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**9623 – AMRITA COLLEGE OF ENGINEERING AND  
TECHNOLOGY**

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**Completed the project named as**

**CALCULATING FAMILY EXPENSES USING  
SERVICENOW**

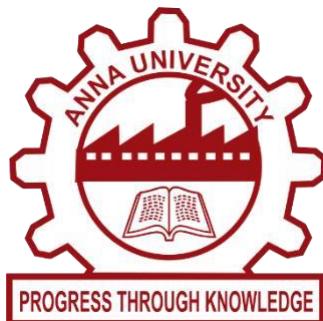
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# **AMRITA COLLEGE OF ENGINEERING AND TECHNOLOGY**

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Certified that, this is the Bonafide record of practical work done by **Mr./Ms. ....** of VII Semester in Information Technology of this College, in the **NM1051-ServiceNow Administrator** during academic year 2025-2026.

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This record is submitted for the University Practical Examination held on .....

**Internal Examiner**

**External Examiner**

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## ServiceNow

ServiceNow is a cloud-based digital workflow platform that helps organizations manage and automate their IT and business processes. It provides a centralized system for handling services such as IT Service Management (ITSM), IT Operations Management (ITOM), and IT Asset Management (ITAM). With ServiceNow, companies can streamline workflows, improve efficiency, and enhance user experiences by reducing manual tasks and ensuring faster service delivery. The platform is highly scalable, supports integrations with various enterprise tools, and offers advanced features like AI, analytics, and self-service portals to support continuous improvement within organizations.

### Benefits Of ServiceNow

- Improves Efficiency Through Automation - ServiceNow automates repetitive and manual tasks, reducing human effort and speeding up service delivery.
- Centralized Platform for All Services - It provides a single system of record for managing IT and business processes, improving communication and visibility.
- Enhances User Experience - Self-service portals and knowledge bases enable users to resolve issues quickly without needing IT support.
- Better Incident and Problem Management - It helps track, prioritize, and resolve incidents efficiently, minimizing downtime and ensuring business continuity.
- Scalable and Flexible - ServiceNow can grow with the organization and can be customized to suit different business needs.

### Features of ServiceNow

- IT Service Management (ITSM) - Provides tools for incident, problem, change, and request management to improve IT support services.
- Self-Service Portals - Users can raise requests, track progress, and find solutions through knowledge articles.
- Workflow Automation - Automates business processes using drag-and-drop workflow capabilities to reduce manual effort.
- Configuration Management Database (CMDB) - Maintains a centralized database of IT assets and their relationships to support better decision making.
- Service Catalog Management - Helps users easily request hardware, software, and services with standardized processes.

# **Calculating Family Expenses Using ServiceNow**

## **Project Description:**

The project aims to develop a comprehensive expense calculation system using the ServiceNow platform. This system will enable users to track and manage family expenses efficiently while offering essential features such as expense categorization, budget setting, real-time tracking, and reporting capabilities. By leveraging ServiceNow's robust and flexible framework, the system will ensure seamless integration, a user-friendly interface, and scalability to accommodate varying family sizes and financial complexities. The ultimate goal of this project is to empower users with intelligent tools that support informed financial decision-making and promote financial well-being within the family unit.

## **Abstract:**

The Family Expense Calculation System developed on the ServiceNow platform aims to provide an efficient and user-friendly solution for managing and tracking household expenses. The system enables users to record, categorize, and analyze daily financial transactions under various expense categories such as food, utilities, education, healthcare, and entertainment. Through its budget-setting and real-time tracking features, users can monitor their spending patterns and identify areas for financial improvement.

The system leverages ServiceNow's powerful automation, reporting, and integration capabilities to deliver a seamless experience with accurate and timely data updates. A customized dashboard presents clear visual reports and summaries, helping users make informed financial decisions. Additionally, the project ensures data privacy, scalability, and flexibility, making it suitable for families of different sizes and financial structures.

By offering a centralized and digital platform for expense management, this project promotes financial discipline, transparency, and control over family finances. Ultimately, the Family Expense Calculation System empowers users to make smarter budgeting decisions, reduce unnecessary spending, and achieve long-term financial stability.

