

Calculating Family Expenses using ServiceNow

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Team Members:

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Problem Statement:

Managing and tracking family expenses manually often leads to inefficiency, errors, and lack of visibility into spending habits. Families require a structured and automated way to categorize, monitor, and report expenses to achieve better financial planning and decision-making.

Objective:

To design and implement an automated family expense calculation system using ServiceNow that supports expense categorization, budget setting, real-time tracking, and reporting.

Skills Required:

- IoT Open Hardware Platforms
- Data Structures

Project Description:

This project aims to build a comprehensive expense calculation system leveraging the ServiceNow platform. The system will allow users to:

Track and manage family expenses efficiently.

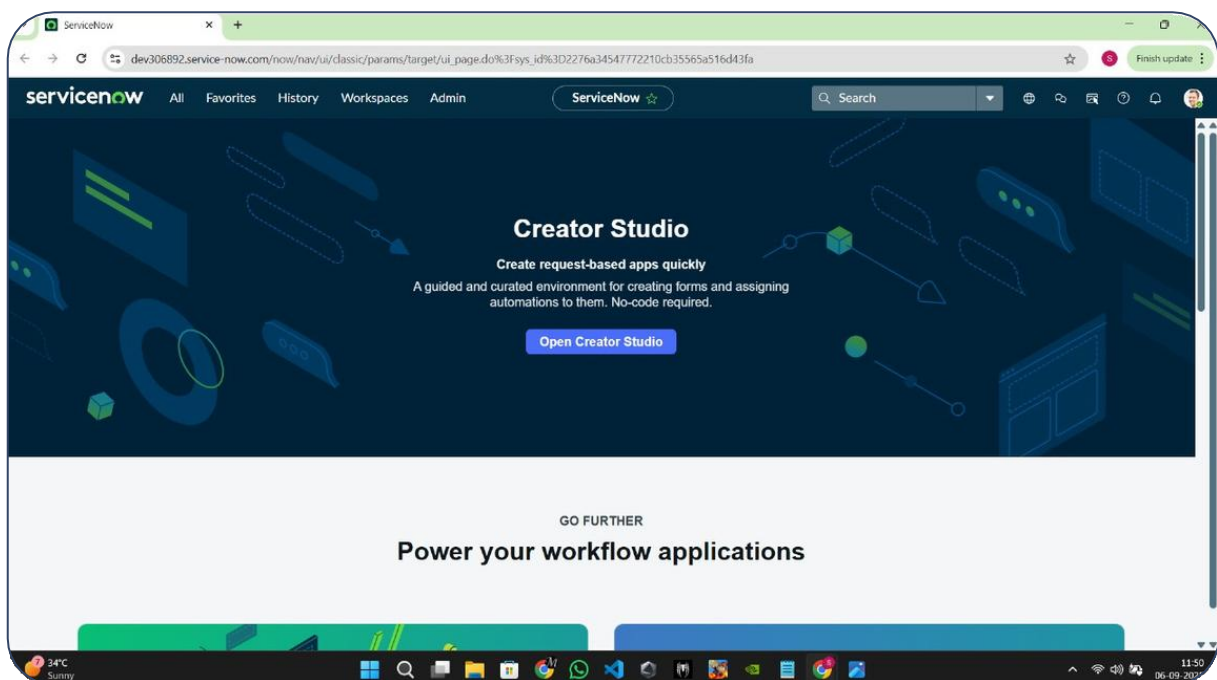
- Categorize expenses into meaningful groups. Set
- and monitor budgets with real-time alerts.
- Generate detailed reports and insights for better decision-making.

TASK INITIATION

Milestone 1 : Setting up ServiceNow Instance

Activity 1: Create and Access Instance

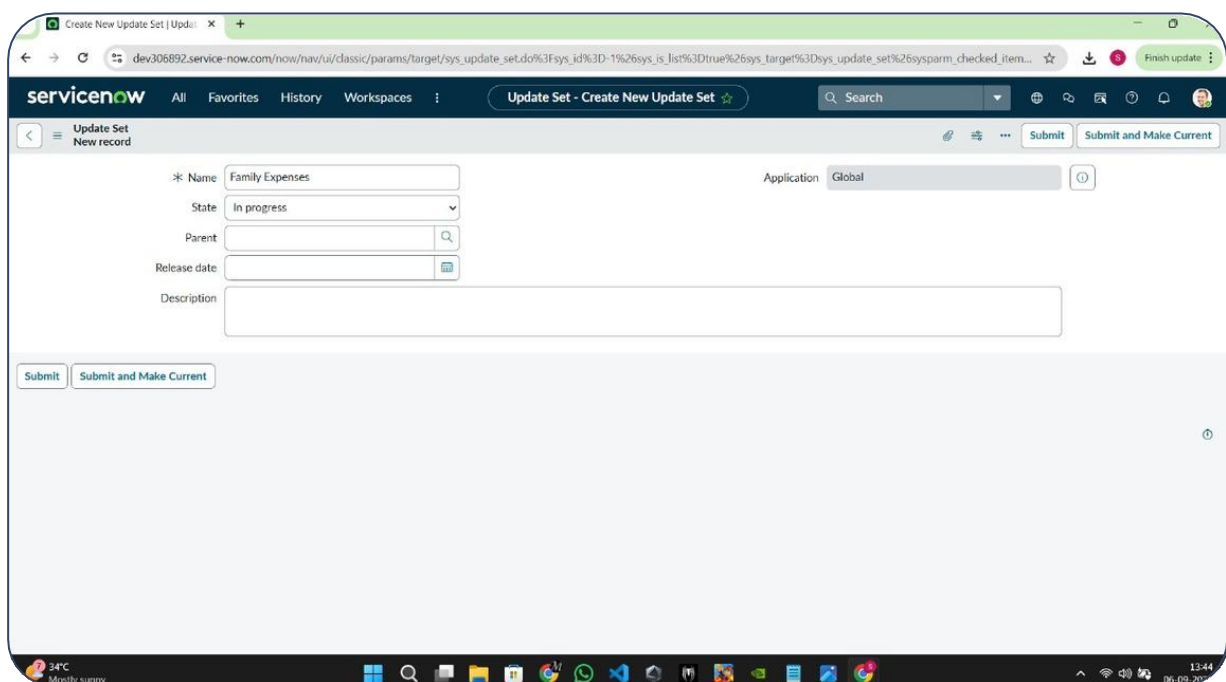
1. Open ServiceNow Developer Site.
2. Sign up for a developer account and log in.
3. Navigate to Personal Developer Instance.
4. Click Request Instance and fill the required details.
5. Submit the request.
6. Once approved, check your email for instance details.
7. Log in using the provided credentials.
8. Verify that you can successfully access and navigate the instance.



