

CALCULATING FAMILY EXPENSES USING SERVICE NOW

Team id: NM2025TMID18178

Team Members:

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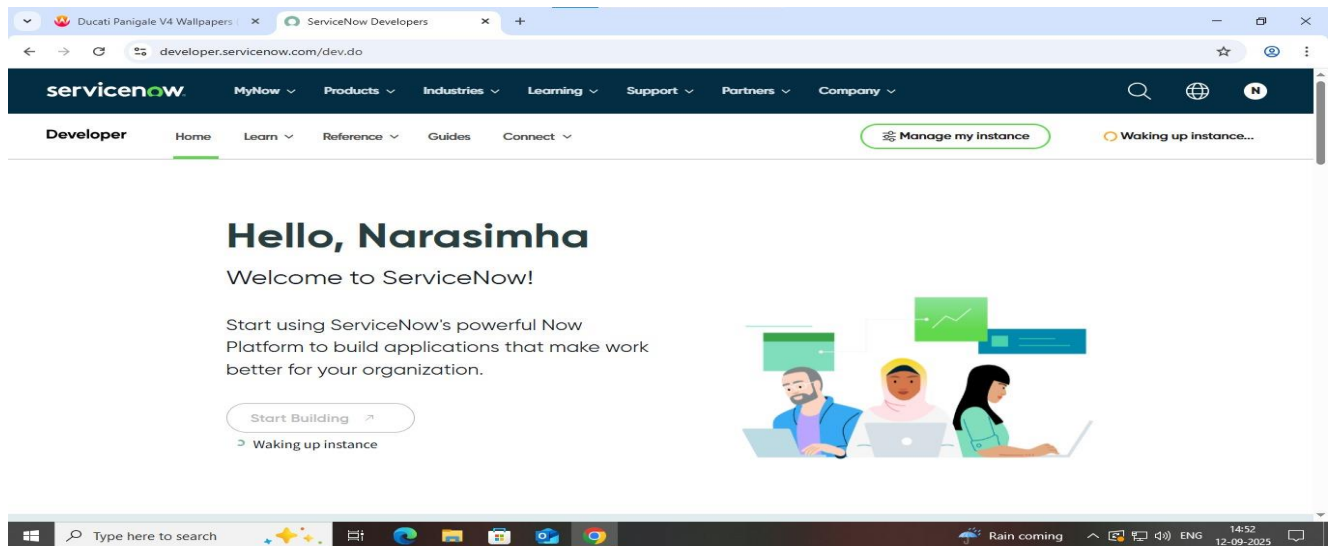
Problem Statement: The project aims to develop a comprehensive expense calculation system using ServiceNow. This system will enable users to track and manage family expenses efficiently. It will include features such as expense categorization, budget setting, real-time tracking, and reporting capabilities.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

Objective: The objective of this project is to develop a family expense management system on the ServiceNow platform that enables efficient tracking, categorization, and budgeting of expenses. It aims to provide real-time monitoring, user-friendly dashboards, and insightful reports to support informed financial decisions. The system will ensure scalability for different family sizes, promote financial discipline through spending analysis, and maintain data security using ServiceNow's robust features.

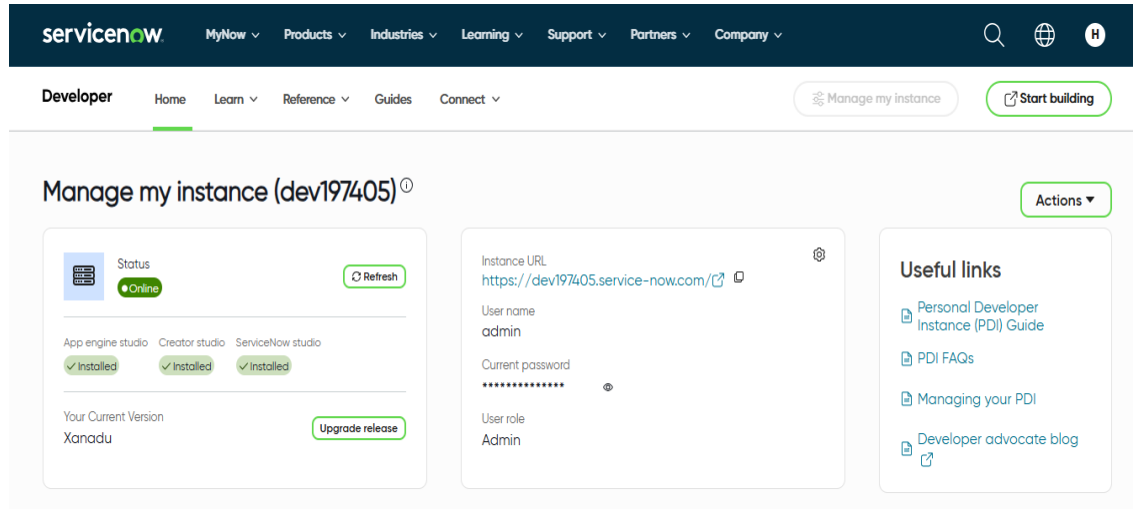
Skills:

TASK INITIATION

Milestone 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.

