

Calculating Family Expenses using Service Now

Team id: NM2025TMID17153

Team Members: 5{FIVE}

Team leader: Swetha .S

Team member: Durga .K

Team member: Nargis tara .M

Team member: Swetha .R

Team member:Jenifer jayapriya.s

Problem statement:

Families often struggle to track and calculate their daily, monthly, and yearly expenses effectively. Manual tracking can be time-consuming and prone to errors.

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.

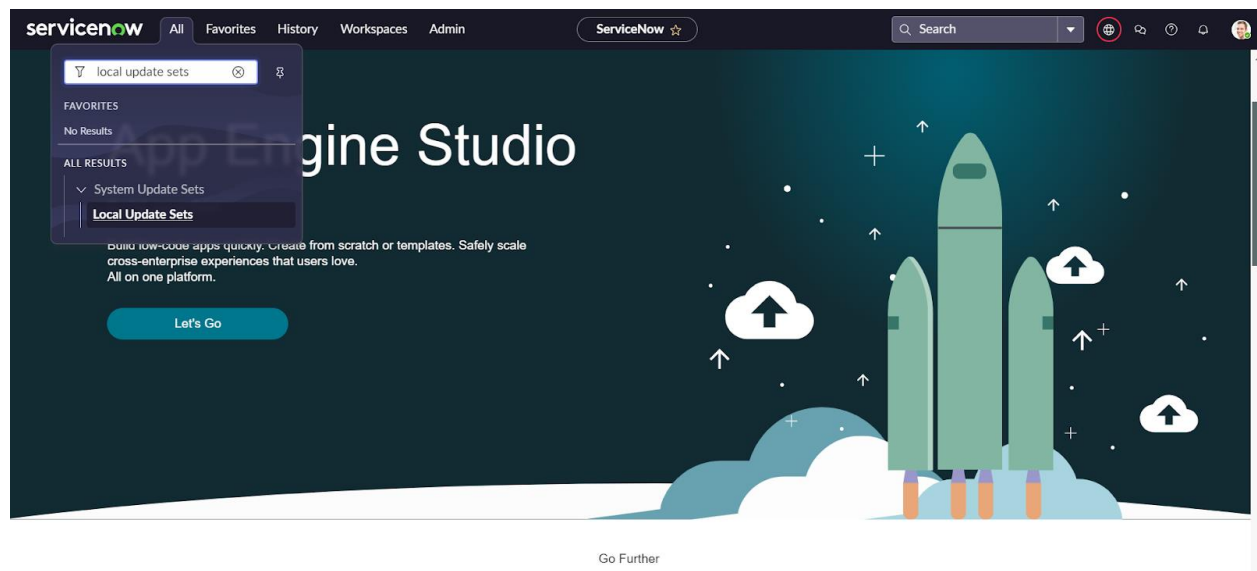
- Skills
- : ServiceNow basics (Instance setup, update sets)
- Table creation and relationships
- Configuring related lists
- Creating Business Rules
- Access control configuration

TASK INVITIATION

Milestone 1: create users

Activity 1 : create users

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.

The screenshot shows the ServiceNow interface for creating a new update set. The left sidebar contains a navigation menu with the following items: Configuration, Docker, Local Images, System Localization, Language Regions, Regions, Currencies, Exchange Rates, Load Exchange Rates, FX Currency Instances, FX Currency Configuration, System Properties, System Localization, System Update Sets, and Local Update Sets. The 'All' filter is selected at the top of the sidebar. The main form is titled 'Update Set - Create New Update Set' and has a 'New record' button. The form fields are: Name (set to 'Family Expenses'), State (set to 'In progress'), Parent (empty), Release date (empty), and Description (empty). The 'Submit and Make Current' button is highlighted in red.

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

* Label
 * Name

Application ⓘ
 Remote Table ☒
 Create module ☒
 Create mobile module ☒
 Add module to menu
 New menu name

Columns Controls Application Access

Table Columns Column label Search ⓘ

Dictionary Entries

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

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

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

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.

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** 

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

< Number Maintenance    **Update** **Delete**

* **Table** **Family Expenses**  

Prefix **MFE**

* **Number** 

Application **Global** 

Number of digits

Update **Delete**

9.Click on Submit.