Milestone 2 : Create Local Update Set

Activity 1: Create Update Set

1. Open ServiceNow.
2. Go to All >> in the filter, search for Local Update Set.
3. Click on New.
4. Enter the details as:
5. Name: Family Expenses
6. Click on Submit.
7. Select Make Current to activate the update set.



The screenshot shows the ServiceNow interface for creating a new update set. The browser address bar shows the URL: `dev306892.service-now.com/now/nav/ui/classic/params/target/sys_update_set.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Dsys_update_set%26sysparm_checked_item...`. The page title is "Update Set - Create New Update Set". The form fields are as follows:

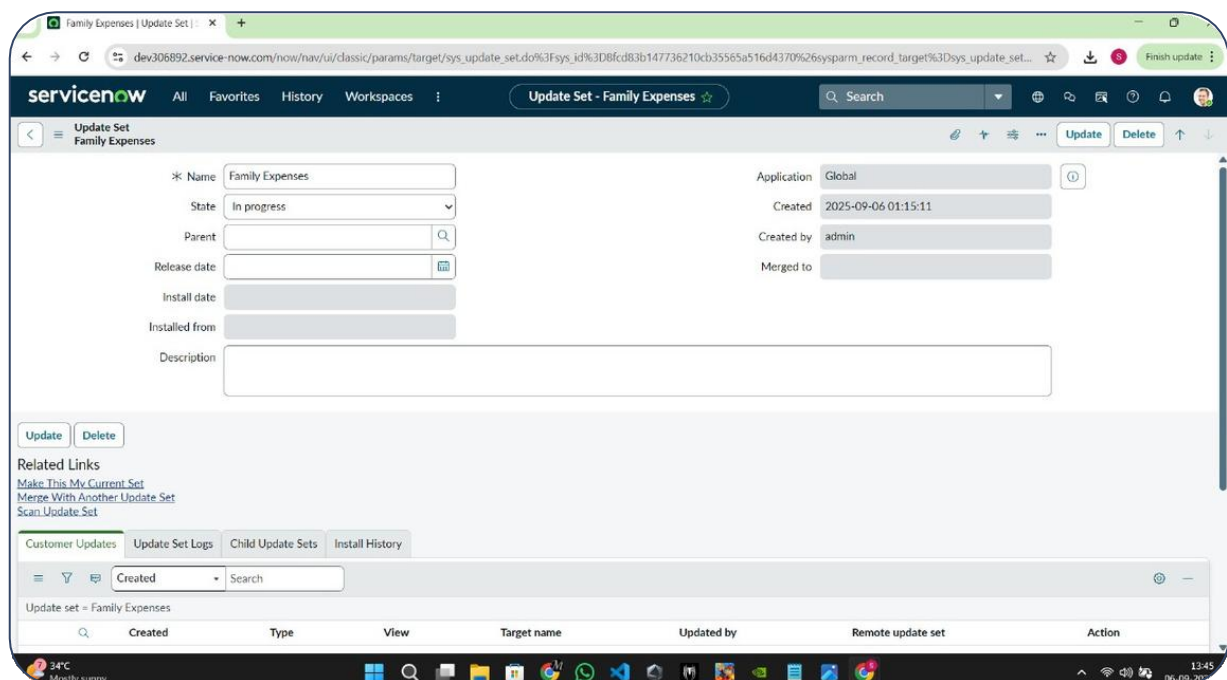
- Name: Family Expenses
- State: In progress
- Parent: (empty)
- Release date: (empty)
- Description: (empty)
- Application: Global

At the bottom of the form, there are two buttons: "Submit" and "Submit and Make Current". The "Submit and Make Current" button is highlighted.

Milestone 3: Creation of New Update Set

Activity 1: Create Local Update Set

1. Open ServiceNow.
2. Go to All >> in the filter, search for Local Update Set.
3. Click on New.
4. Enter the following details:
5. Name: Family Expenses
6. Click on Submit.
7. Select Make Current to activate the update set.