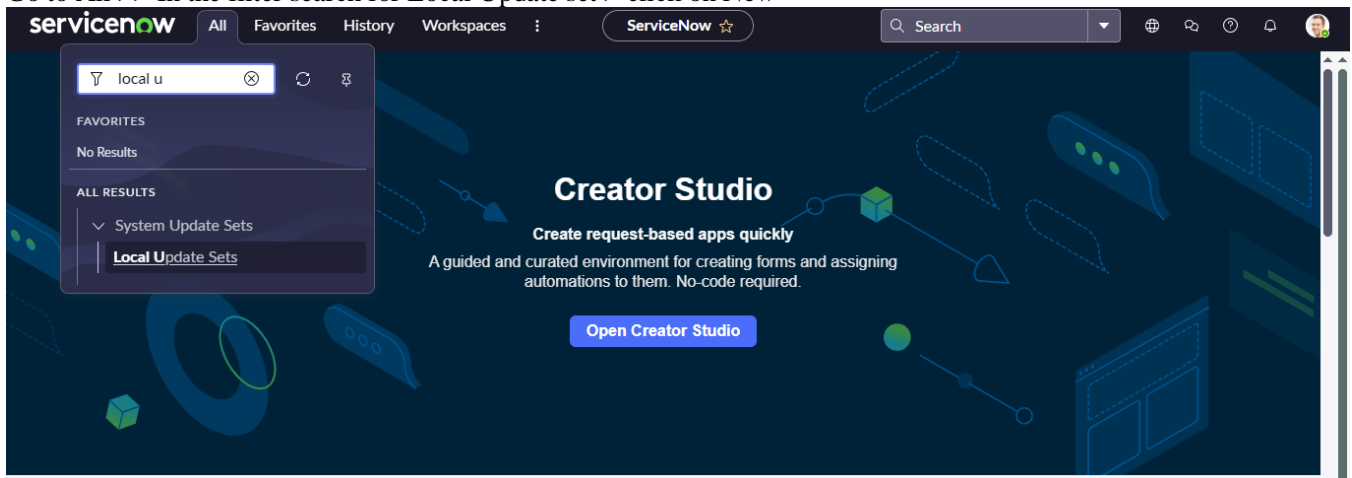


The screenshot shows the 'Manage my instance (dev197405)' page in the ServiceNow Developer portal. The page includes a navigation bar with 'Developer', 'Home', 'Learn', 'Reference', 'Guides', and 'Connect'. A 'Manage my instance' button is visible. The main content area has three panels:

- Status:** Shows 'Online' status with a 'Refresh' button. Below, it lists 'App engine studio', 'Creator studio', and 'ServiceNow studio', all marked as 'Installed'. It also shows 'Your Current Version' as 'Xanadu' with an 'Upgrade release' button.
- Instance details:** Displays the 'Instance URL' as <https://dev197405.service-now.com/>, 'User name' as 'admin', 'Current password' (masked), and 'User role' as 'Admin'.
- Useful links:** Provides links to 'Personal Developer Instance (PDI) Guide', 'PDI FAQs', 'Managing your PDI', and 'Developer advocate blog'.

Milestone 2 : Creation of New Update Set

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



The screenshot shows the ServiceNow Creator Studio interface. A search filter 'local u' is applied in the top left, resulting in 'ALL RESULTS' showing 'System Update Sets' and 'Local Update Sets'. The main area is titled 'Creator Studio' with the text 'Create request-based apps quickly' and 'A guided and curated environment for creating forms and assigning automations to them. No-code required.' An 'Open Creator Studio' button is visible.

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

servicenow All Favorites History Update Set - Create New Update Set Search Submit Submit and Make Current

Update Set
New record

* Name Application

State

Parent

Release date

Description

Submit Submit and Make Current

Milestone 3: Creation of Table

Activity: Creation of New Update Set

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

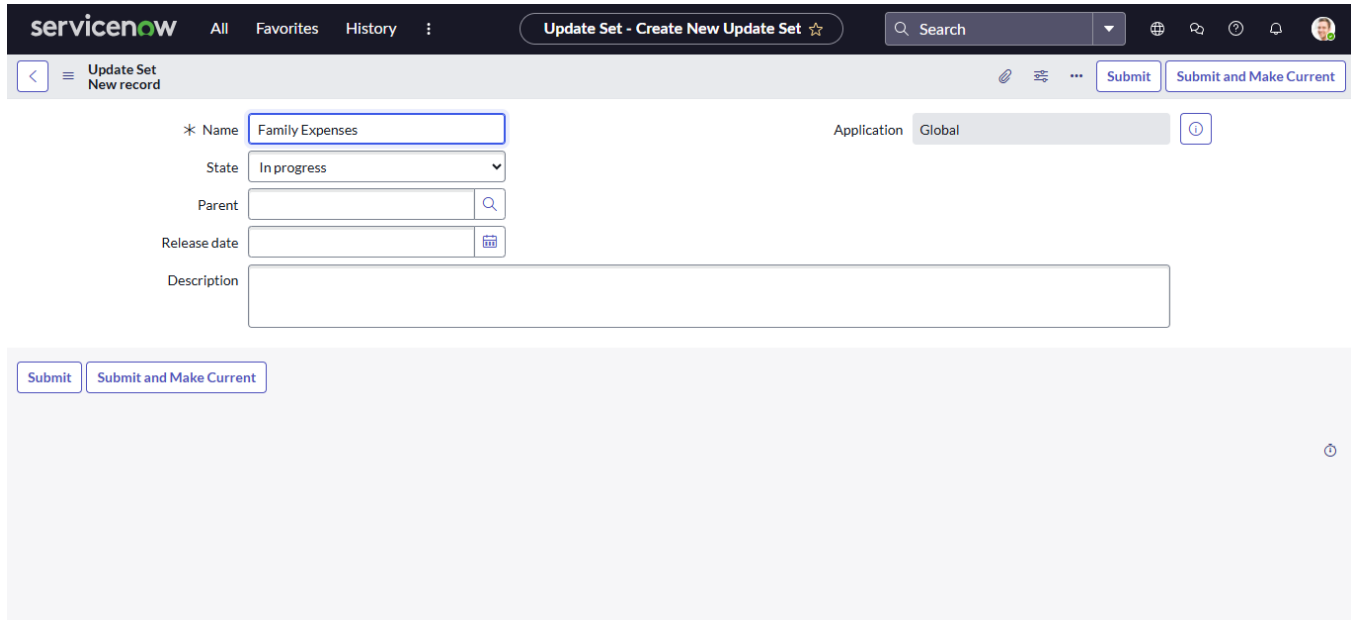
servicenow All Favorites History Workspaces ServiceNow Search Open Creator Studio

FAVORITES
No Results

ALL RESULTS
System Update Sets
Local Update Sets

Creator Studio
Create request-based apps quickly
A guided and curated environment for creating forms and assigning automations to them. No-code required.

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



servicenow All Favorites History Update Set - Create New Update Set Search

Update Set New record Submit Submit and Make Current

* Name Family Expenses Application Global

State In progress

Parent

Release date

Description

Submit Submit and Make Current

Milestone 4: Creation of Table

Activity 1: 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.

servicenow
All Favorites History Workspaces
 Table - New Record
 Search
 Submit Cancel

Table
New record

A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes. [More Info](#)

* Label
 * Name
 Extends table

Application
 Create module ☒
 Create mobile module ☒
 Add module to menu
 New menu name

Activity 2: 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\

servicenow All Favorites History Admin Table - Family Expenses Search

Table Columns for text Search

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
Updated by	String	(empty)		40	false
Updates	Integer	(empty)		40	false
Updated	Date/Time	(empty)		40	false
Created by	String	(empty)		40	false
Created	Date/Time	(empty)		40	false
Sys ID	Sys ID (GUID)	(empty)		32	false
Number	String				false
Date	Date				false
Amount	Integer				false
Expense Details	String		800		false
Insert a new row...					

