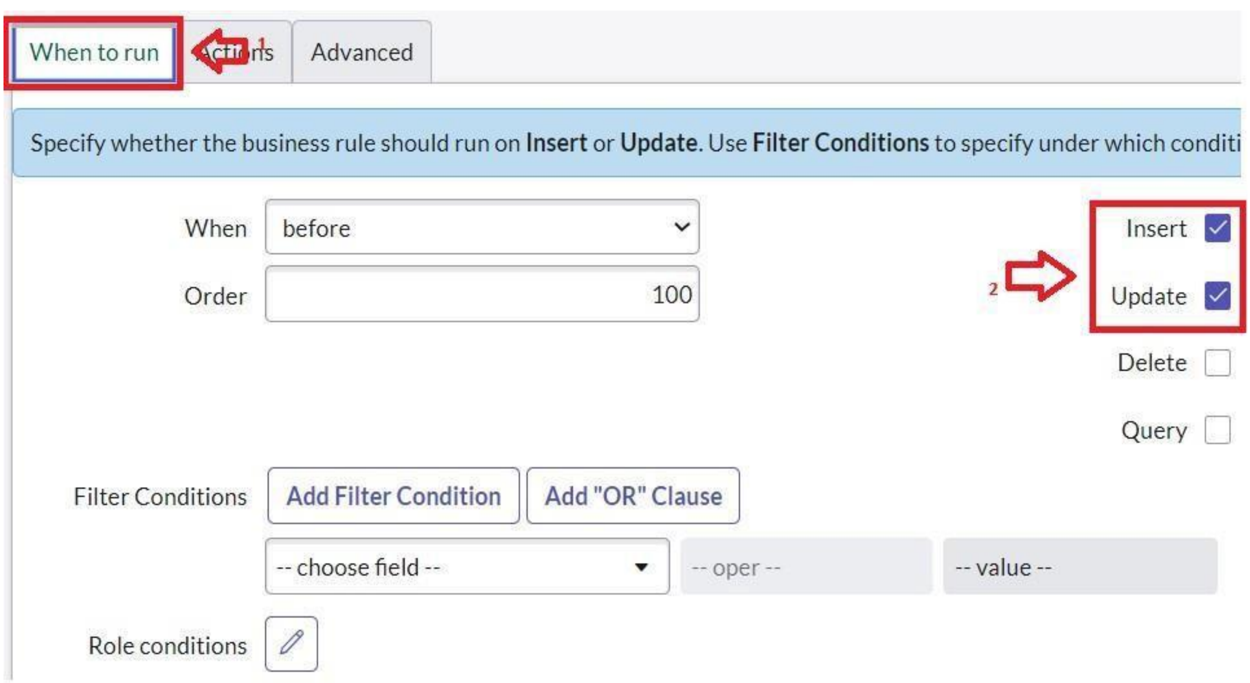
Milestone 13: Business rules

Activity 13: 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

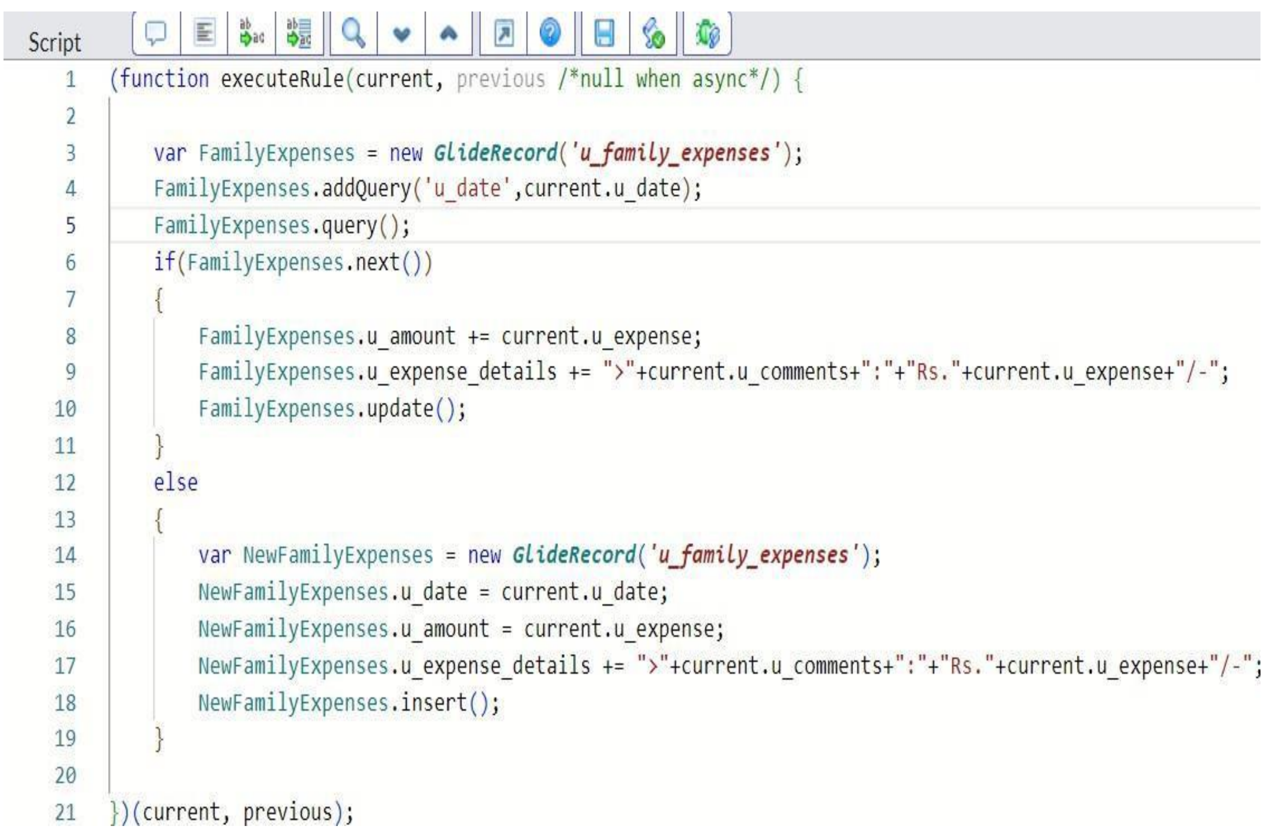


5. In Advance(we write the code): Write the below code >>

```
(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);
```




```
(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.

Milestone 14: Configure the relationship

Activity 14: Configure the Relationship

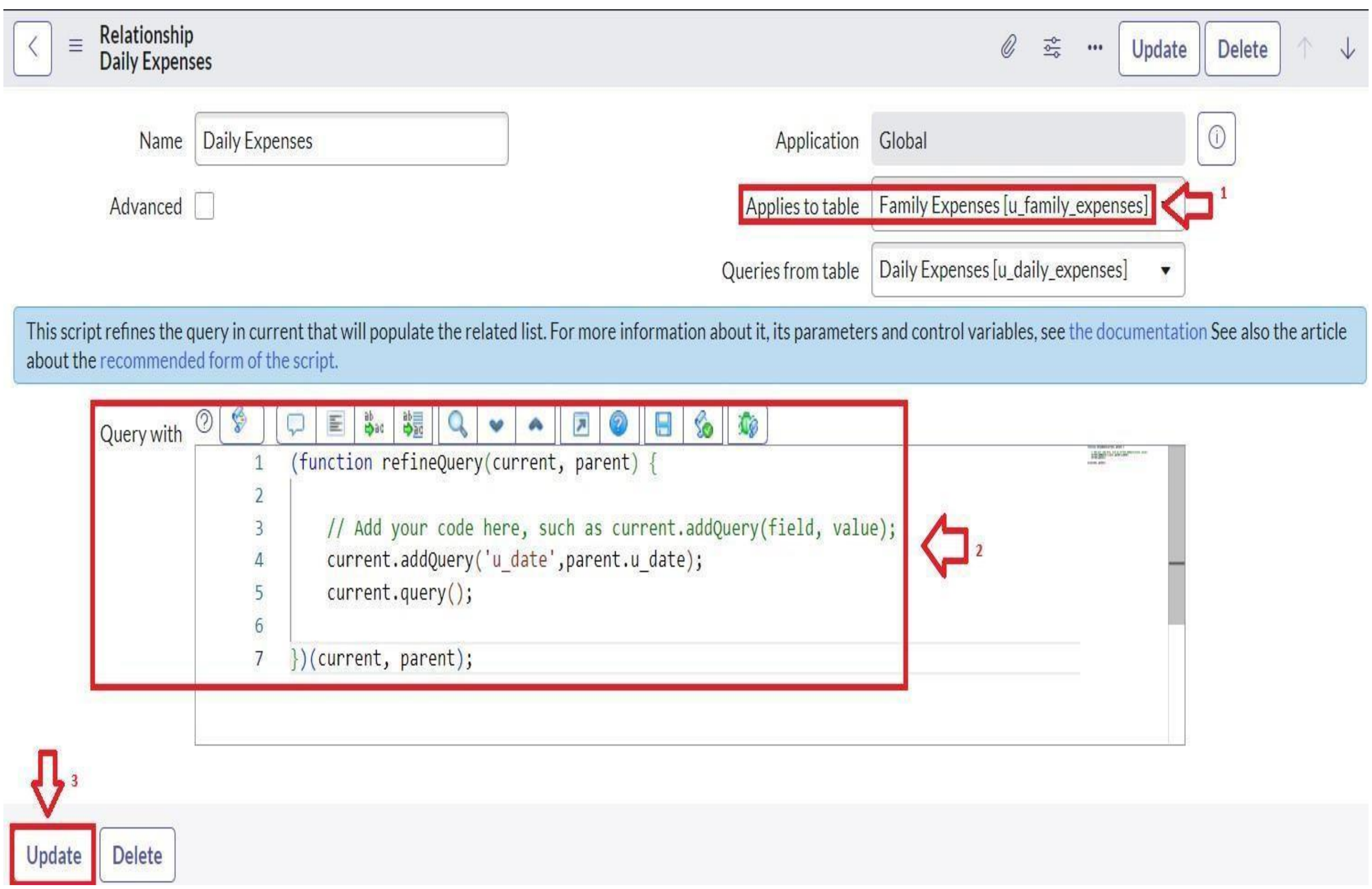
1. Go to All >> In the filter search for Relationships >> Open Relationships.
2. In that, open Daily Expenses Relationship.
3. For Applies to table : Select Family Expenses.
4. In Query with : write the below Query.

```
(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 project “Calculating Family Expenses using ServiceNow” successfully demonstrates how a powerful cloud-based platform can be applied to solve day-to-day

financial management challenges within a family. By
digitizing the expense tracking process, the system eliminates the inefficiencies of manual methods and provides a structured, automated, and secure approach to financial planning.

Overall, the project achieves its objectives of improving financial awareness, promoting savings, and showcasing the real-world application of ServiceNow in household expense management