Family Expenses | Update Set | X

dev306892.service-now.com/now/nav/ui/classic/params/target/sys_update_set.do%3Fsys_id%3D8fcd83b147736210cb35565a516d4370%26sysparm_record_target%3Dsys_update_set...

servicenow All Favorites History Workspaces Update Set - Family Expenses Search

Update Set Family Expenses Update Delete

* Name: Family Expenses Application: Global
State: In progress Created: 2025-09-06 01:15:11
Parent: Created by: admin
Release date: Merged to:
Install date:
Installed from:
Description:

Update Delete

Related Links
[Make This My Current Set](#)
[Merge With Another Update Set](#)
[Scan Update Set](#)

Customer Updates Update Set Logs Child Update Sets Install History

Created Search

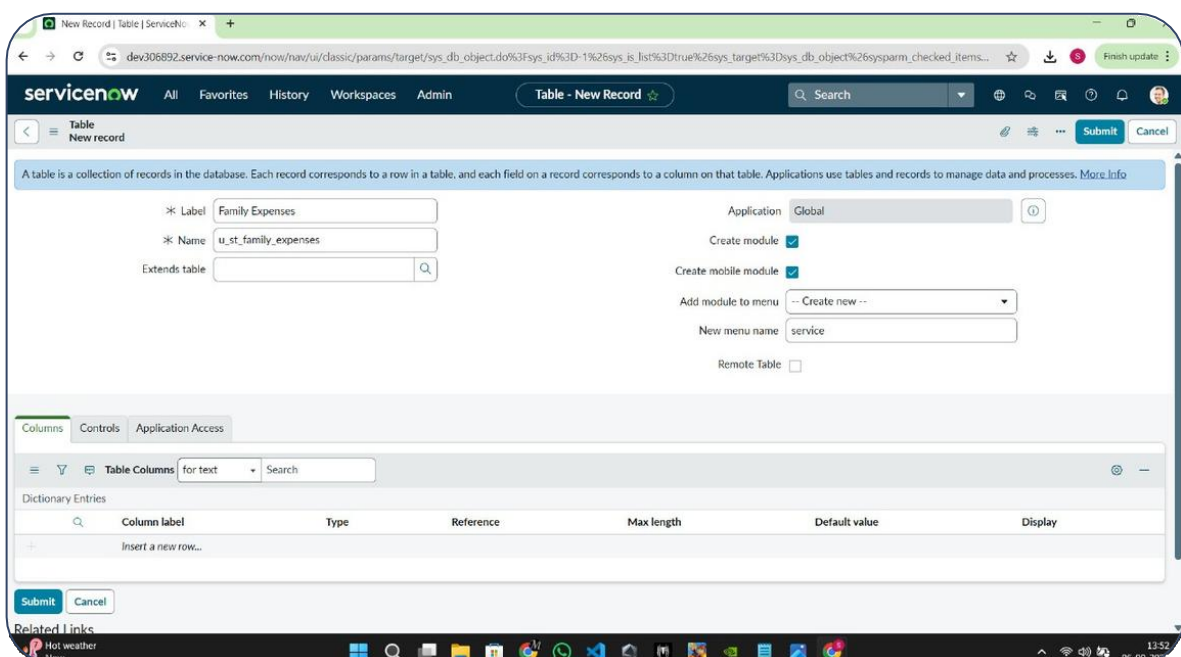
Update set = Family Expenses

Created	Type	View	Target name	Updated by	Remote update set	Action
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Milestone 4: Creation of Family Expenses Table

Activity 1: Create New Table

1. Open ServiceNow.
2. Go to All >> in the filter, search for Tables.
3. Click on New.
4. Enter the following details:
5. Label: Family Expenses
6. Name: (Auto-Populated)
7. New Menu Name: Family Expenditure
8. Go to the Header, right-click, and then click on Save.



dev306892.service-now.com/now/ui/classic/params/target/sys_db_object.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Dsys_db_object%26sysparm_checked_items...

servicenow All Favorites History Workspaces Admin 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 Family Expenses Application Global ⓘ

* Name u_st_family_expenses Create module ☒

Extends table Create mobile module ☒

Add module to menu -- Create new --

New menu name service

Remote Table ☐

Columns Controls Application Access

Table Columns for text Search

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
Insert a new row...					

Submit Cancel

Related Links

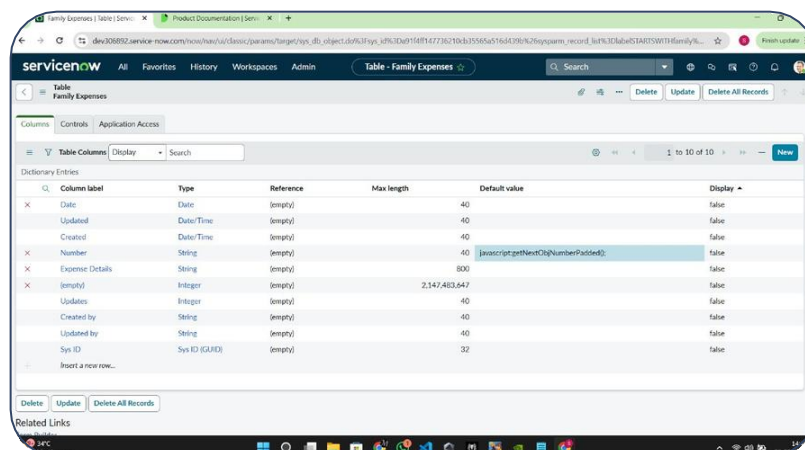
Hot weather Now

13:52 06-09-2024

Milestone 5 : Creation of Columns (Fields)

Activity 2: Add Columns to Family Expenses Table

1. Open the Family Expenses Table in ServiceNow.
2. Near Columns, double-click on Insert a new row.
3. Column Label: Number
4. Type: String
5. Double-click on Insert a new row again.
6. Column Label: Date
7. Type: Date
8. Double-click on Insert a new row again.
9. Column Label: Amount
10. Type: Integer
11. Double-click on Insert a new row again.
12. Column Label: Expense Details
13. Type: String
14. Max Length: 800
15. Go to the Header, right-click, and then click on Save.

