

CALCULATING FAMILY EXPENCES USING SERVICE NOW

Team Id: NM2025TMID18167

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.

Objectives: 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.

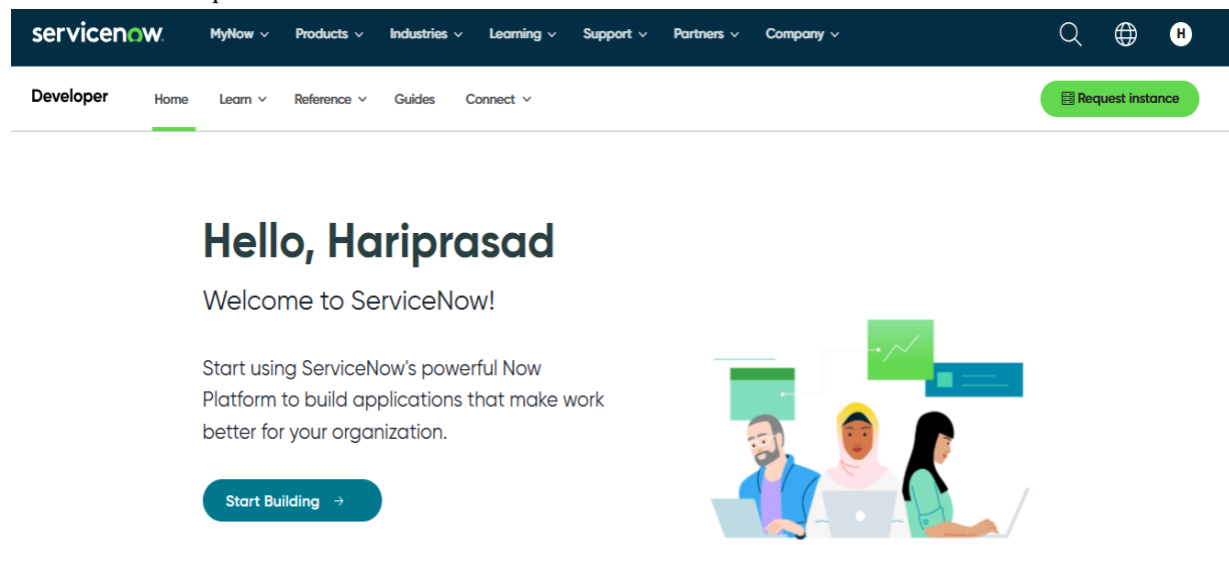
Skills:

TASK INITIATION

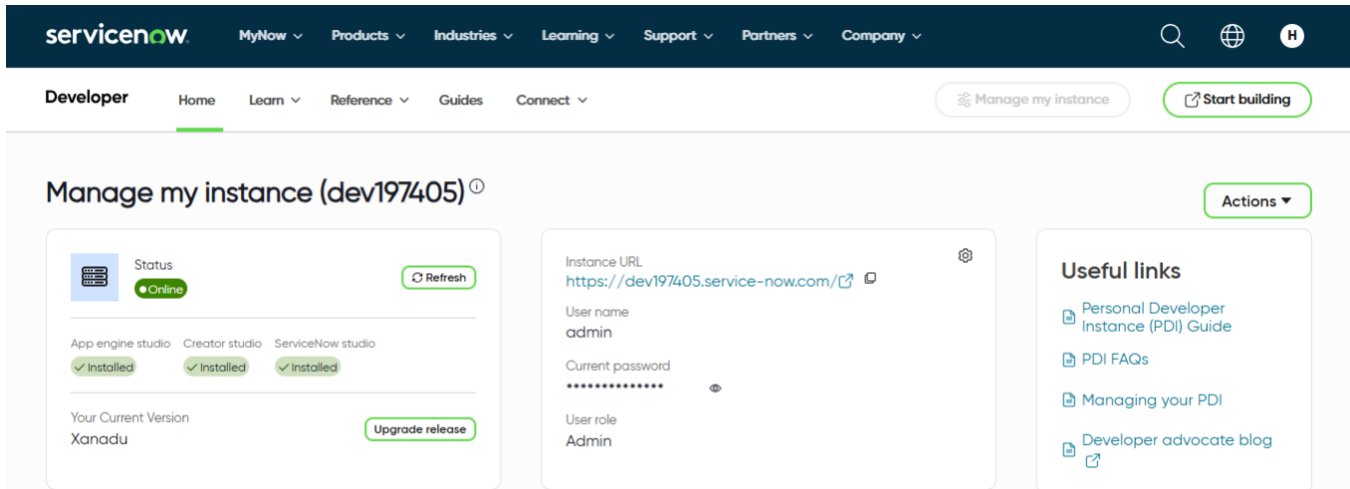
Milestone 1 : Setting up ServiceNow Instance

Activity : 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.



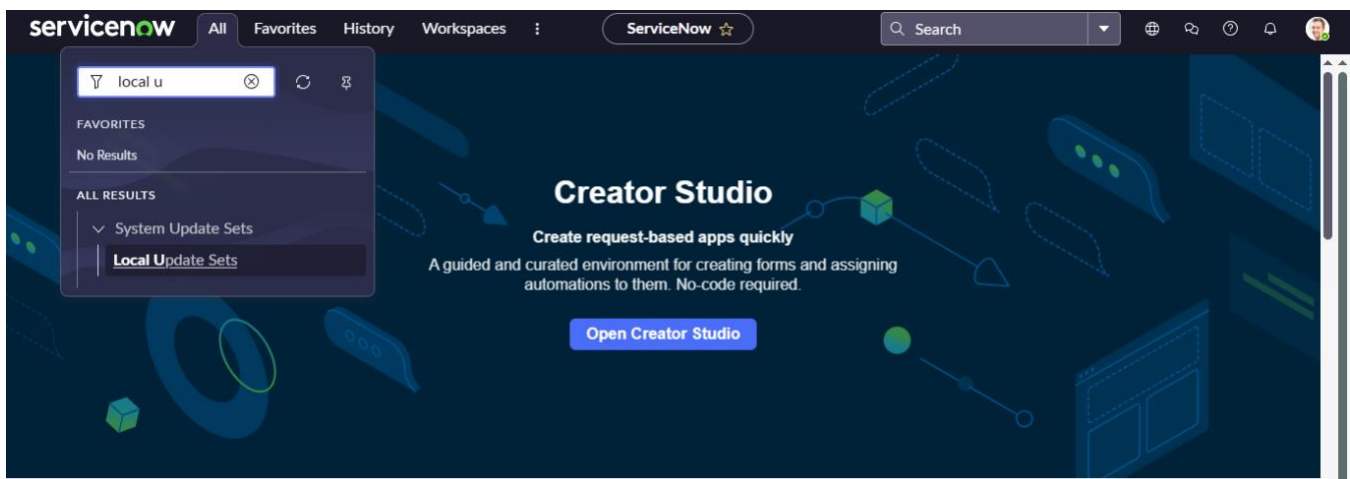
The screenshot shows the ServiceNow Developer console for instance dev197405. The top navigation bar includes links for MyNow, Products, Industries, Learning, Support, Partners, and Company. Below this, the 'Developer' section is active, showing options for Home, Learn, Reference, Guides, and Connect. A 'Manage my instance' button is visible. The main content area is titled 'Manage my instance (dev197405)' and includes an 'Actions' dropdown. It displays the instance status as 'Online', lists installed components (App engine studio, Creator studio, ServiceNow studio), and shows the current version as 'Xanadu' with an 'Upgrade release' button. A sidebar on the right provides 'Useful links' such as the Personal Developer Instance (PDI) Guide, PDI FAQs, Managing your PDI, and the Developer advocate blog.

