

# Calculating Family Expenses Using Service Now

Team ID : NM2025TMID00273

Team Size : 3

Team Leader : Vishal T

Team member : Vignesh K

Team member : Satheesh S

## Sub Titles

- Introduction

- Project Objective
- Setting Up Service Now Instance
- Creation of New Update set
- Creation of Table (Family Expenses)
- Creation of Table (Daily Expenses)
- Creation of Relationship
- Configuring Related List on Family Expenses
- Creation of Business Rules
- Configure the Relationship
- Conclusion

## **Introduction**

### **Calculating Family Expenses Using Service Now**

A Guided project was designed to build a clear, flexible, and easy-to-use system for keeping track of and organizing family expenses through the ServiceNow platform.

## **Project Objective**

The goal of this project is to build a comprehensive family expenses calculation system that allows users to categorize and record expenses, set budgets, and track them in real time.

It also aims to establish relationships between tables for better organization of data.

## **Setting Up ServiceNow Instance**

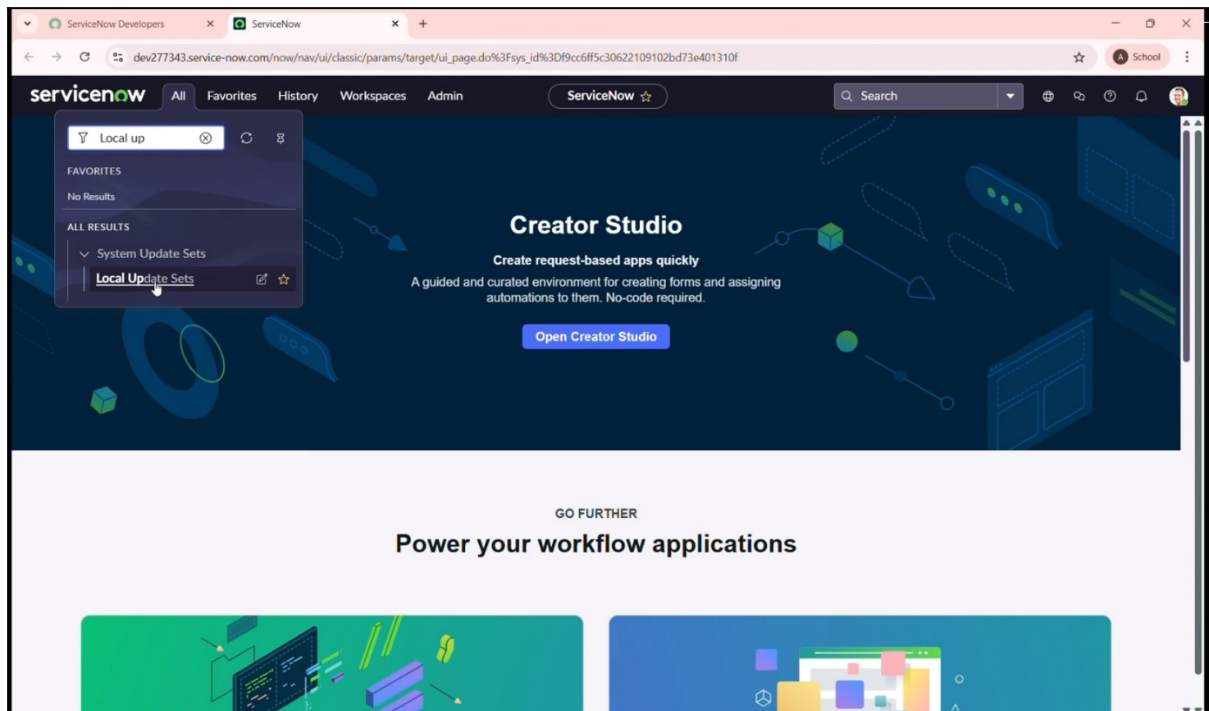
1. A personal developer instance (PDI) was created from ServiceNow to start building and testing the application.
2. Open "<https://developer.servicenow.com>".
3. Create a personal developer instance.
4. Click on Request Instance.
5. Submit the request.
6. Navigate to the ServiceNow platform.