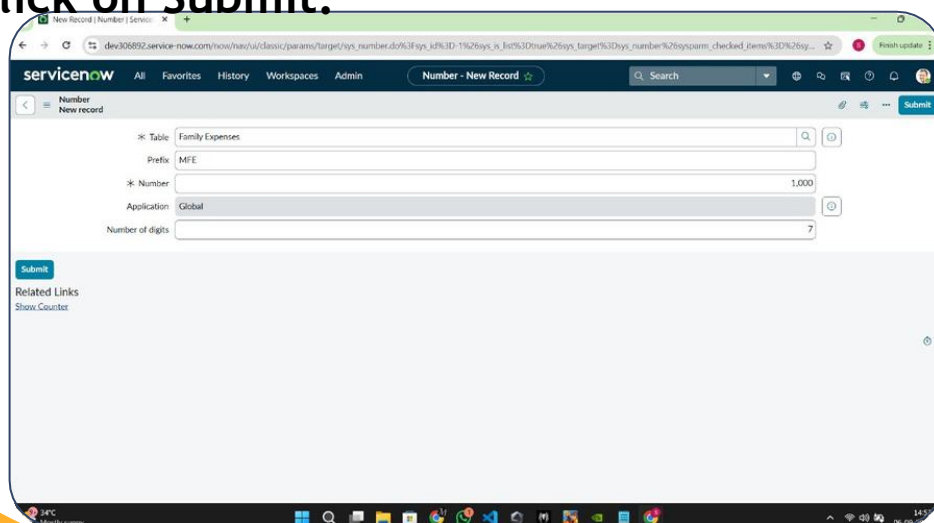


Column label	Type	Reference	Max length	Default value	Display
Date	Date	(empty)	40	false	false
Updated	Date/Time	(empty)	40	false	false
Created	Date/Time	(empty)	40	false	false
Number	String	(empty)	40	javascript: getNewObjNumberPadded();	false
Expense Details	String	(empty)	800	false	false
(empty)	Integer	(empty)	2,147,483,647	false	false
Updated	Integer	(empty)	40	false	false
Created by	String	(empty)	40	false	false
Updated by	String	(empty)	40	false	false
Sys ID	Sys ID (GUID)	(empty)	32	false	false

Milestone 6 : Making Number Field an Auto-Number

Activity 3: Configure Auto-Number for Number Field

1. Activity 1: Configure Auto-Number for Number Field
2. Open the Family Expenses Table in ServiceNow.
3. Double-click on the Number field/column.
4. Scroll down and click on Advanced View.
5. In Default Value:
6. Check the box for Use dynamic default.
7. Set Dynamic default value to Get Next Padded Number.
8. Click on Update.
9. Activity 2: Configure Number Maintenance
10. Go to All >> in the filter, search for Number Maintenance.
11. Select Number Maintenance.
12. Click on New.
13. Enter the following details:
14. Table: Family Expenses
15. Prefix: MFE
16. Click on Submit.



The screenshot shows the 'Number - New Record' form in ServiceNow. The form is titled 'Number - New Record' and has a 'Submit' button at the bottom left. The form fields are as follows:

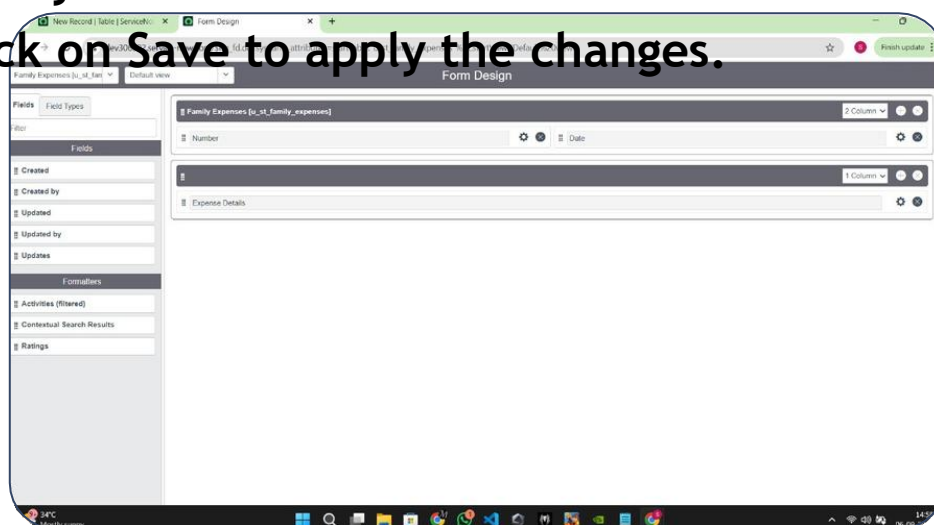
Field	Value
Table	Family Expenses
Prefix	MFE
Number	1,000
Application	Global
Number of digits	7

Below the form, there is a 'Related Links' section with a link to 'Show Counters'.