- Now you will navigate to the ServiceNow.

Milestone 2 : Creation of New Update Set

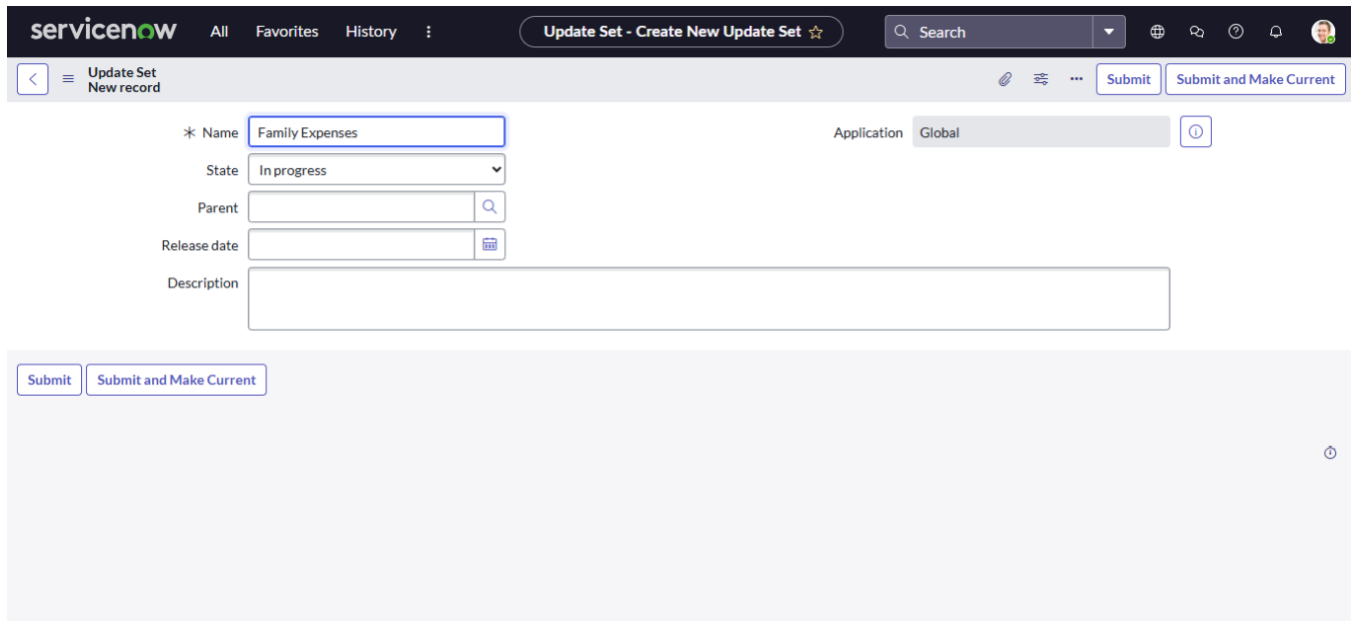
Activity: Creation of New Update Set

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



The screenshot shows the ServiceNow Creator Studio interface. The top navigation bar includes links for All, Favorites, History, and Workspaces. A search bar is present. The main content area is titled 'Creator Studio' and features a large blue button labeled 'Open Creator Studio'. A sidebar on the left shows a search for 'local u' with no results under 'FAVORITES'. Under 'ALL RESULTS', 'System Update Sets' is expanded, and 'Local Update Sets' is selected. The background of the main area has a dark blue theme with various icons and a 'Create request-based apps quickly' message.

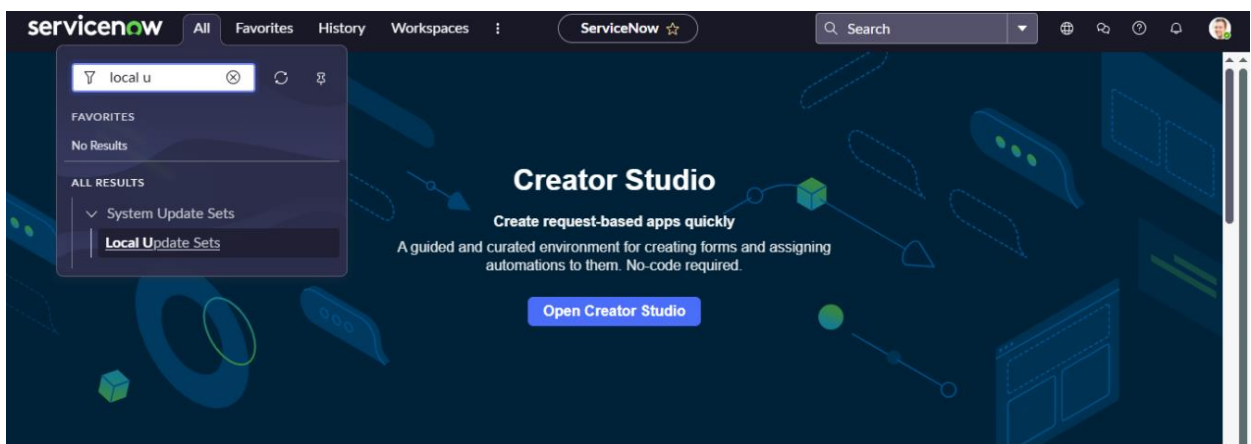
- Enter the Details as:
Name : Family Expenses
- Then click on Submit and Make current.