## **Objectives:**

The main objective of this project is to develop a Family Expense Management System on the ServiceNow platform that enables efficient tracking, categorization, and budgeting of household expenses. The specific objectives are as follows:

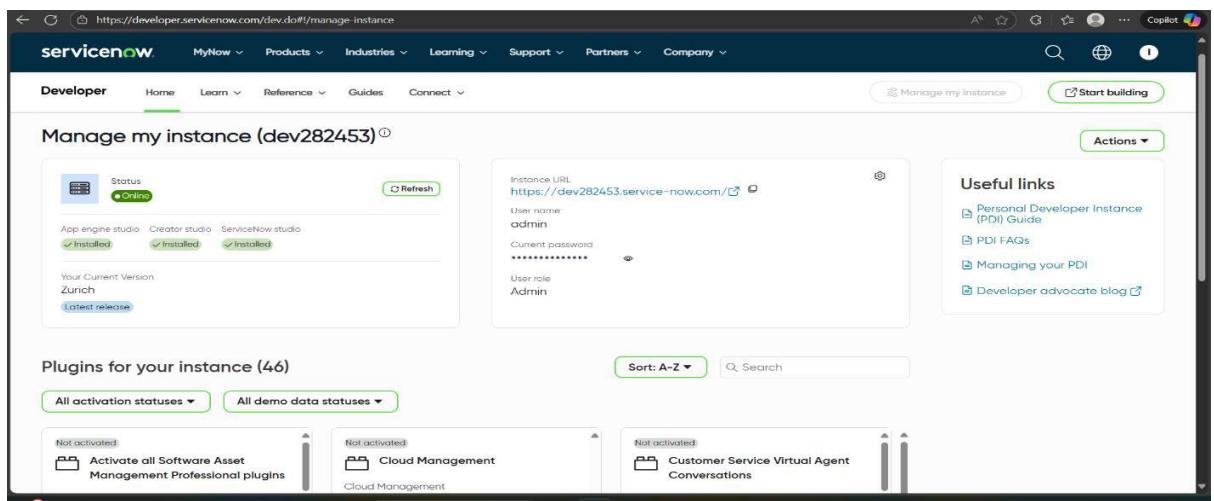
- To provide real-time monitoring and interactive dashboards for better financial visibility.
- To generate insightful analytical reports that help users make informed financial decisions.
- To ensure scalability and adaptability for families of different sizes and financial needs.
- To promote financial discipline through detailed spending analysis and budgeting tools.
- To maintain data security and integrity using ServiceNow's built-in security features.

# 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.



**Figure No:1**

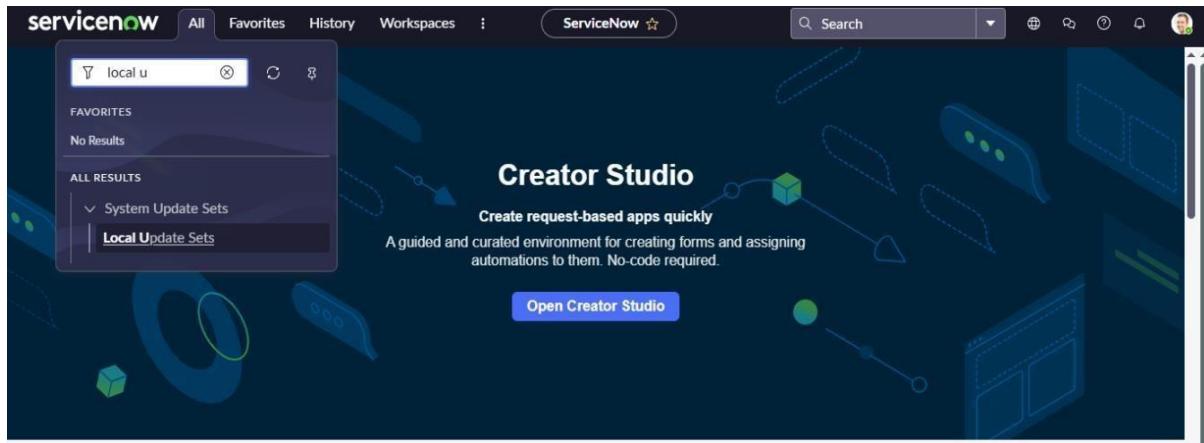
7. Now you will navigate to the ServiceNow.