Milestone 7: Configure the Form

Activity 4: Customize Family Expenses Form

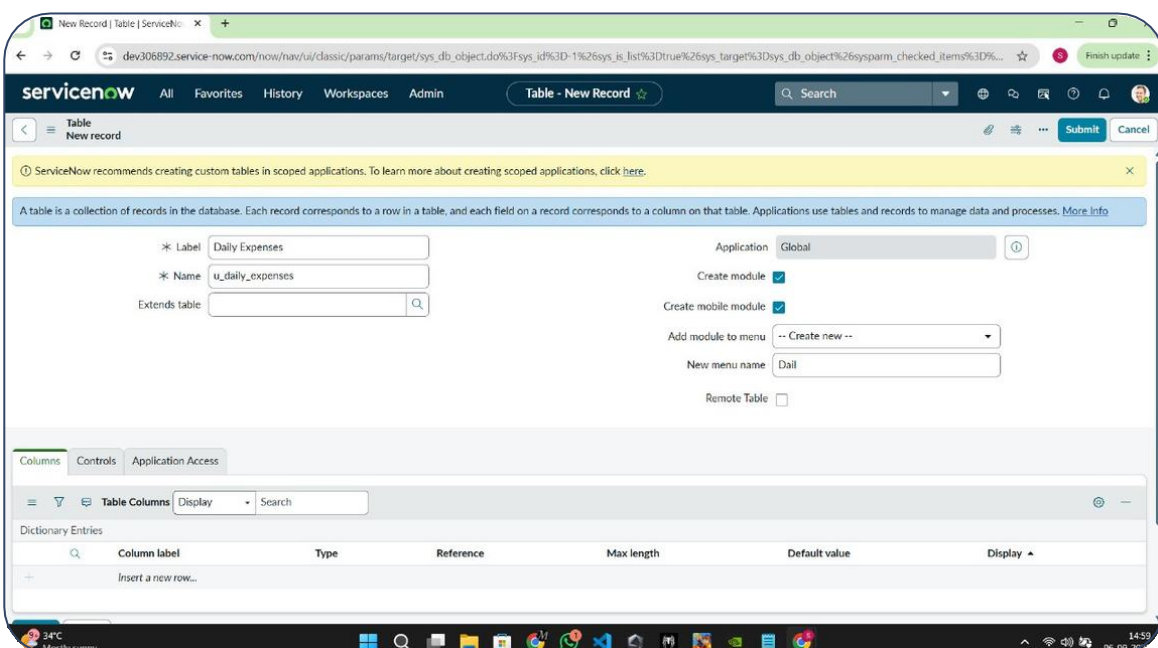
1. Go to All >> in the filter, search for Family Expenses.
2. Open Family Expenses.
3. Click on New to open a blank record form.
4. Go to the Header, right-click, then click on Configure >> select Form Design.
5. Use Drag & Drop to customize the form layout as per requirements.
6. Activity 2: Apply Field Properties
7. For the Number field, click on the gear icon and set it as Read-Only.
8. For the Date field, click on the gear icon and set it as Mandatory.
9. For the Amount field, click on the gear icon and set it as Mandatory.
10. Click on Save to apply the changes.



Milestone 8: Creation of Daily Expenses Table

Activity 1: Create New Table for Daily Expenses

1. Open ServiceNow.
2. Go to All >> in the filter, search for Tables.
3. Click on New.
4. Enter the following details:
5. Label: Daily Expenses
6. Name: (Auto-Populated)
7. Add Module to Menu: Family Expenditure
8. Go to the Header, right-click, and then click on Save.



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:

New menu name:

Remote Table: ☐

Columns Controls Application Access

Table Columns Display Search

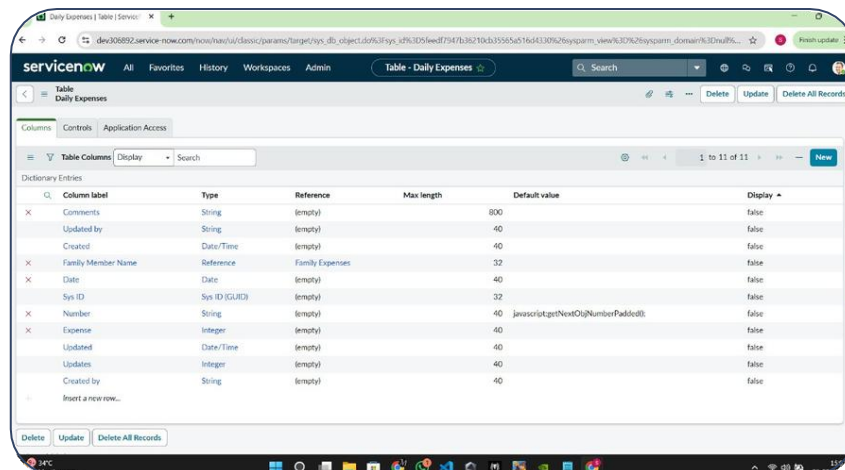
Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
Insert a new row...					