Milestone 3: Creation of Table

Activity: Creation of New Update Set

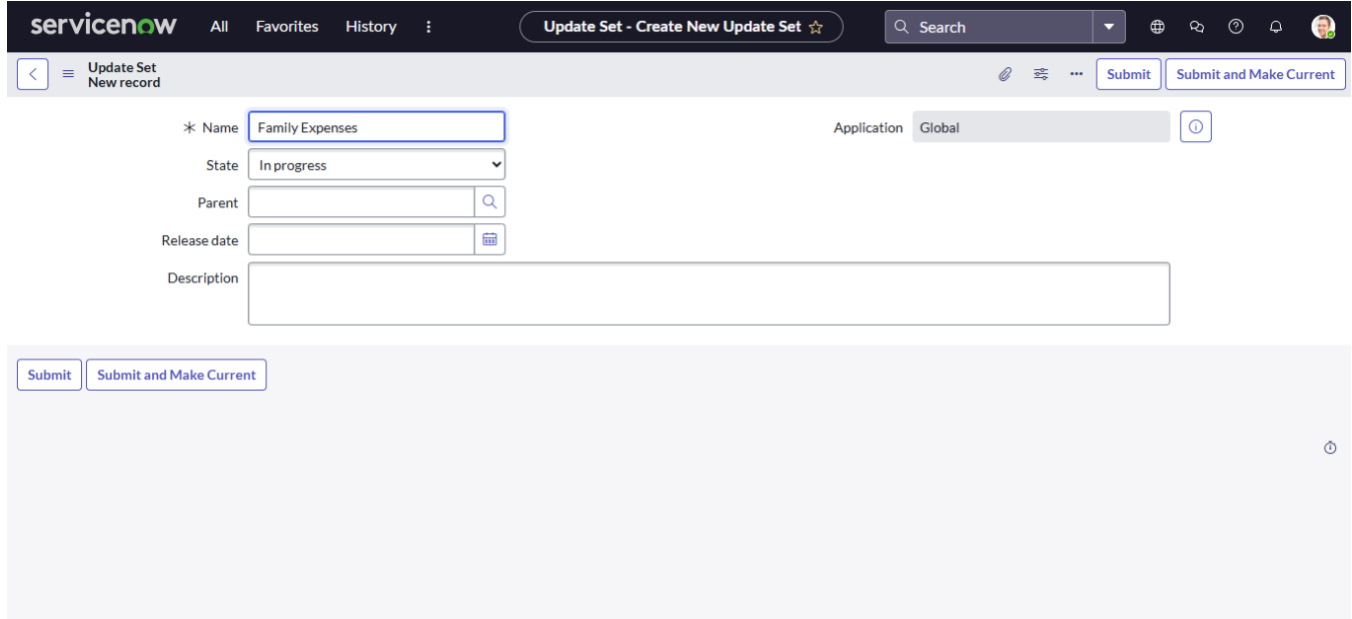
1. Go to All >> In the filter search for Local Update set > click on New



2. Enter the Details as:

Name : Family Expenses

- Then click on Submit and Make current.



The screenshot shows the ServiceNow 'Update Set' form. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', and a search bar. The main header shows 'Update Set - Create New Update Set' with a star icon. Below this, there's a sub-header 'Update Set' and 'New record'. The form fields are as follows:

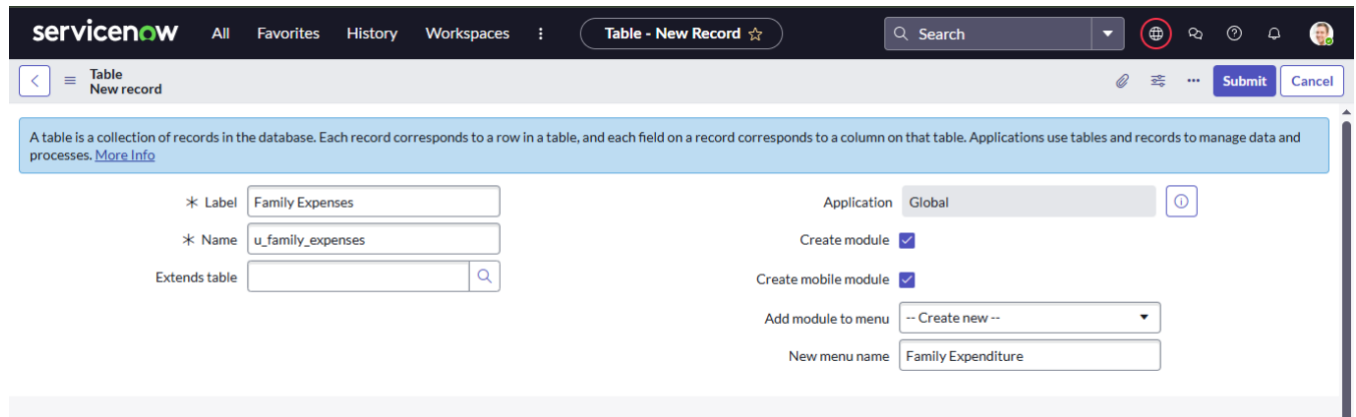
- * Name:
- State:
- Parent:
- Release date:
- Description:
- Application:

At the bottom, there are two buttons: 'Submit' and 'Submit and Make Current'.