## Milestone 2

### Creation of New Update Set

#### 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: Go to All >> In the filter search for Local Update set > click on New Family Expenses

3. Then click on Submit and Make current

A screenshot of the 'Update Set - Create New Update Set' form. The top navigation bar shows 'Update Set - Create New Update Set' with a star icon, 'Search', and other icons. The form fields include:

- \* Name: Family Expenses
- State: In progress
- Parent: (empty)
- Release date: (empty)
- Description: (empty)

The right side of the form shows 'Application: Global'. At the bottom are two buttons: 'Submit' and 'Submit and Make Current'.

## Milestone 3

### Creation of Table

#### Activity: Creation of Table

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



2. Enter the Details as:

Name: Family Expenses

The screenshot shows the 'Update Set - Create New Update Set' form. At the top, it says 'Update Set New record'. The form fields are: Name (Family Expenses), State (In progress), Parent (empty), Release date (empty), and Description (empty). To the right, it says 'Application Global'. At the bottom, there are 'Submit' and 'Submit and Make Current' buttons.

3. Then click on 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

The screenshot shows the ServiceNow interface for creating a new table. At the top, it says "servicenow" and has links for "All", "Favorites", "History", "Workspaces". The title bar says "Table - New Record". Below the title, there's a search bar and some icons. The main area has a header "Table" with "Table" and "New record" buttons. A tooltip explains what a table is. The form fields are as follows:

* Label	Family Expenses	Application	Global
* Name	u_family_expenses	Create module	<input checked="" type="checkbox"/>
Extends table		Create mobile module	<input checked="" type="checkbox"/>
		Add module to menu	~ Create new --
		New menu name	Family Expenditure

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

#### Activity 2: Creation of Columns (Fields)

1. Near Columns Double click near insert a new row.  
Give the details as:
  - i.Column label: Number
  - ii.Type: String
2. Double click on insert a new row again  
Give the details as:
  - i.Column label: Date
  - ii.Type: Date

3. Double click on insert a new row again

Give the details as:

- i.Column label: Amount
- ii.Type: Integer

4. Double click on insert a new row again

Give the details as:

- i.Column label: Expense Details
- ii.Type: String
- iii.Max length: 800

The screenshot shows the ServiceNow interface for managing table columns. The title bar says 'Table - Family Expenses'. The main area is titled 'Table Columns' with a dropdown menu set to 'for text'. A search bar is present. Below is a table with the following data:

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

5. 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

4. Click on Update

The screenshot shows the 'Dictionary Entry Number' screen in ServiceNow. The title bar says 'Dictionary Entry Number View: Advanced'. The top right has 'Delete Column' and 'Update' buttons. Below is a toolbar with icons for search, refresh, and more. A message bar says 'Alters the behavior of a field or functionality that depends on the field. [More Info](#)'. The main area has tabs: 'Attributes' (selected), 'Choice List Specification', 'Calculated Value', and 'Default Value'. The 'Default Value' tab is active, showing the message 'The Default value specifies what value the field has when first displayed.' It contains a checked checkbox 'Use dynamic default' and a text input 'Dynamic default value' with the value 'Get Next Padded Number'. At the bottom are 'Delete Column' and 'Update' buttons.