Milestone 9 : Creation of Columns (Fields) for Daily Expenses Table

Activity 2: Add Columns to Daily Expenses Table

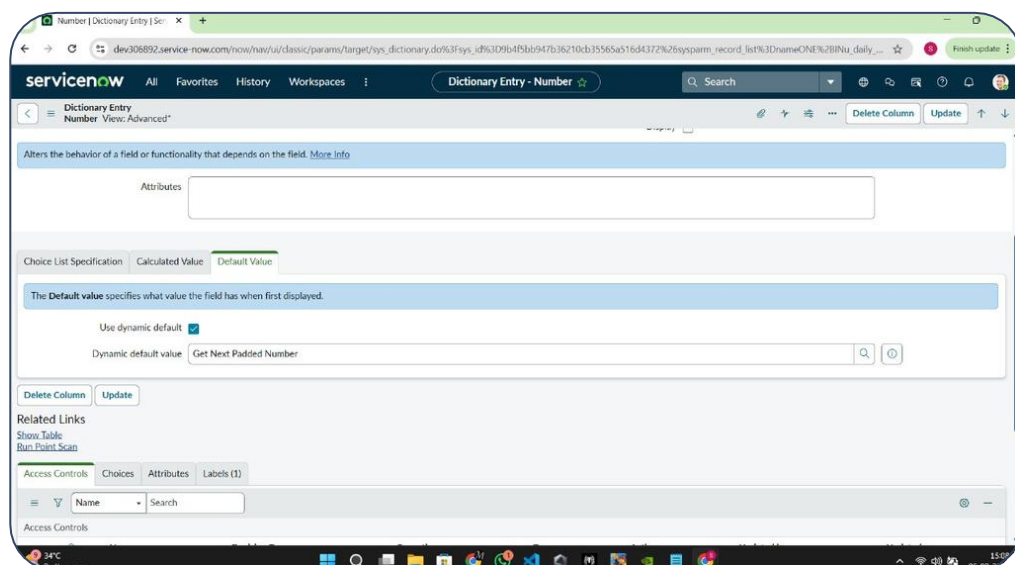
1. Open the Daily Expenses Table in ServiceNow.
2. Near Columns, double-click on Insert a new row.
3. Column Label: Number
4. Type: String
5. Double-click on Insert a new row again.
6. Column Label: Date
7. Type: Date
8. Double-click on Insert a new row again.
9. Column Label: Expense
10. Type: Integer
11. Double-click on Insert a new row again.
12. Column Label: Family Member Name
13. Type: Reference
14. Max Length: 800
15. Double-click on Insert a new row again.
16. Column Label: Comments
17. Type: String
18. Max Length: 800
19. Go to the Header, right-click, and then click on Save.



Milestone 10 : Making Number Field an Auto-Number

Activity 3: Configure Auto-Number for Number Field

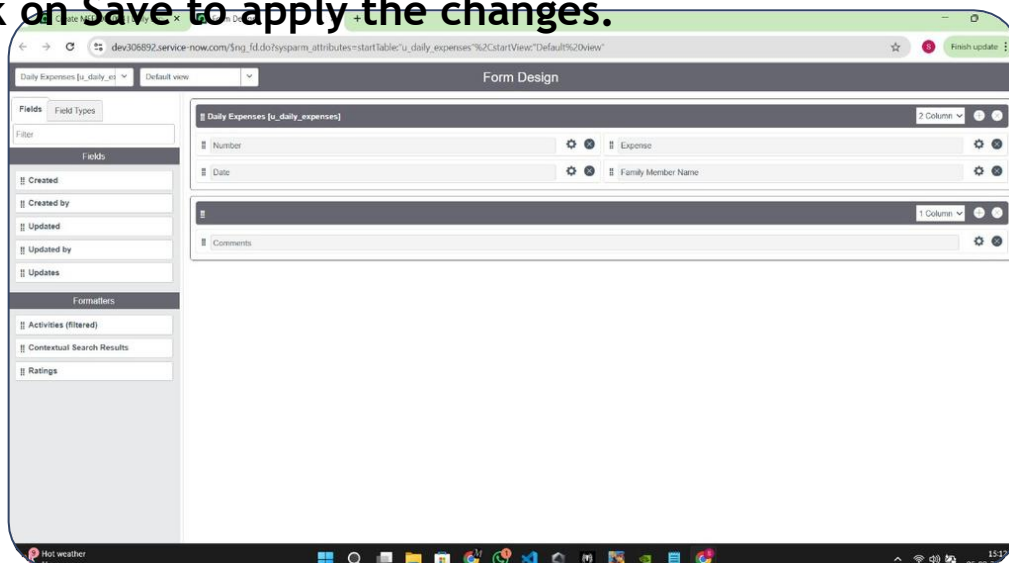
1. Open the Daily Expenses Table (or Family Expenses Table if configuring there) in ServiceNow.
2. Double-click on the Number field/column.
3. Scroll down and switch to Advanced View.
4. In Default Value:
5. Check the box Use dynamic default.
6. Set Dynamic default value to Get Next Padded Number.
7. Click on Update.
8. Activity 2: Configure Number Maintenance
9. Go to All >> in the filter, search for Number Maintenance.
10. Select Number Maintenance.
11. Click on New.
12. Enter the following details:
13. Table: Family Expenses
14. Prefix: MFE
15. Click on Submit.