Delete Update Delete All Records

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

Activity 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.

Dictionary Entry Number View: Advanced

Display ☐

Alters the behavior of a field or functionality that depends on the field. [More Info](#)

Attributes

Choice List Specification Calculated Value **Default Value**

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

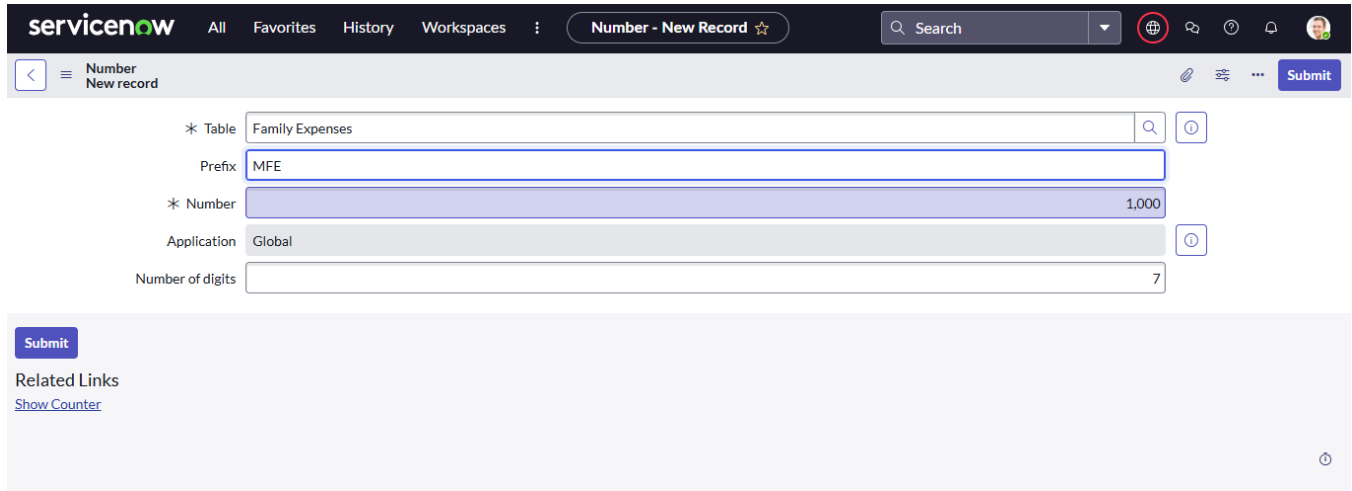
Use dynamic default ☒

Dynamic default value Get Next Padded Number

Delete Column Update

- Go to All >> In the filter search for Number Maintenance >> select Number Maintenance

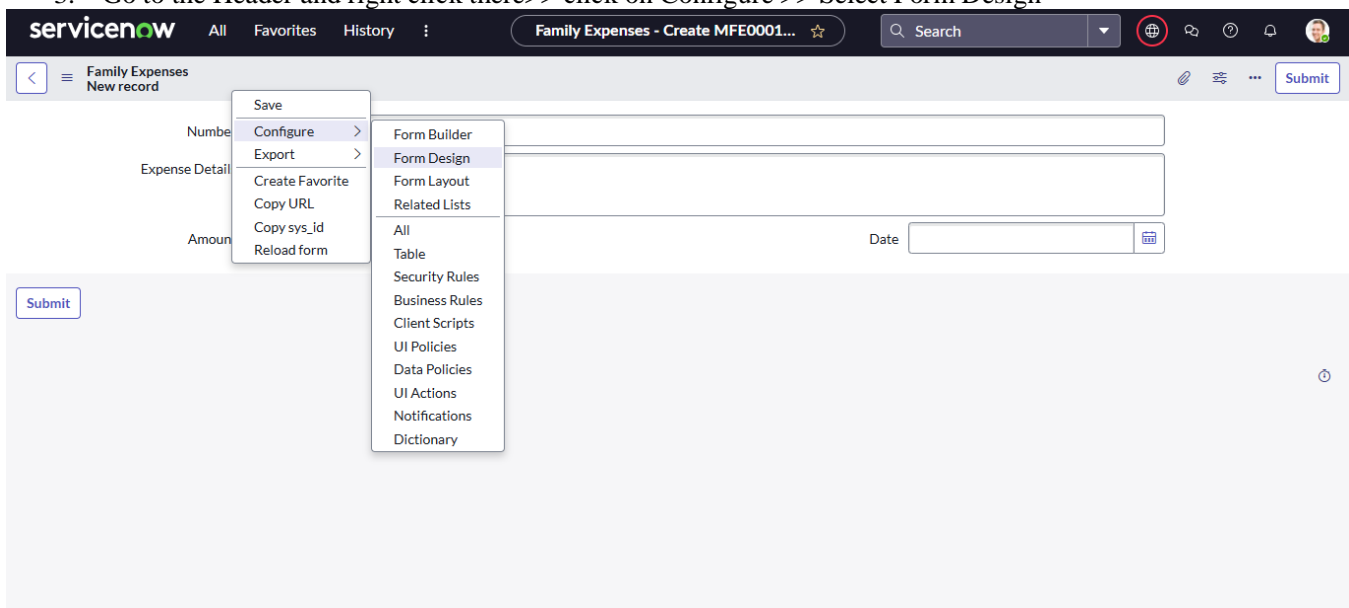
6. Click on New.
7. Enter the below Details:
 - i. Table : Family Expenses
 - ii. Prefix : MFE