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

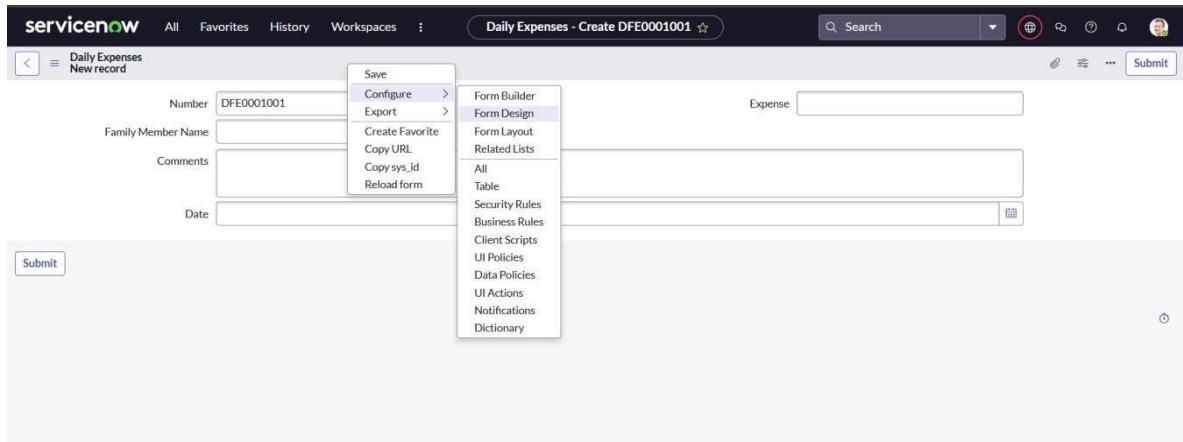
The screenshot shows the 'Number - New Record' screen for the 'Family Expenses' table. The title bar says 'servicenow' and 'Number - New Record'. The top navigation includes 'All', 'Favorites', 'History', 'Workspaces', and a search bar. The form fields are: 'Table' (Family Expenses), 'Prefix' (MFE), 'Number' (1,000), 'Application' (Global), and 'Number of digits' (7). At the bottom are 'Submit' and 'Related Links' buttons, with 'Show Counter' as a link.

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

4.



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



8. Click on Save.

## Milestone 5: 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

The screenshot shows the ServiceNow interface for creating a new table. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and a 'Table - New Record' button. The main area has a header 'Table - New Record' with a star icon. Below the header, there's a message about tables: '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.' A 'More Info' link is provided. The form fields are as follows:

* Label	Family Expenses	Application	Global
* Name	u_family_expenses	Create module	<input checked="" type="checkbox"/>
Extends table		Create mobile module	<input checked="" type="checkbox"/>
		Add module to menu	-- Create new --
		New menu name	Family Expenditure

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

### Activity 2: Creation of Columns (Fields)

6. Near Columns Double click near insert a new row.

Give the details as:

i.Column label: Number

ii.Type: String

7. Double click on insert a new row again

Give the details as:

i.Column label: Date

ii.Type: Date

8. Double click on insert a new row again

Give the details as:

i.Column label: Amount

ii.Type: Integer

9. Double click on insert a new row again

Give the details as:

- i.Column label: Expense Details
- ii.Type: String
- iii.Max length: 800

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

10. 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

- 4.Click on Update

Dictionary Entry  
Number View: Advanced

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

**Delete Column** **Update**

5.Go to All >> In the filter search for Number Maintenance >> select Number Maintain

6.Click on New.

7.Enter the below Details:

Table: Family Expenses

Prefix: MFE

The screenshot shows the ServiceNow interface for creating a new record. The top navigation bar includes 'All', 'Favorites', 'History', 'Workspaces', and a search bar. The current page is 'Number - New Record'. The main form has the following fields:

- \* Table: Family Expenses
- Prefix: MFE
- \* Number: 1,000
- Application: Global
- Number of digits: 7

A 'Submit' button is located at the bottom left of the form area.

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 Daily Expenses record. The top navigation bar includes 'All', 'Favorites', 'History', 'Workspaces', and a search bar. The current page is 'Daily Expenses - Create DFE0001001'. A context menu is open over the 'Number' field, with the following options:

- Save
- Configure
- Export
- Create Favorite
- Copy URL
- Copy sys\_id
- Reload form

The 'Configure' option is highlighted. To the right of the menu, the 'Form Design' option is also highlighted. The form fields include 'Number' (DFE0001001), 'Family Member Name', 'Comments', and 'Date'. A 'Submit' button is located 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 displays a form configuration interface. At the top, there's a header for 'Daily Expenses [u\_daily\_expenses]' with a '2 Column' dropdown and a '+' button. Below this, there are two rows of fields. The first row contains 'Number' and 'Family Member Name', each with a gear icon and a 'Read Only' checkbox. The second row contains 'Date' and 'Expense', also with gear icons and 'Read Only' checkboxes. A horizontal line separates this from the bottom section. The bottom section has a header for '1 Column' with a '+' button. It contains a single row with a 'Comments' field, which also has a gear icon and a 'Read Only' checkbox.