Milestone 11: Configure the Form for Daily Expenses

Activity 4: Customize Daily Expenses Form

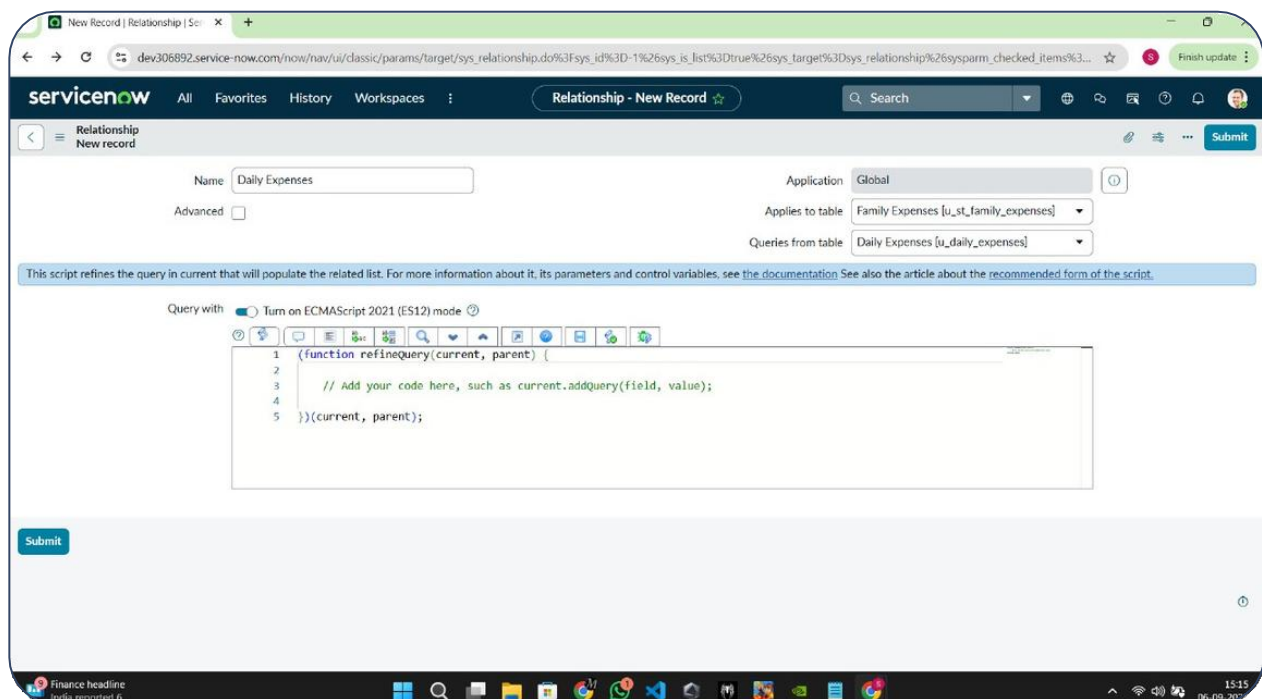
1. Go to All >> in the filter, search for Daily Expenses.
2. Open Daily Expenses.
3. Click on New to open a blank record form.
4. Go to the Header, right-click, then click on Configure >> select Form Design.
5. Use Drag & Drop to customize the form layout as per requirements.
6. Activity 2: Apply Field Properties
7. For the Number field, click on the gear icon and set it as Read-Only.
8. For the Date field, click on the gear icon and set it as Mandatory.
9. For the Family Member Name field, click on the gear icon and set it as Mandatory.
10. Click on Save to apply the changes.



Milestone 12 : Creation of Relationship between Family Expenses and Daily Expenses Tables

Activity 1: Define Relationship

1. Go to All >> in the filter, search for Relationships.
2. Open Relationships.
3. Click on New.
4. Enter the following details:
5. Name: Daily Expenses
6. Applies to Table: Family Expenses
7. Related List (Daily Expenses): Daily Expenses
8. Click on Save to establish the relationship.



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 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

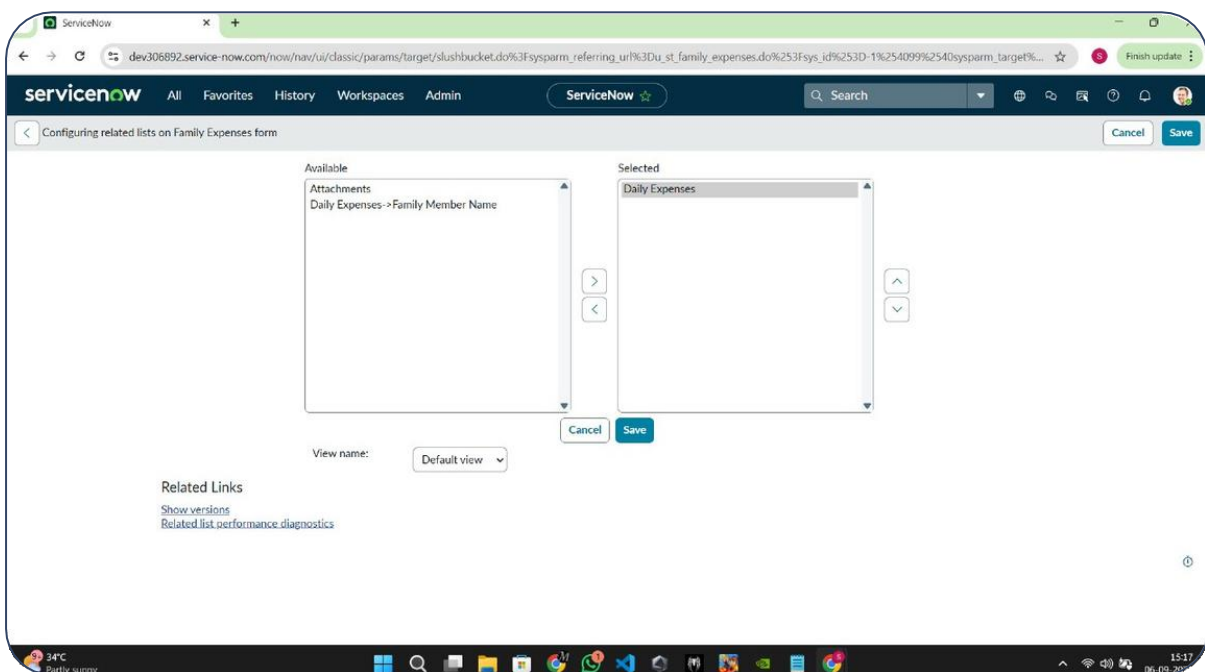
```
1 (function refineQuery(current, parent) {
2
3   // Add your code here, such as current.addQuery(field, value);
4
5 })(current, parent);
```