- 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.

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.

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.**

The screenshot shows the 'Default Value' configuration screen. At the top, there are three tabs: 'Choice List Specification', 'Calculated Value', and 'Default Value'. The 'Default Value' tab is selected and highlighted with a red box and arrow 1. Below the tabs, a blue banner states: 'The Default value specifies what value the field has when first displayed.' Underneath, there is a checkbox labeled 'Use dynamic default' which is checked, with a red box and arrow 2. Below the checkbox is a text input field labeled 'Dynamic default value' containing the text 'Get Next Padded Number', with a red box and arrow 3. At the bottom left, there are two buttons: 'Delete Column' and 'Update'. The 'Update' button is highlighted with a red box and arrow 4.

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 the 'New record' form for 'Number Maintenance'. At the top, there is a header bar with a back arrow, a menu icon, the text 'Number New record', and a 'Submit' button. Below the header, there are four input fields. The first field is labeled '* Table' and contains the text 'Daily Expenses', with a red box and arrow 1. The second field is labeled 'Prefix' and contains the text 'DFE', with a red box and arrow 2. The third field is labeled '* Number' and contains the text '1,000'. The fourth field is labeled 'Application' and contains the text 'Global'. Below these fields, there is a field labeled 'Number of digits' containing the text '7'. At the bottom left, there is a 'Submit' button highlighted with a red box and arrow 3.

9. **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 a form design tool interface. At the top, a header bar shows the form name 'Daily Expenses [u_daily_expenses]' and a column selector set to '2 Column'. Below the header, the form is divided into two main sections. The top section is a 2-column grid containing four input fields: 'Number', 'Date', 'Family Member Name', and 'Expense'. Each field has a gear icon for configuration and a close icon. The bottom section is a single-column area containing a 'Comments' text area. The interface is clean and modern, with a light gray background and white form elements.

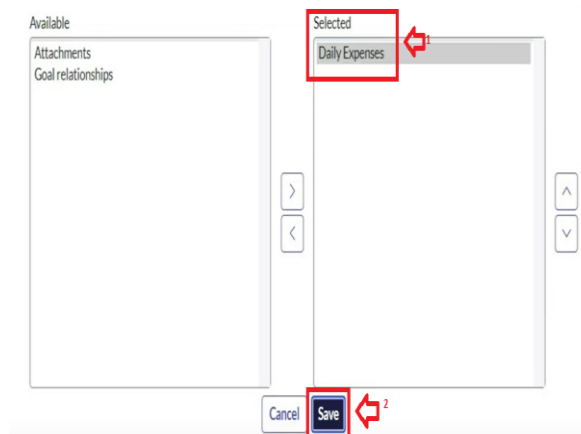
5. Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
6. Make Date, Family Member Name Mandatory Field by clicking on the gear icon and checking Mandatory
7. Click on Save.

Creation of Relationship 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

Business Rule
New record

ss rule is a server-side script that runs when a record is displayed, inserted, deleted, or when a table is queried. Use business rules to automatically change values in form fields when the specified conditions are met

Name: Family Expenses BR 1

Table: Daily Expenses (u_daily_expenses) 2

Application: Global 0

Active ☒

Advanced ☒ 3

4. In when to run Check Insert and Update

When to run 1 2 3 4

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

When: before 5

Order: 100 6

Insert ☒ 7

Update ☒ 8

Delete ☐

Query ☐

Filter Conditions: Add Filter Condition Add "OR" Clause

-- choose field -- 9 -- oper -- 10 -- value -- 11

Role conditions 12

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);

```

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.

The screenshot shows the 'Relationship' configuration for 'Daily Expenses'. The 'Name' field is 'Daily Expenses' and the 'Application' is 'Global'. The 'Applies to table' dropdown is set to 'Family Expenses [u_family_expenses]' (indicated by a red box and arrow 1). The 'Queries from table' dropdown is set to 'Daily Expenses [u_daily_expenses]'. A blue informational box states: '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.' Below this, the 'Query with' field contains a script (indicated by a red box and arrow 2):

```
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);
```

At the bottom, the 'Update' button is highlighted with a red box and arrow 3.

The screenshot shows the 'Script' editor with the following code:

```
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.**