8. Click on Submit.

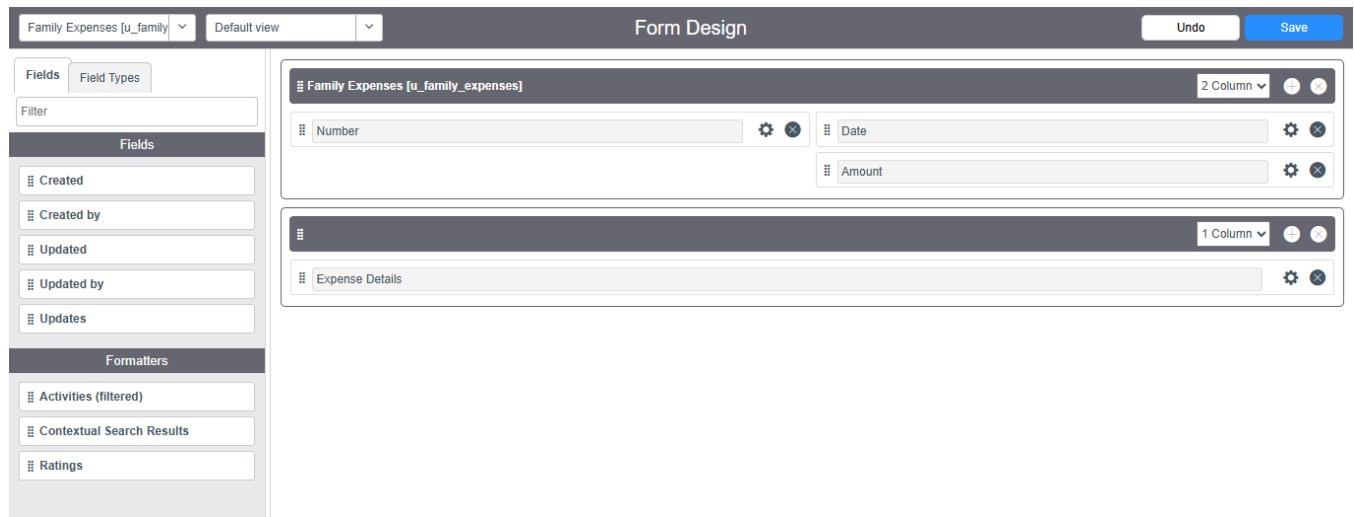
Activity 4: Configure the Form

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.

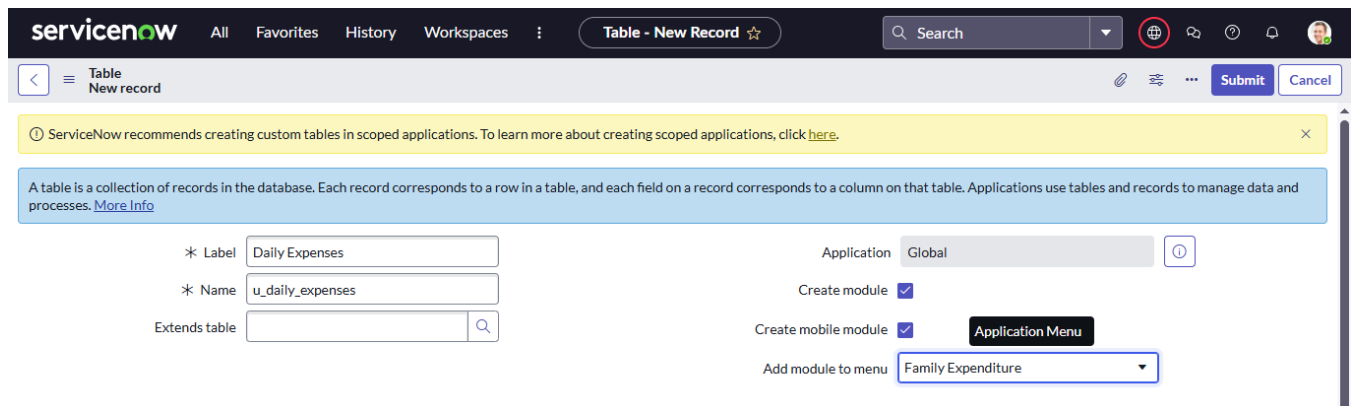


The screenshot shows the 'Form Design' interface for a table named 'Family Expenses [u_family_expenses]'. The interface has a top bar with 'Family Expenses [u_family]' and 'Default view' dropdowns, and 'Undo' and 'Save' buttons. On the left, there are tabs for 'Fields' and 'Field Types', a 'Filter' input, and a list of fields: 'Created', 'Created by', 'Updated', 'Updated by', and 'Updates'. Below these are 'Formatters' including 'Activities (filtered)', 'Contextual Search Results', and 'Ratings'. The main area shows the table structure with two sections. The first section is titled 'Family Expenses [u_family_expenses]' and has a '2 Column' dropdown. It contains three fields: 'Number', 'Date', and 'Amount', each with a gear icon for configuration. The second section is titled 'Expense Details' and has a '1 Column' dropdown, containing one field: 'Expense Details', also with a gear icon.

Milestone 5: Creation of Table (Daily Expenses)

Activity 1: Creation of Daily Expenses Table

1. Go to All > In the filter search for Tables > click on New.
2. Enter the Details:
 - i. Label : Daily Expenses
 - ii. Name : Auto-Populated
 - iii. Add Module to menu : Family Expenditure
3. Go to the Header and right click there>> click on Save.



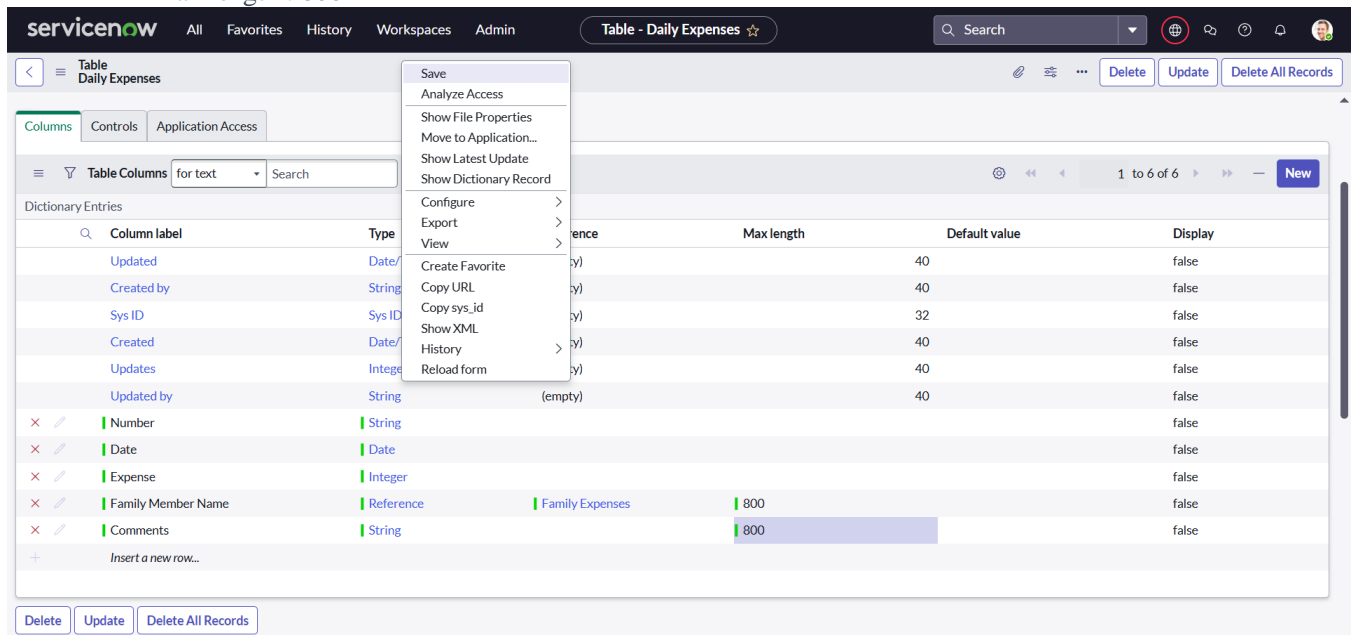
The screenshot shows the 'Table - New Record' form in ServiceNow. The top bar includes the 'servicenow' logo, navigation tabs (All, Favorites, History, Workspaces), and a 'Table - New Record' button. Below the top bar, there's a search bar and a 'Submit' button. A yellow banner at the top states: 'ServiceNow recommends creating custom tables in scoped applications. To learn more about creating scoped applications, click [here](#).' Below this, a blue box contains a description: 'A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes. [More Info](#)'. The form fields are:

- * Label: 'Daily Expenses'
- * Name: 'u_daily_expenses'
- Extends table: (empty field with a search icon)
- Application: 'Global' (dropdown)
- Create module: ☒
- Create mobile module: ☒
- Add module to menu: 'Family Expenditure' (dropdown)

 There is also an 'Application Menu' button next to the 'Add module to menu' dropdown.

Activity 2: Creation of Columns(Fields)

1. Near Columns Double click near insert a new row.
Give the details as:
Column label : Number
Type : String
2. Double click on insert a new row again
Give the details as:
Column label : Date
Type : Date
3. Double click on insert a new row again
Give the details as:
Column label : Expense
Type : Integer
4. Double click on insert a new row again
Give the details as:
Column label : Family Member Name
Type : Reference
Max length : 800
5. Double click on insert a new row again
Give the details as:
Column label : Comments
Type : String
Max length : 800

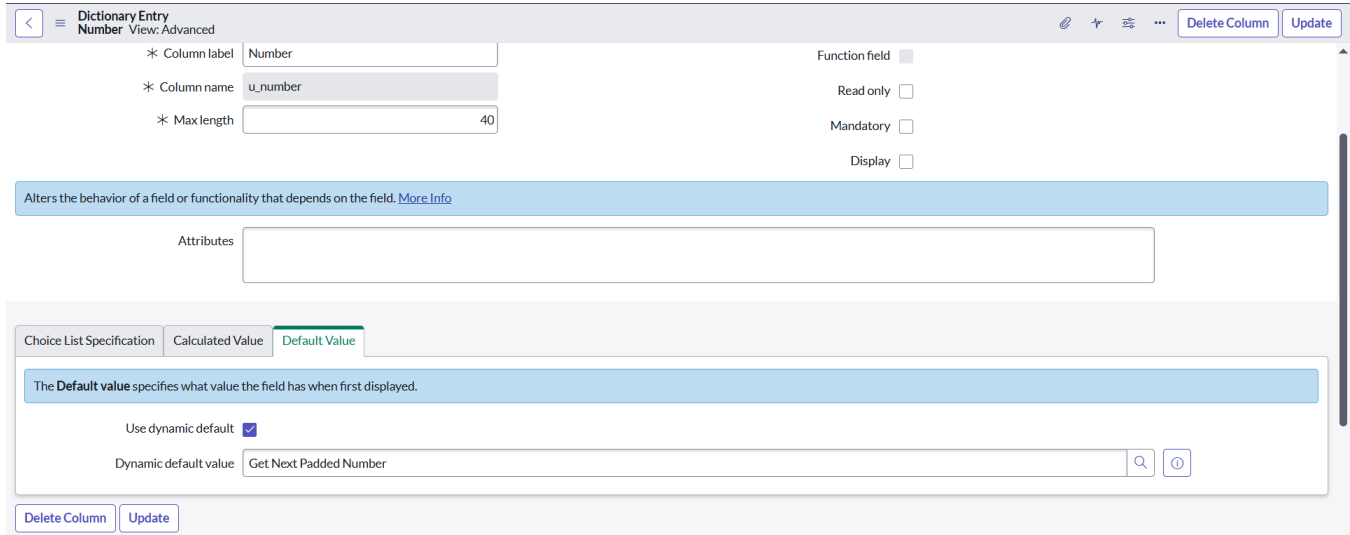


Column label	Type	Max length	Default value	Display
Updated	Date/		40	false
Created by	String		40	false
Sys ID	Sys ID		32	false
Created	Date/		40	false
Updates	Integer		40	false
Updated by	String	(empty)	40	false
Number	String			false
Date	Date			false
Expense	Integer			false
Family Member Name	Reference	Family Expenses	800	false
Comments	String		800	false

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

Activity 3: 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



Dictionary Entry
Number View: Advanced

* Column label: Number

* Column name: u_number

* Max length: 40

Function field: ☐

Read only: ☐

Mandatory: ☐

Display: ☐

Attributes:

Choice List Specification | Calculated Value | **Default Value**

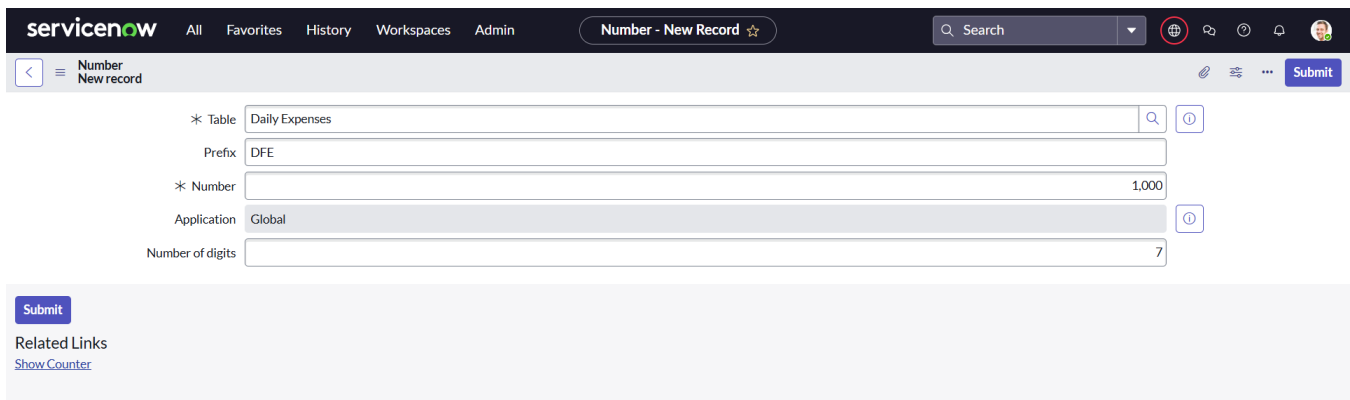
The **Default value** specifies what value the field has when first displayed.