Milestone 4: Creation of Table

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



servicenow All Favorites History Workspaces **Table - New Record** Search

Table New record Submit Cancel

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 Application

* Name Create module ☒

Extends table 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

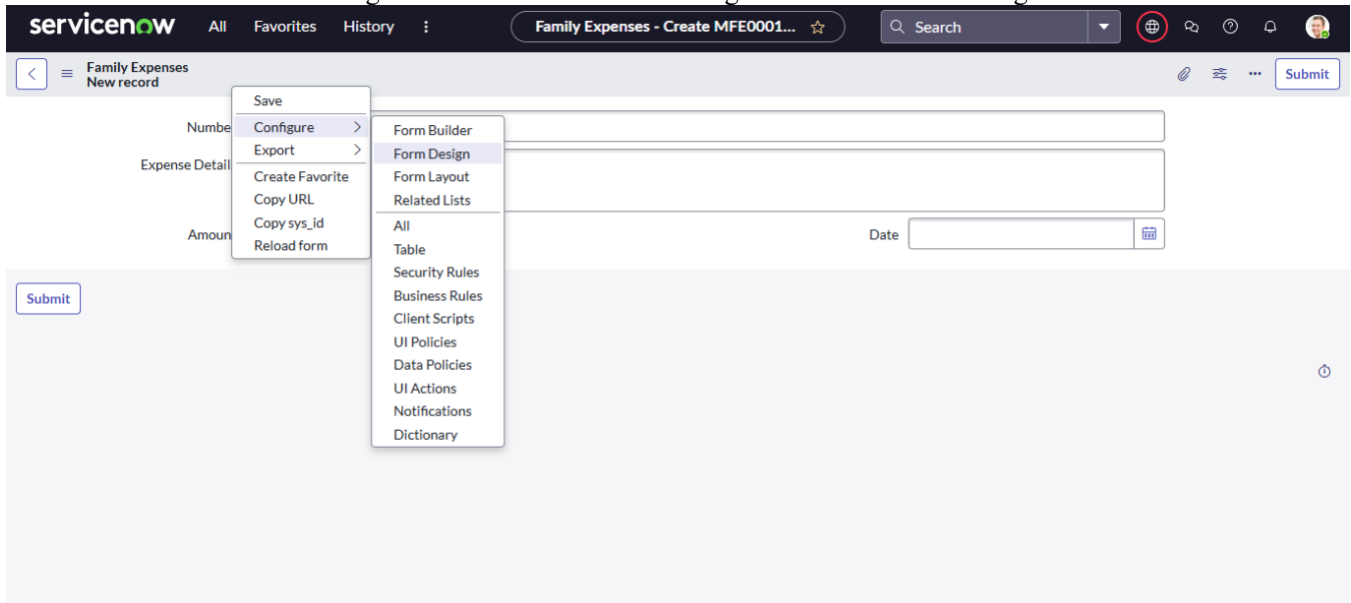
- Double click on the Number Field/Column.
- Go down and double click on Advanced view
- In Default Value:
 - Use dynamic default : check the box
 - Dynamic default value : Get Next Padded Number
- Click on Update.

5. 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

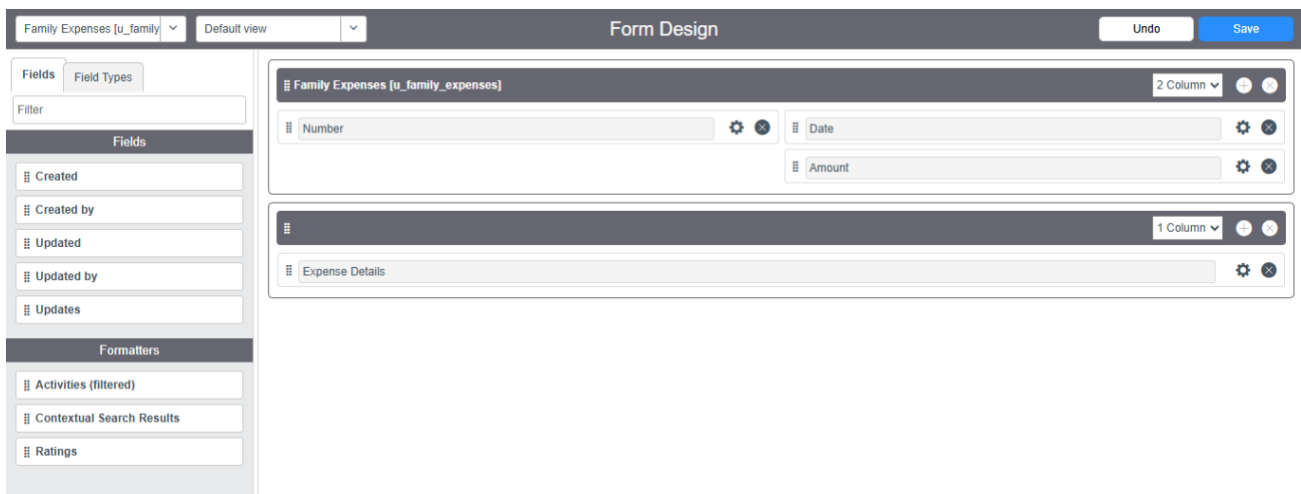
8. Click on Submit.

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



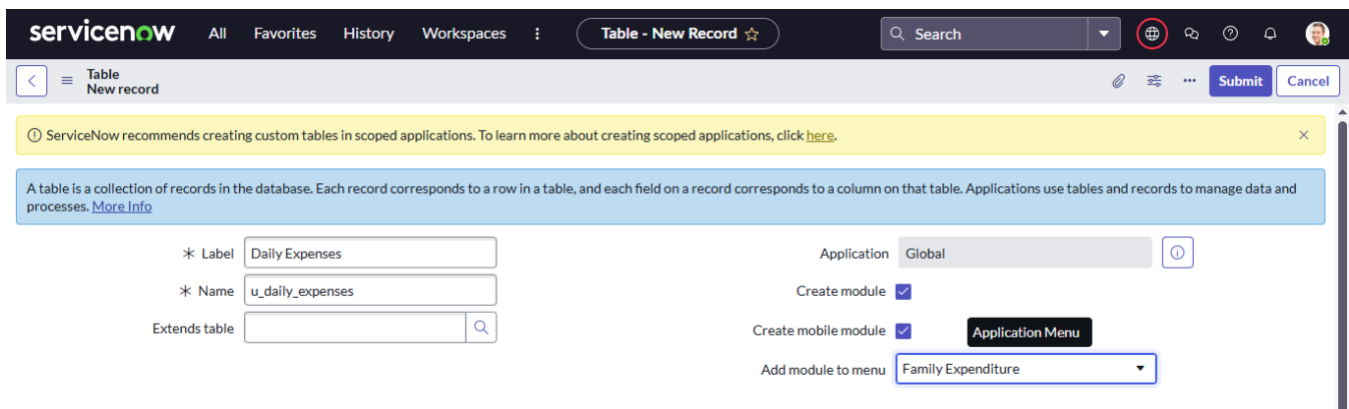
4. Customize or Drag Drop the form as per your requirement.
5. Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
6. Make Date, Amount Mandatory Field by clicking on the gear icon and checking Mandatory
7. Click on Save.