My Instance		
INSTANCE STATUS	INSTANCE ACTION	ACTIVITY
<div>Online</div> <div>RELEASE</div> <div>okohama</div> <div>USER ROLE</div> <div>admin</div> <div>APP ENGINE STUDIO</div> <div>Installed</div> <div>REATOR STUDIO</div> <div>Installed</div>	<div>Activate Plugin</div> <div>Manage Email Properties</div> <div>Release Instance</div> <div>Change User Role</div> <div>Remove Demo Data</div> <div>Reset and Wipe Instance</div> <div>Manage instance password</div> <div>Refresh Instance</div>	<div>Instances with no activity for over 10 days will be claimed back in to the pool.</div>

## Creation of New Update Set

An update set was created to capture all customizations and configurations during the project development.

Click Local Update Set



Enter the Details:

Name: Family Expenses, then click Submit.

A screenshot of the ServiceNow 'Create New Update Set' form. The browser address bar shows a URL from dev277343.service-now.com. The ServiceNow logo is in the top left, with navigation tabs for All, Favorites, History, Workspaces, and Admin. The page title is 'Update Set - Create New Update Set'. The form has a left-hand menu with 'Update Set' and 'New record'. The form fields are: '\* Name' (text input with 'Family Expenses'), 'State' (dropdown menu with 'In progress'), 'Parent' (text input with a search icon), 'Release date' (text input with a calendar icon), and 'Description' (text area). The 'Application' field is set to 'Global'. At the bottom left are buttons for 'Submit' and 'Submit and Make Current'. At the bottom right are buttons for 'Submit' and 'Submit and Make Current'.

# Creation of Table (Family Expenses)

A new table was added to store core family expense details such as category, amount, and date.