Use dynamic default: ☒

Dynamic default value: Get Next Padded Number

Delete Column | Update

4. 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 : Daily Expenses
Prefix : DFE



servicenow All Favorites History Workspaces Admin Number - New Record

Search

Number - New record

* Table: Daily Expenses

Prefix: DFE

* Number: 1,000

Application: Global

Number of digits: 7

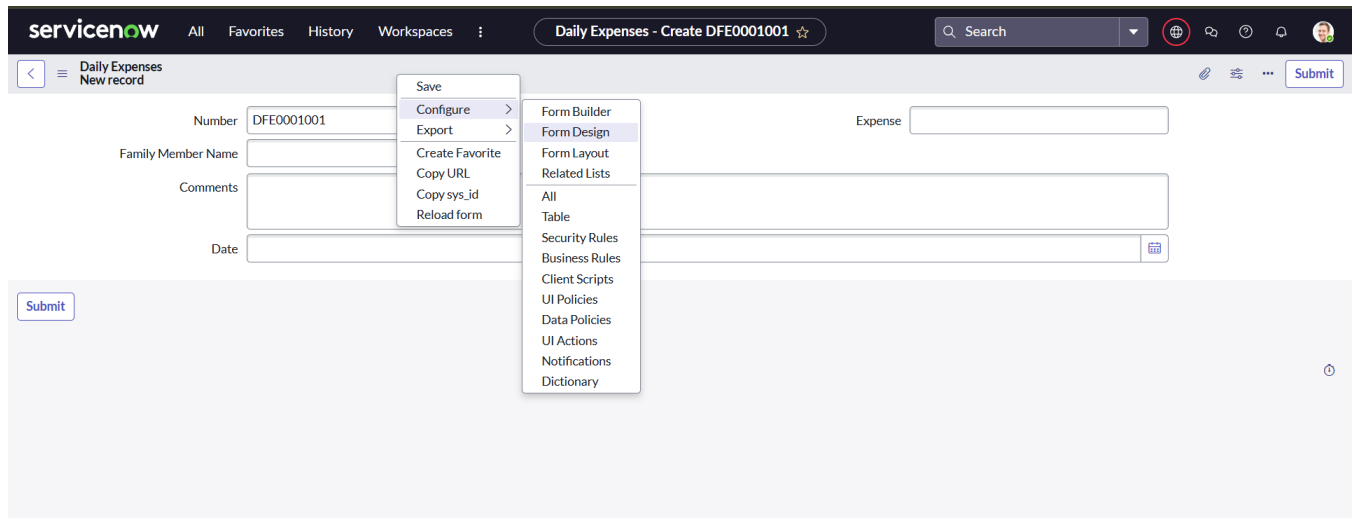
Submit

Related Links
[Show Counter](#)

8. Click on Submit

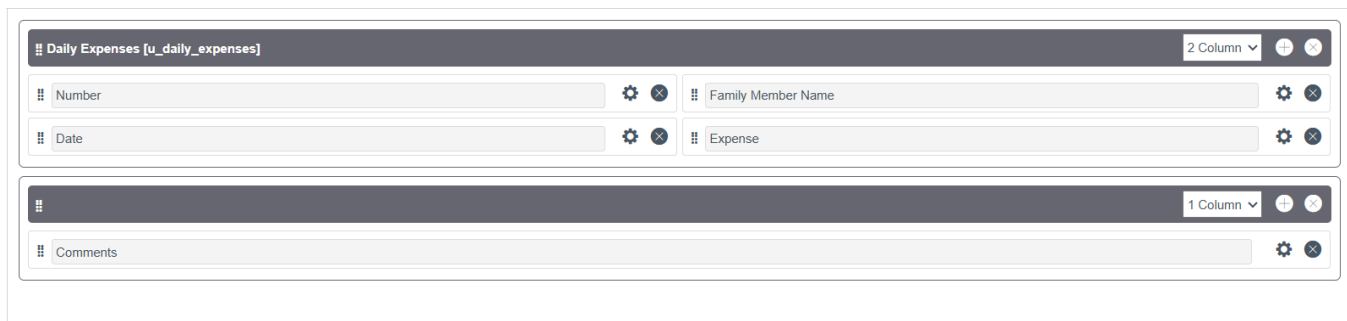
Activity 4 : Configure the Form

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



The screenshot shows the ServiceNow interface for creating a new record in the 'Daily Expenses' table. The form is titled 'Daily Expenses - Create DFE0001001'. The 'Configure' menu is open, showing options like 'Form Builder', 'Form Design', 'Form Layout', and 'Related Lists'. The 'Form Design' option is selected. The form fields include 'Number' (DFE0001001), 'Family Member Name', 'Comments', and 'Date'. The 'Expense' field is also visible. The 'Submit' button is at the bottom left.