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.



servicenow All Favorites History Workspaces **Table - New Record** Search

< Table New record Submit Cancel

① ServiceNow recommends creating custom tables in scoped applications. To learn more about creating scoped applications, click [here](#).

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

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

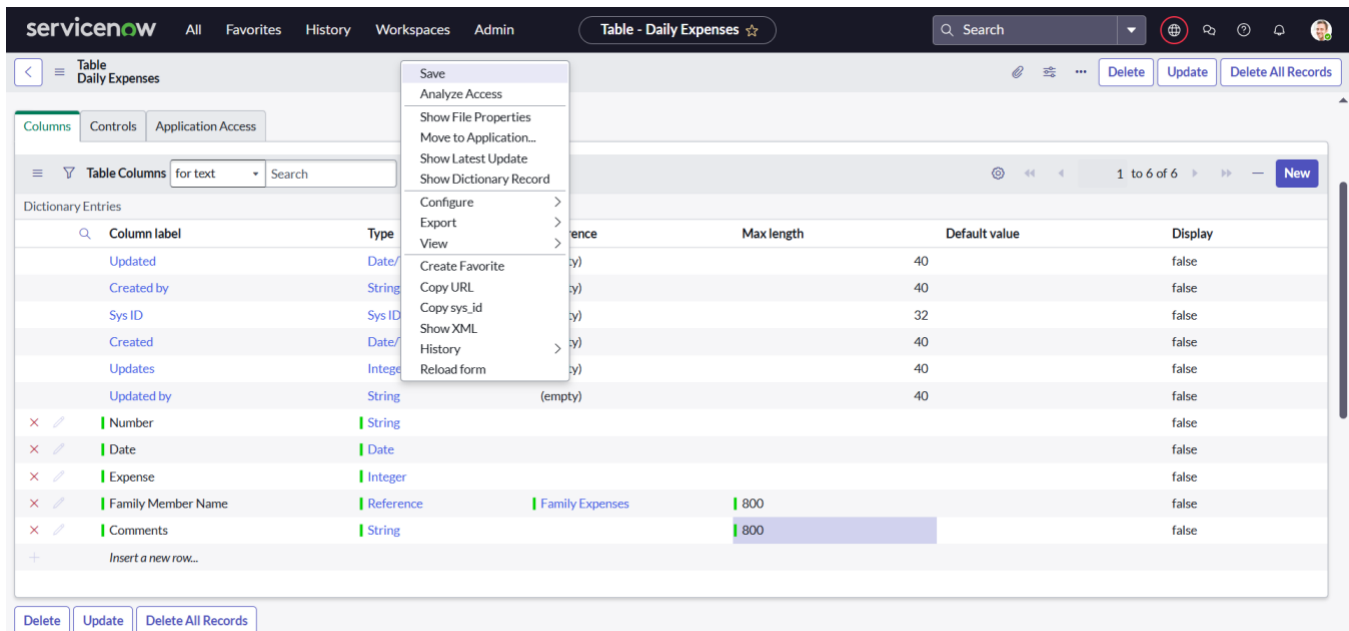
5. Double click on insert a new row again

Give the details as:

Column label : Comments

Type : String

Max length : 800



The screenshot shows the ServiceNow interface for configuring the 'Table - Daily Expenses'. The 'Columns' tab is selected, and a context menu is open over the 'Expense' column. The menu options include: Save, Analyze Access, Show File Properties, Move to Application..., Show Latest Update, Show Dictionary Record, Configure, Export, View, Create Favorite, Copy URL, Copy sys_id, Show XML, History, and Reload form. The 'Expense' column is highlighted with a blue bar. The table also shows other columns: Updated, Created by, Sys ID, Created, Updates, Updated by, Number, Date, Family Member Name, and Comments. The 'Family Member Name' column has a max length of 800. The 'Comments' column has a max length of 800. The 'Expense' column has a max length of 800. The 'Family Member Name' column has a reference to 'Family Expenses'.

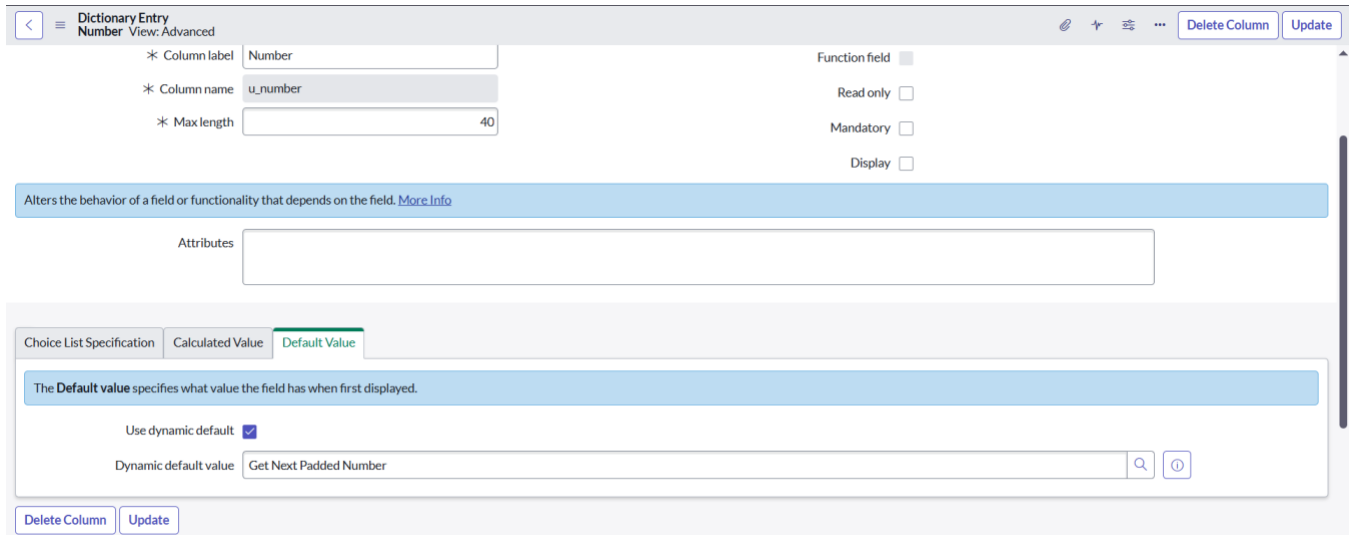
6. Go to the Header and right click there>> click on Save.