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

This screenshot shows the 'Relationship - New Record' page in ServiceNow. The 'Name' field is populated with 'Daily Expenses'. The 'Applies to table' dropdown is set to 'Family Expenses [u.family\_expenses]'. The 'Queries from table' dropdown is set to 'Daily Expenses [u.daily\_expenses]'. Below the form, there is a script editor window containing the following ECMAScript code:

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

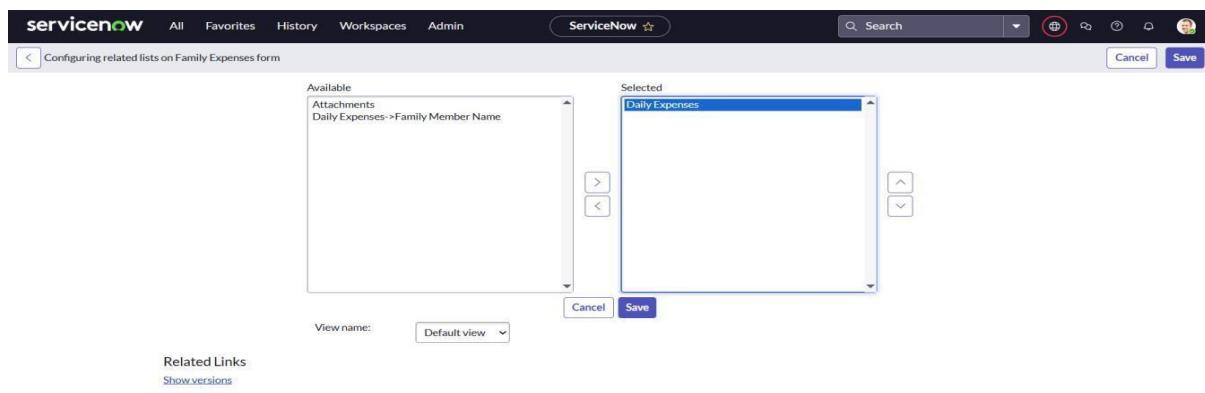
4. Click Save.

## 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.
2. Click on New 3.
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

The screenshot shows the ServiceNow interface for creating a new business rule. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and a search bar. The main title is 'Business Rule - New Record'. The form fields are as follows:

- Name: Family Expenses BR
- Table: Daily Expenses [u\_daily\_expenses]
- Application: Global
- Active:
- Advanced:

Buttons at the bottom include 'Save' (highlighted with a red circle), 'Cancel', and 'Submit'.

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

```
(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;
```