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, Family Member Name Mandatory Field by clicking on the gear icon and checking Mandatory



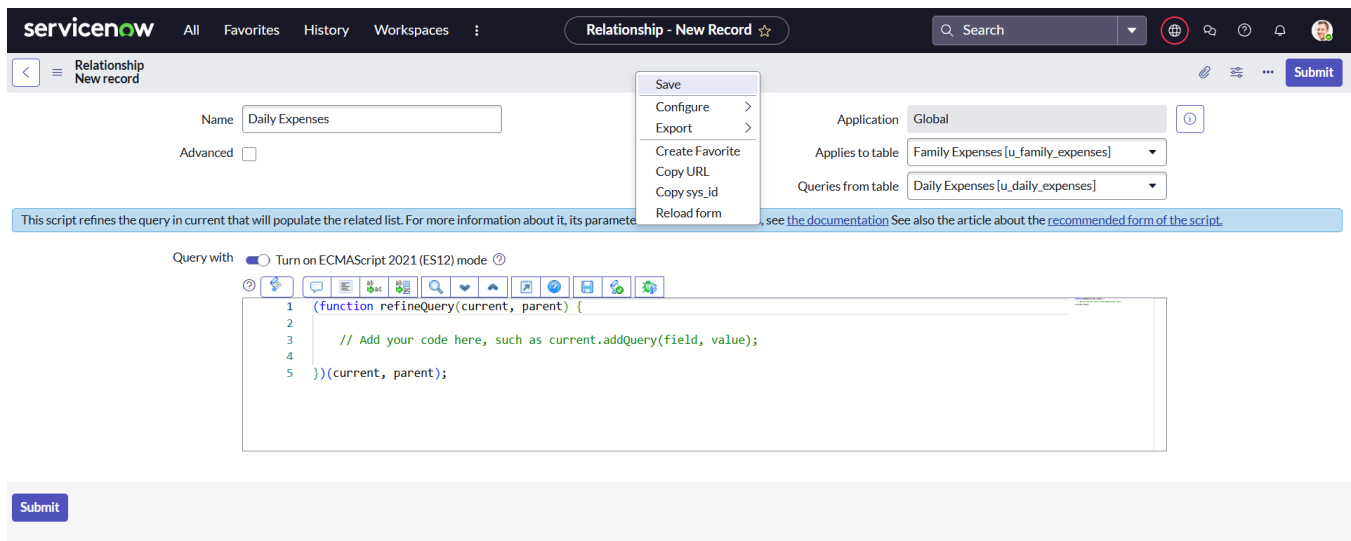
The screenshot shows the configuration of the 'Daily Expenses [u_daily_expenses]' form. The form is configured with 2 columns. The first column contains 'Number', 'Date', and 'Expense'. The second column contains 'Family Member Name' and 'Comments'. The 'Number' field is marked as Read-Only. The 'Date' and 'Family Member Name' fields are marked as Mandatory. The 'Comments' field is marked as Read-Only.

7. Click on Save.

Milestone 6: Creation of Relationship

Activity : 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.



servicenow All Favorites History Workspaces : Relationship - New Record ☆

Search

Relationship New record

Name

Advanced ☐

Application

Applies to table

Queries from table

This script refines the query in current that will populate the related list. For more information about it, its parameters, see the [documentation](#) See also the article about the [recommended form of the script](#).

Query with ☒ Turn on ECMAScript 2021 (ES12) mode

```

1 (function refineQuery(current, parent) {
2
3   // Add your code here, such as current.addQuery(field, value);
4
5 })(current, parent);
  
```

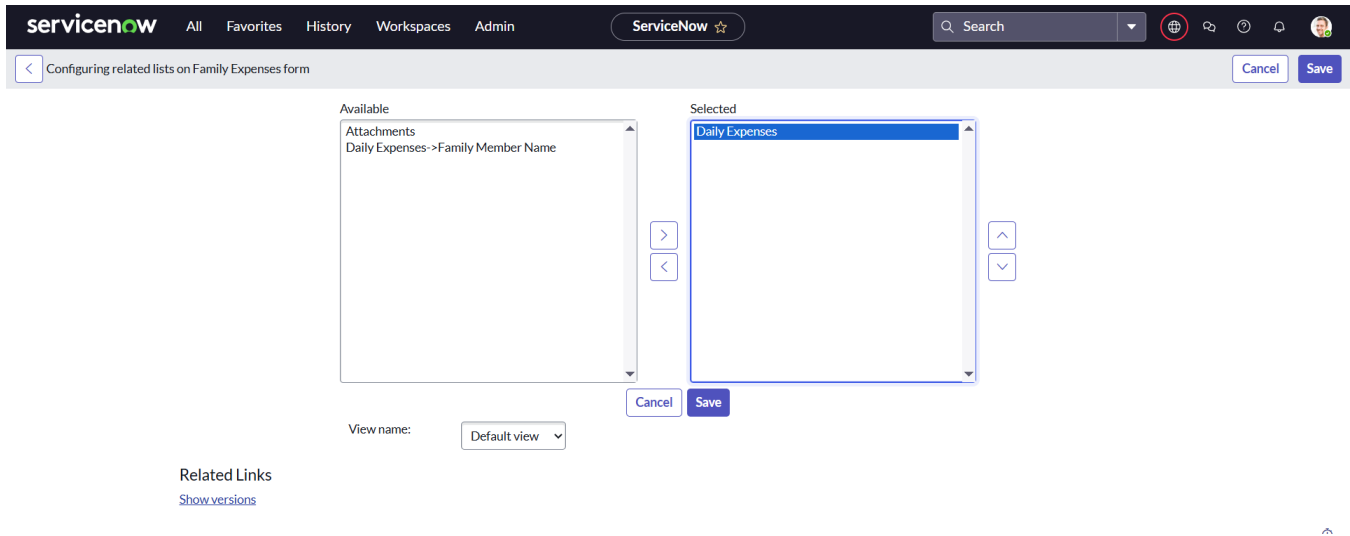
Submit

Milestone 7: Configuring Related List on Family Expenses

Activity : 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.