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: ☒

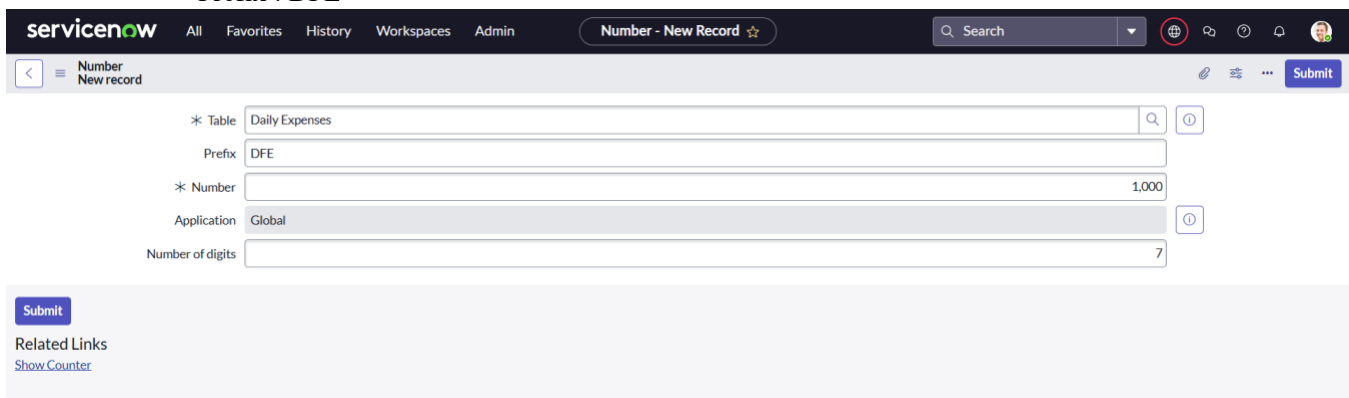
Dynamic default value: Get Next Padded Number

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

Number New record

* Table: Daily Expenses

Prefix: DFE

* Number: 1,000

Application: Global

Number of digits: 7

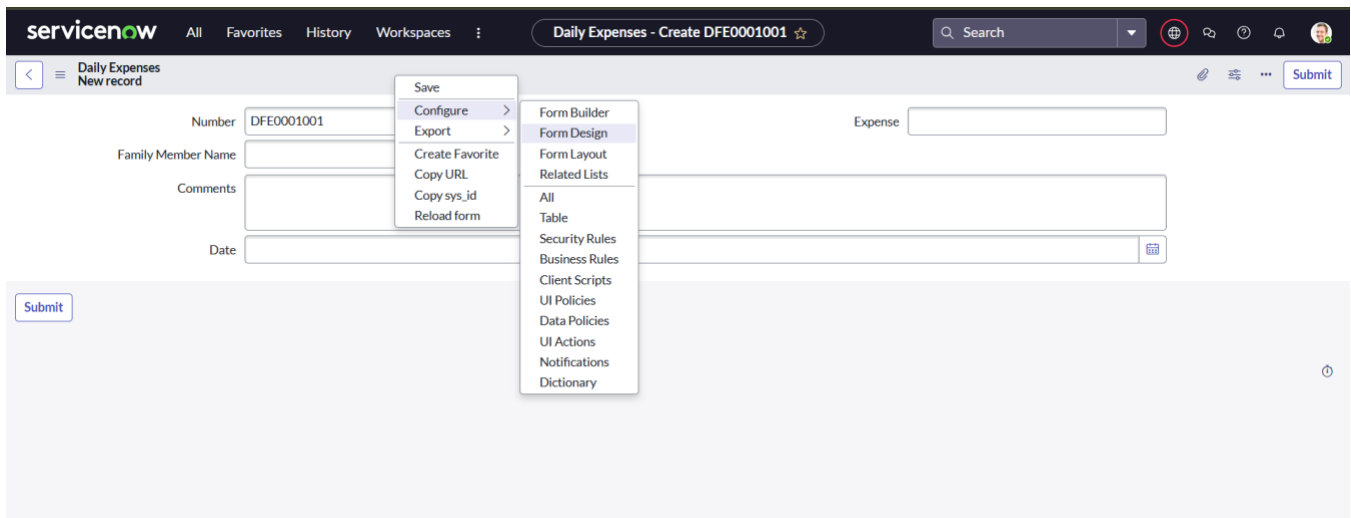
Submit

Related Links
[Show Counter](#)

8. Click on Submit

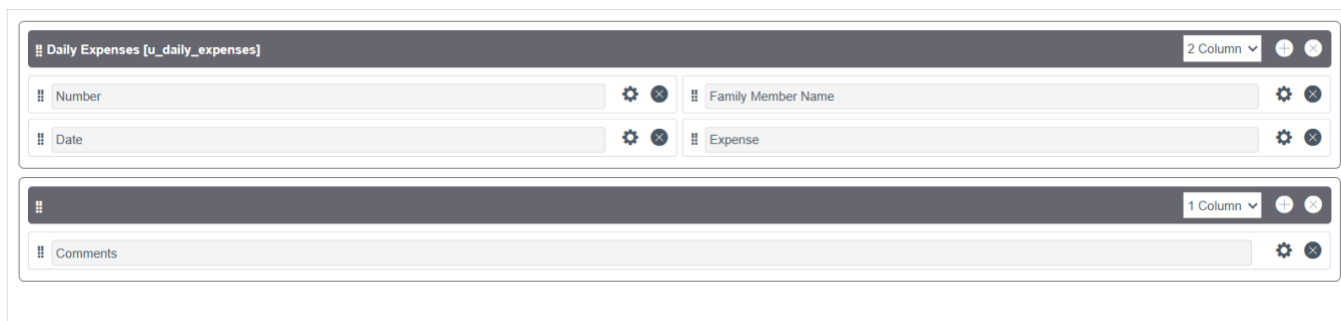
Activity 4 : Configure the Form

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, and 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 ServiceNow form design canvas. The form is titled 'Daily Expenses [u_daily_expenses]' and is in '2 Column' layout. The fields are arranged in a grid: 'Number' and 'Family Member Name' in the first row, 'Date' and 'Expense' in the second row, and 'Comments' in the third row. Each field has a gear icon for configuration.