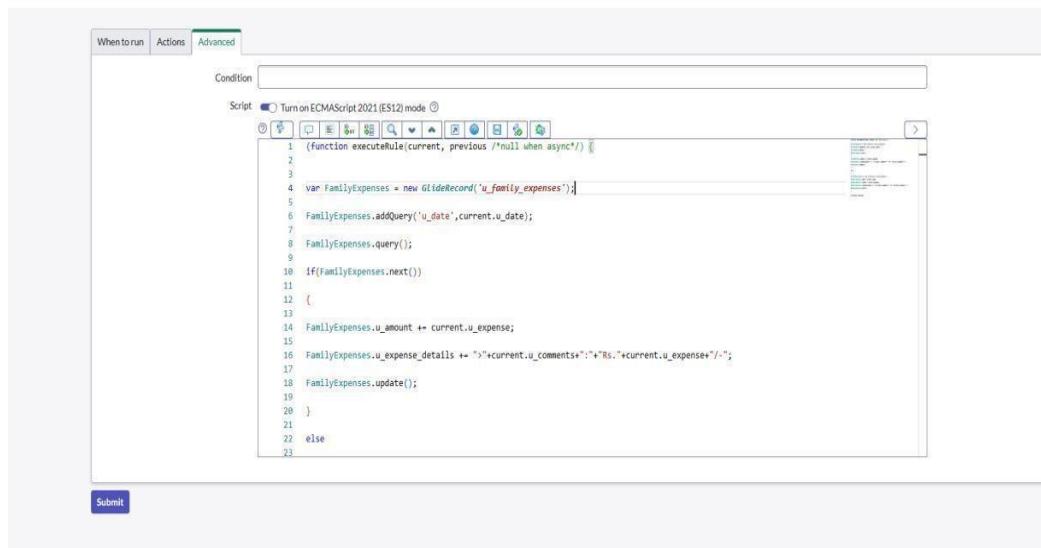
```

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.

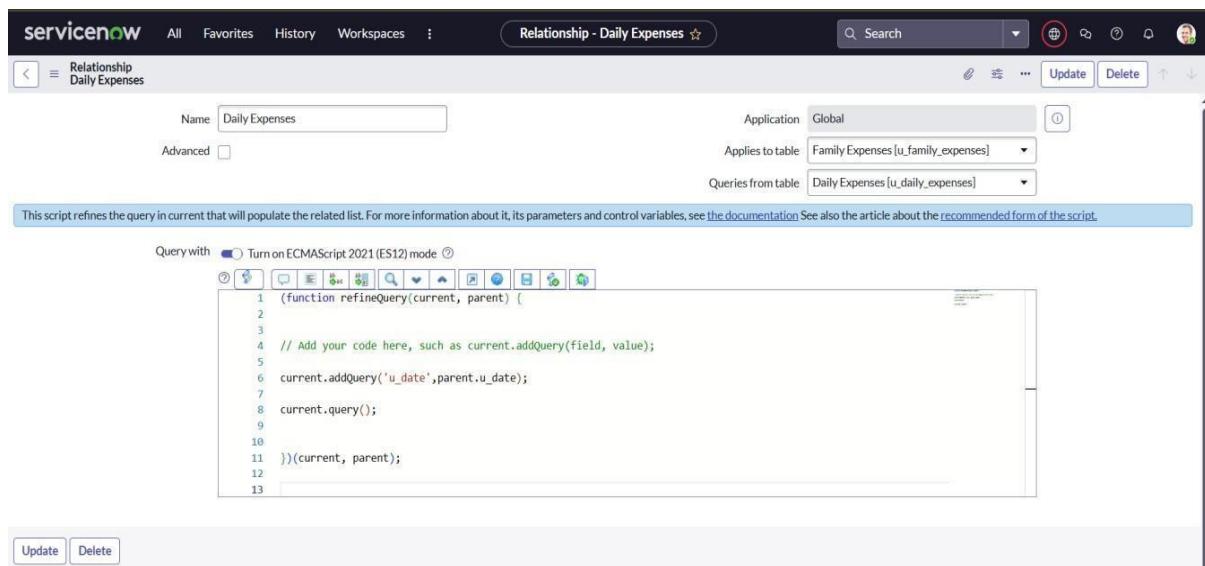
## Milestone 9:

### 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);
```



The screenshot shows the ServiceNow interface for configuring a relationship. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and a search bar. The title bar says 'Relationship - Daily Expenses'. The main area has tabs for 'Relationship' and 'Daily Expenses'. On the left, there's a 'Name' field set to 'Daily Expenses' and an 'Advanced' checkbox. On the right, settings include 'Application: Global', 'Applies to table: Family Expenses [u.family\_expenses]', and 'Queries from table: Daily Expenses [u.daily\_expenses]'. A note at the bottom 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 is a code editor containing the provided JavaScript function. At the bottom are 'Update' and 'Delete' buttons.

5. Click on Update.

## **Conclusion:**

The project “Calculating Family Expenses using ServiceNow” demonstrates how technology can streamline and simplify household financial management. By leveraging the features of ServiceNow, the system provides efficient expense tracking, categorization, budgeting, and reporting while ensuring scalability, data security, and ease of use. The customized components, such as tables, forms, and business rules, enable a user-friendly and automated solution that promotes financial awareness and discipline. Overall, the project highlights the potential of ServiceNow as a versatile platform capable of supporting real-world applications beyond traditional IT service management