Submit

Milestone 13 : Configuring Related List on Family Expenses

Activity 1: Add Daily Expenses as Related List

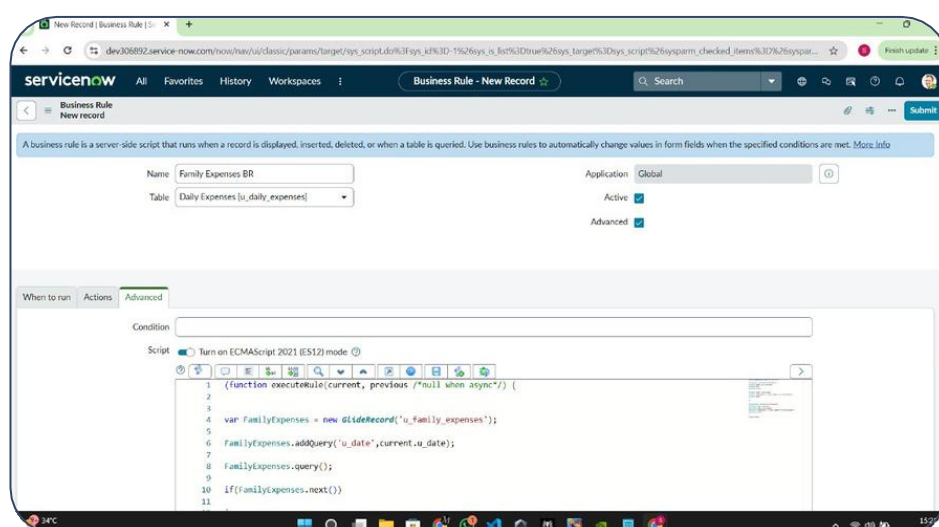
1. Go to All >> in the filter, search for Family Expenses.
2. Open Family Expenses.
3. Click on New to open a blank record form.
4. Go to the Header, right-click, then click on Configure >> select Related Lists.
5. Add Daily Expenses to the selected area.
6. Click on Save to apply the configuration.



Milestone 14 : Creation of Business Rules

Activity 1: Define Business Rule for Family Expenses

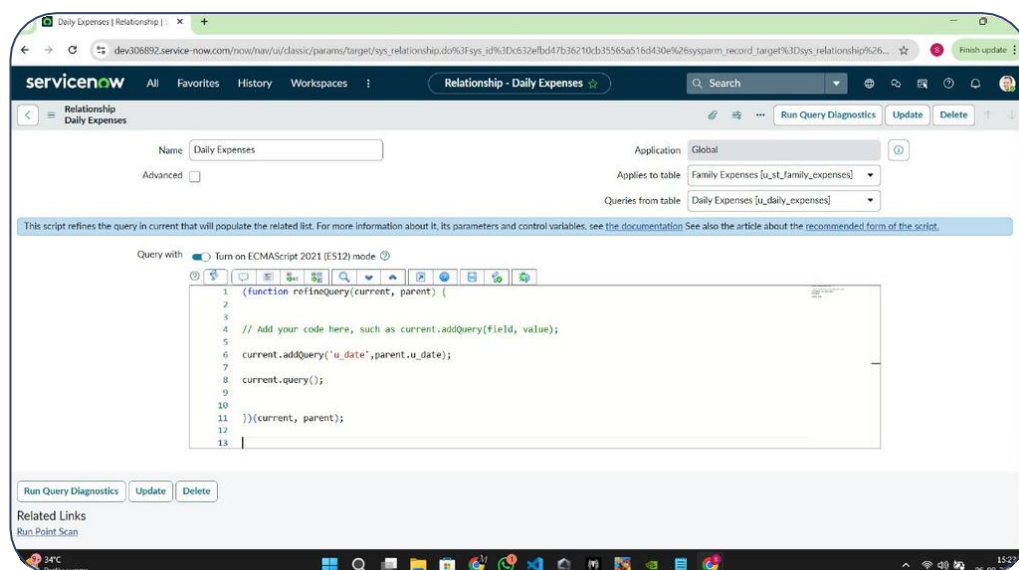
1. Go to All >> in the filter, search for Business Rules.
2. Under System Definition, select Business Rules.
3. Click on New.
4. Enter the following details:
5. Name: Family Expenses BR
6. Table: Daily Expenses
7. Check Advanced.
8. Under When to run, check both Insert and Update.
9. Activity 2: Add Script in Advanced Section
10. Paste the script:
11. Activity 3: Save the Business Rule
12. Go to the Header, right-click, and then click on Save.



Milestone 15 : Configure the Relationship

Activity 1: Define Business Rule for Family Expenses

1. Activity 1: Refine Daily Expenses Relationship
2. Go to All >> in the filter, search for Relationships.
3. Open Relationships.
4. Select the Daily Expenses Relationship.
5. Set Applies to Table as Family Expenses.
6. In Query with, add the following script:
(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)
7. Click on Update to save the configuration.



Conclusion:

The “Calculating Family Expenses using ServiceNow” project successfully demonstrates how a robust digital platform can simplify financial management for families. By leveraging ServiceNow’s capabilities, the system provides an intuitive, scalable, and real-time solution for tracking and managing expenses. The integration of features such as expense categorization, budget setting, and detailed reporting empowers users to gain insights into their spending patterns and make informed financial decisions. This project not only enhances financial transparency within the family but also encourages disciplined budgeting and improved financial well-being. Ultimately, it highlights the potential of combining modern technology with practical financial management to create a meaningful impact on everyday life.