7. Click on Save.

Milestone 6: Creation of Relationship

Activity : Creation of Relationship between Family Expenses and Daily Expenses tables.

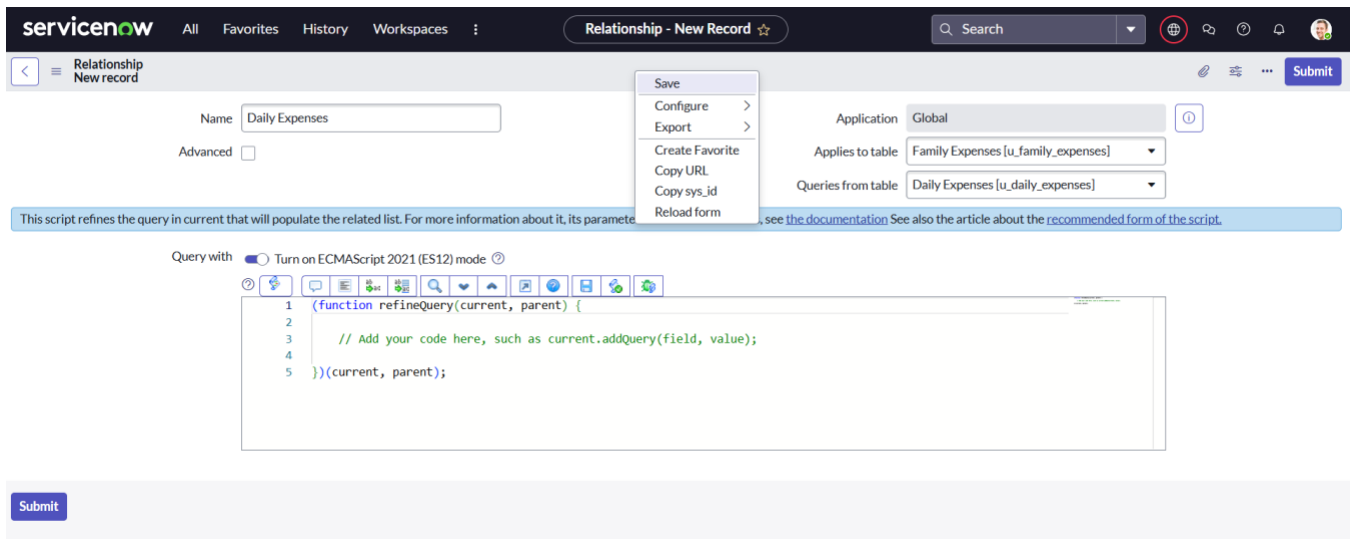
1. Go to All >> In the filter search for Relationships >> Open Relationships
2. Click on New.
3. Enter the details:

Name : Daily Expenses

Applies to table : Select Family Expenses

Daily Expenses : Select Daily Expenses

4. Click Save.



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);
```

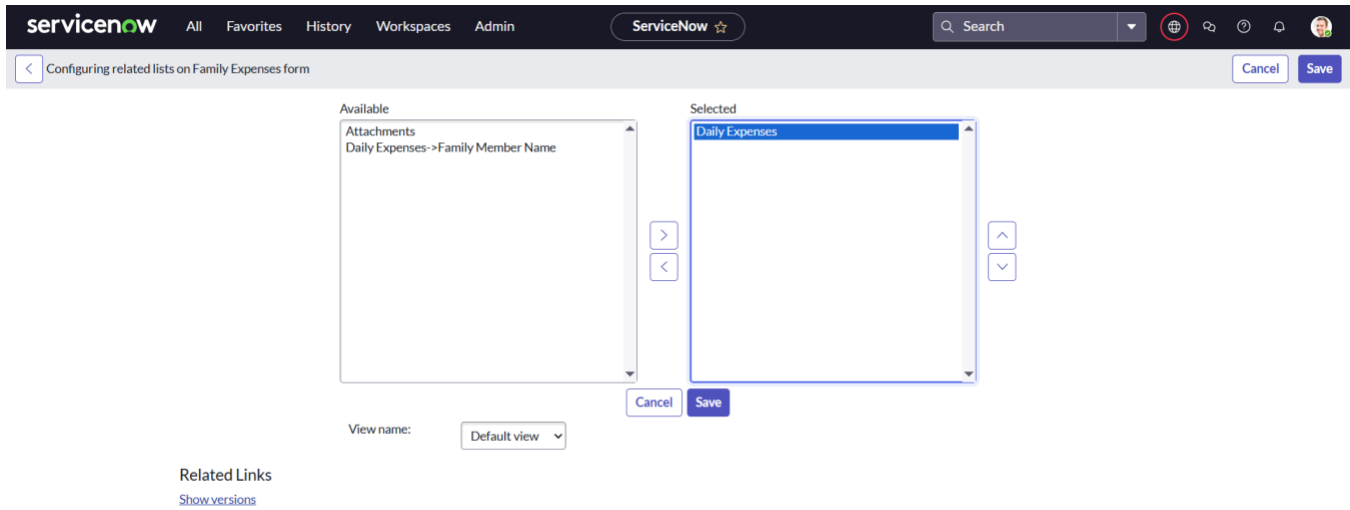
Submit

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

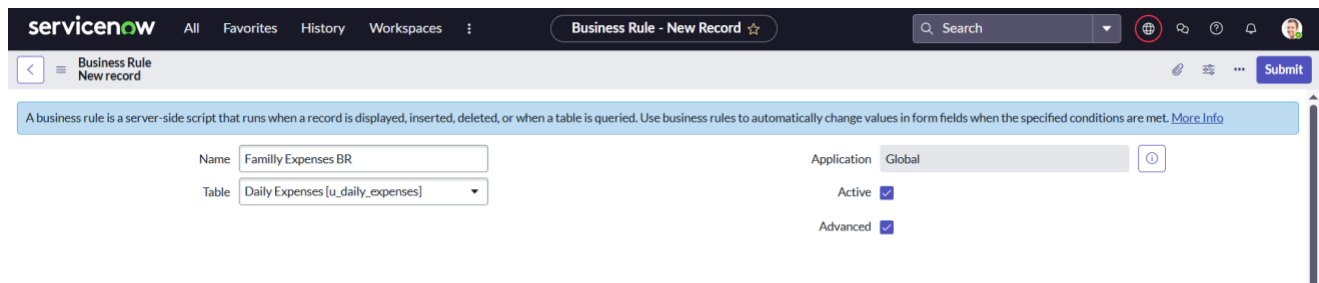
Activity : Creation of Business Rules

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

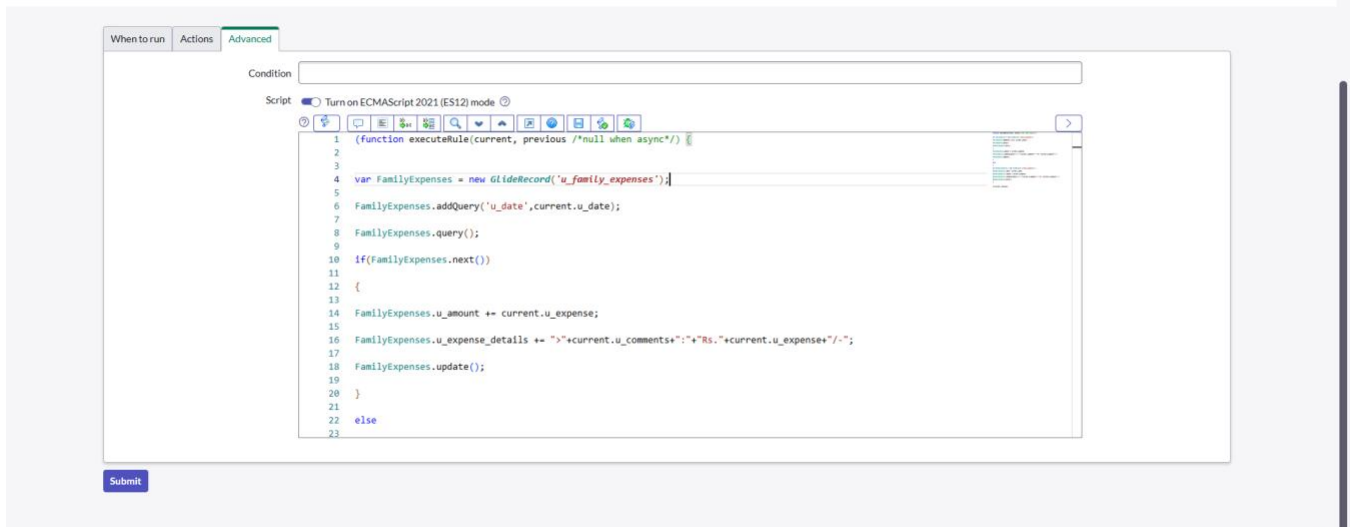
Table : Select Daily Expenses

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.

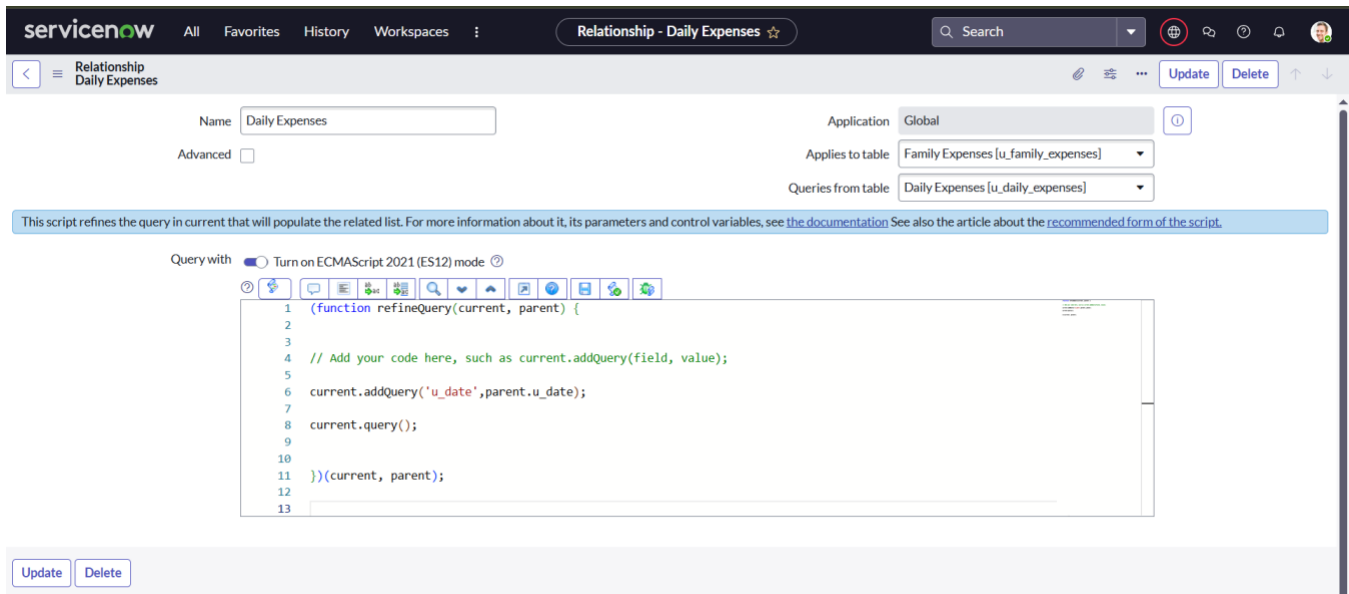
```
(function refineQuery(current, parent) {
```

```
// 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

Name: Daily Expenses

Advanced ☐

Application: Global

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 “**Calculating Family Expenses using ServiceNow**” successfully demonstrates how technology can simplify and streamline the process of managing household finances. By leveraging the features of ServiceNow, the system enables effective expense tracking, categorization, and reporting, while maintaining scalability and security. Through the creation of customized tables, forms, relationships, and business rules, the project provides a user-friendly solution that empowers families to monitor their spending patterns and make informed financial decisions. Ultimately, this initiative not only promotes financial discipline but also highlights the potential of ServiceNow as a platform for developing practical, real-world applications beyond its traditional IT service management scope.