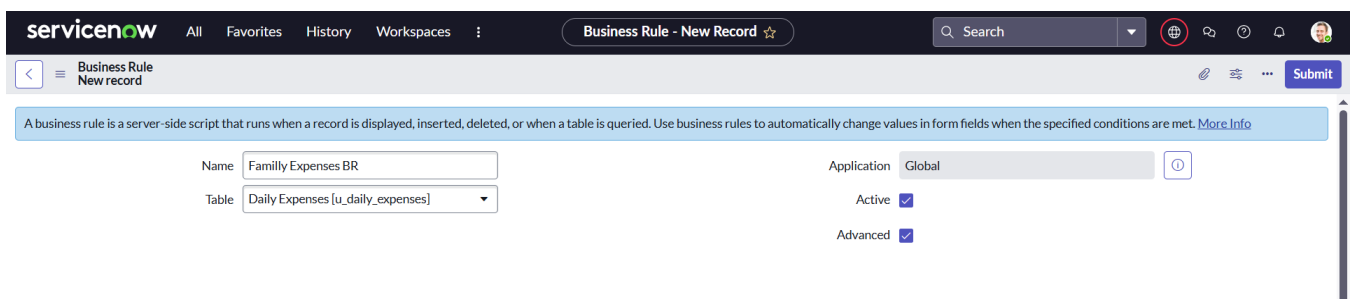
5. Click on Save

Milestone 8: Creation of Business Rules

Activity : 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

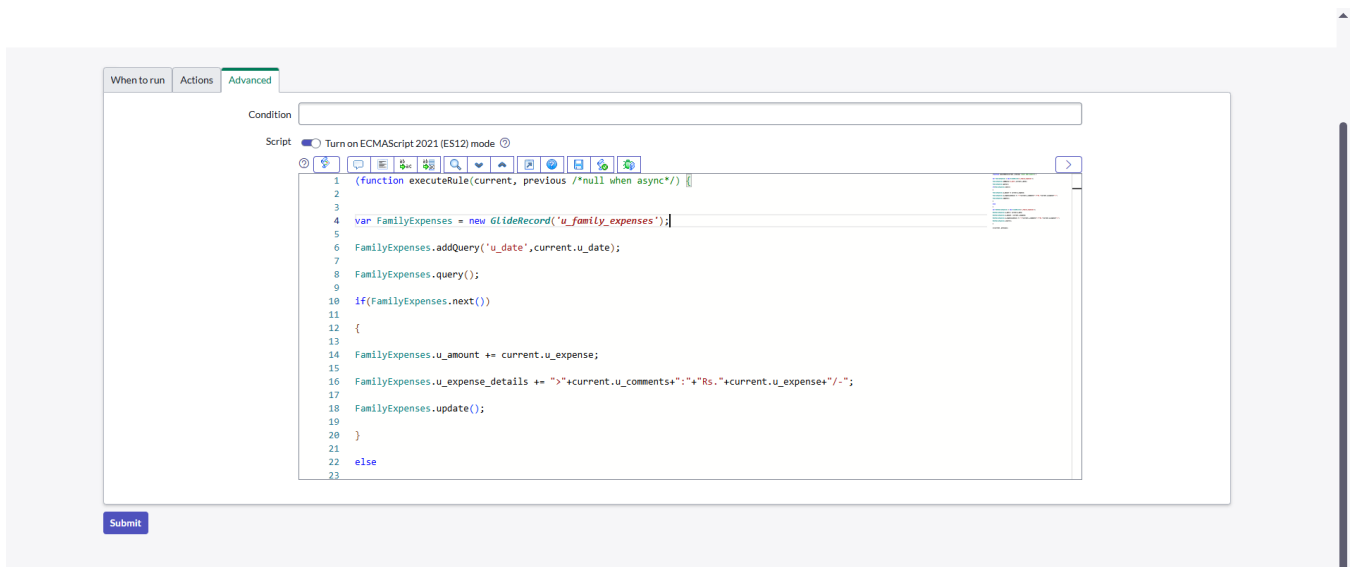


4. In when to run Check Insert and Update
5. In Advance(we write the code): Write the below code >>

```
(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);
```



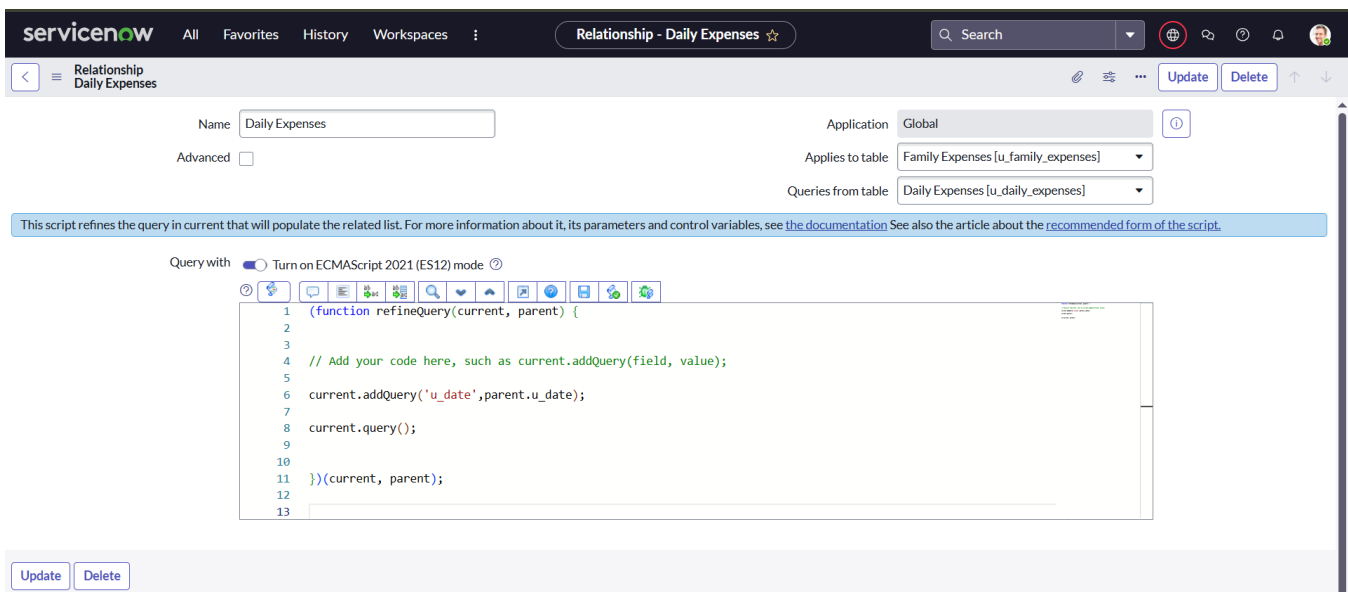
6. Go to the Header and right click there>> click on Save.

Milestone 9 : Configure the Relationship

Activity : Configure the Relationship

1. 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);
```



servicenow All Favorites History Workspaces Relationship - Daily Expenses Search

Relationship Daily Expenses Update Delete

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 Turn on ECMAScript 2021 (ES12) mode

```
1 (function refineQuery(current, parent) {  
2  
3  
4 // Add your code here, such as current.addQuery(field, value);  
5  
6 current.addQuery('u_date',parent.u_date);  
7  
8 current.query();  
9  
10  
11 })(current, parent);  
12  
13
```

Update Delete

5. Click on Update.

Conclusion :

The project effectively demonstrates how ServiceNow can be used to manage and track family expenses with real-time monitoring, automated calculations, and user-friendly dashboards. It simplifies expense tracking, promotes financial discipline, and highlights the flexibility of ServiceNow for solving practical, real-world problems.