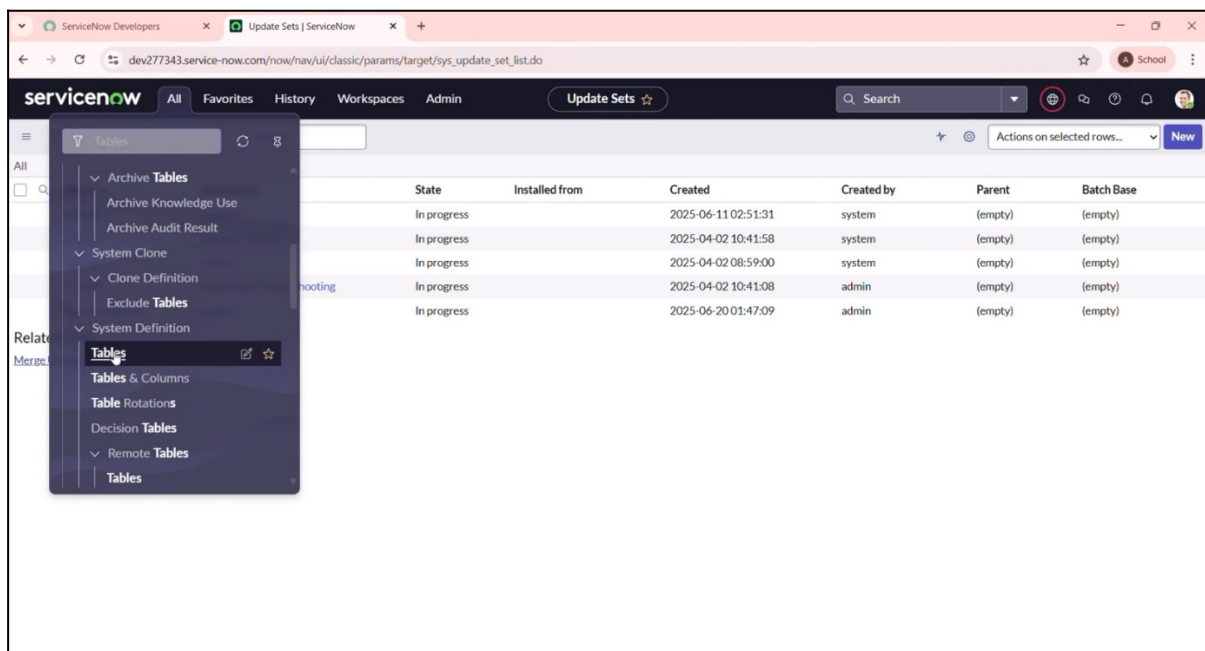
## 1. Creation of family expenses table

a. Search for tables and click New.

b. Label: Family Expenses

Name: Auto – Populated

New menu name: Family Expenditure



Label	Name	Extends table	Extensible	Updated
Account Subscription Entitlement	account_subscription_entitlement	(empty)	false	2025-04-02 09:47:13
Adaptive Authentication Event	adaptive_auth_event	(empty)	false	2025-04-02 09:22:59
Agent Assist Recommendation	agent_assist_recommendation	Application File	false	2025-04-02 09:24:48
MID Server File	agent_file	(empty)	false	2025-04-02 09:03:14
Record Producer Configuration	aisa_rp_config	Application File	false	2025-04-02 09:30:16
Search Actions	aisa_ui_action	Application File	false	2025-04-02 09:30:16
AI Search ACL Overrides	ais_acl_overrides	Application File	false	2025-04-02 08:39:41
AI Search Active Table Ingestion Tracker	ais_active_table_ingestion_tracker	(empty)	false	2025-04-02 08:39:39
AI Search Async Genius Result	ais_async_genius_result	(empty)	false	2025-04-02 08:39:44
AI Search Async Request	ais_async_request	(empty)	false	2025-04-02 08:39:45
AI Search Child Table	ais_child_table	Application File	false	2025-04-02 08:39:43
AI Search Configuration Attribute	ais_configuration_attribute	(empty)	false	2025-04-02 08:39:39
AI Search Connection	ais_connection	(empty)	false	2025-04-02 08:39:44
AI Search Country To Search Language	ais_country_to_search_language	Application File	false	2025-04-02 08:39:45
Custom Matcher	ais_custom_matcher	Application File	false	2025-04-02 08:39:42
AI Search Indexed Source	ais_datasource	Application File	false	2025-04-02 08:39:44
AI Search Indexed Source Attribute	ais_datasource_attribute	Application File	false	2025-04-02 08:39:39
AI Search Indexed Source Field Attribute	ais_datasource_field_attribute	Application File	false	2025-04-02 08:39:40
AI Search Indexed Source Statistics	ais_datasource_stats	(empty)	false	2025-04-02 08:39:41

ServiceNow recommends creating custom tables in scoped applications. To learn more about creating scoped applications, see [Creating Scoped Applications](#).

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 in that table. Applications use tables and records to manage data and processes. [More Info](#)

\* Label:

\* Name:

Application:

Create module: ☒

Create mobile module: ☒

Add module to menu:

New menu name:

Remote Table: ☒

**Table Columns** for text

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

Submit Cancel

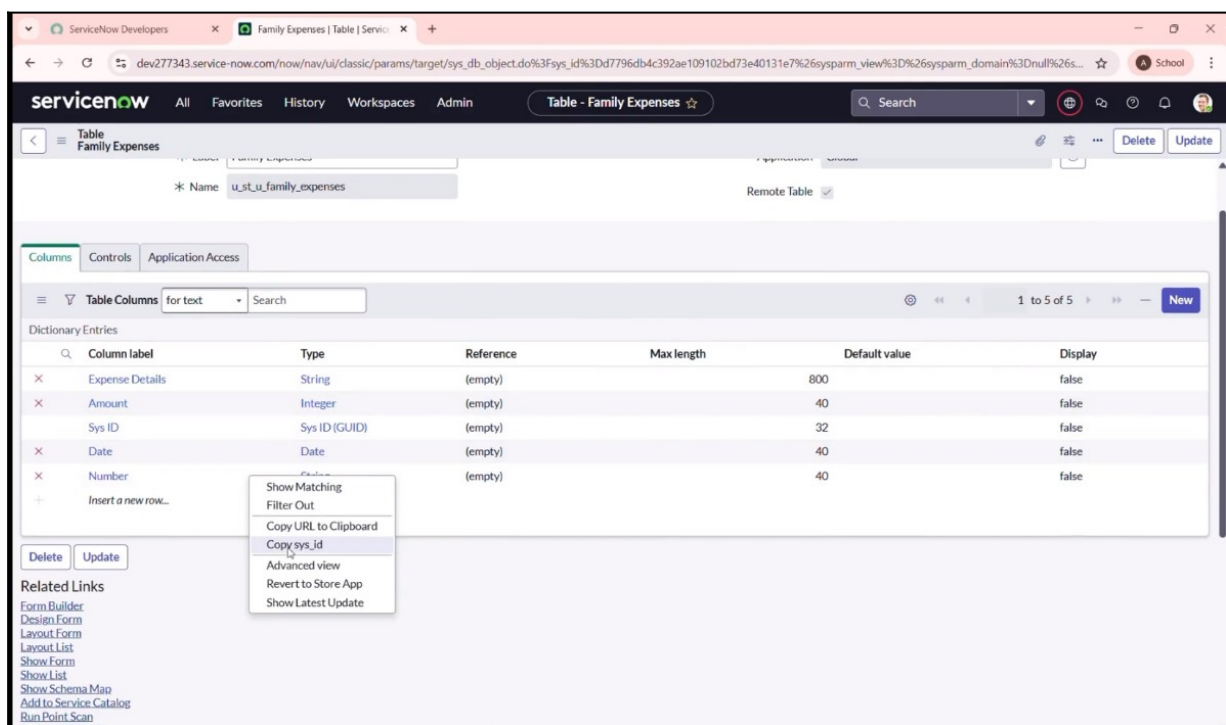
Related Links  
[Track in Update Sets](#)

c. Go to the header, right-click, and click Save.

## 2. Creation of Columns (Fields)



- a. Insert a new row
- b. Column label: Number  
Type: String
- c. Column label: Date  
Type: Date
- d. Column label: Amount  
Type: Integer
- e. Column label: Expense Details  
Type: String  
Max length: 800



### 3. Making Number Field An auto – Number

a. Double-click the Number field.

b. Click on Advanced view

c. Click Default value

Use dynamic default: checks the box

Dynamic default value: Get Next Padded Number

d. Click Update button

The screenshot shows the ServiceNow interface for configuring a Dictionary Entry for a Number field. The page is titled "Dictionary Entry - Number" and is in "View: Advanced" mode. The configuration includes the following fields and options:

- Column name:** u\_number
- Max length:** 40
- Read only:** ☐
- Mandatory:** ☐
- Display:** ☐

Below these fields is a section for "Attributes" with a text input field. Further down, there are tabs for "Choice List Specification", "Calculated Value", and "Default Value". The "Default Value" tab is selected, showing a description: "The Default value specifies what value the field has when first displayed." Under this tab, the "Use dynamic default" checkbox is checked, and the "Dynamic default value" is set to "Get Next Padded Number". At the bottom of the configuration area, there are "Delete Column" and "Update" buttons. The "Update" button is highlighted with a mouse cursor. Below the configuration area, there are "Related Links" (Show Table, Run Point Scan, Default view) and a section for "Access Controls" (Choices, Attributes, Labels (1)).

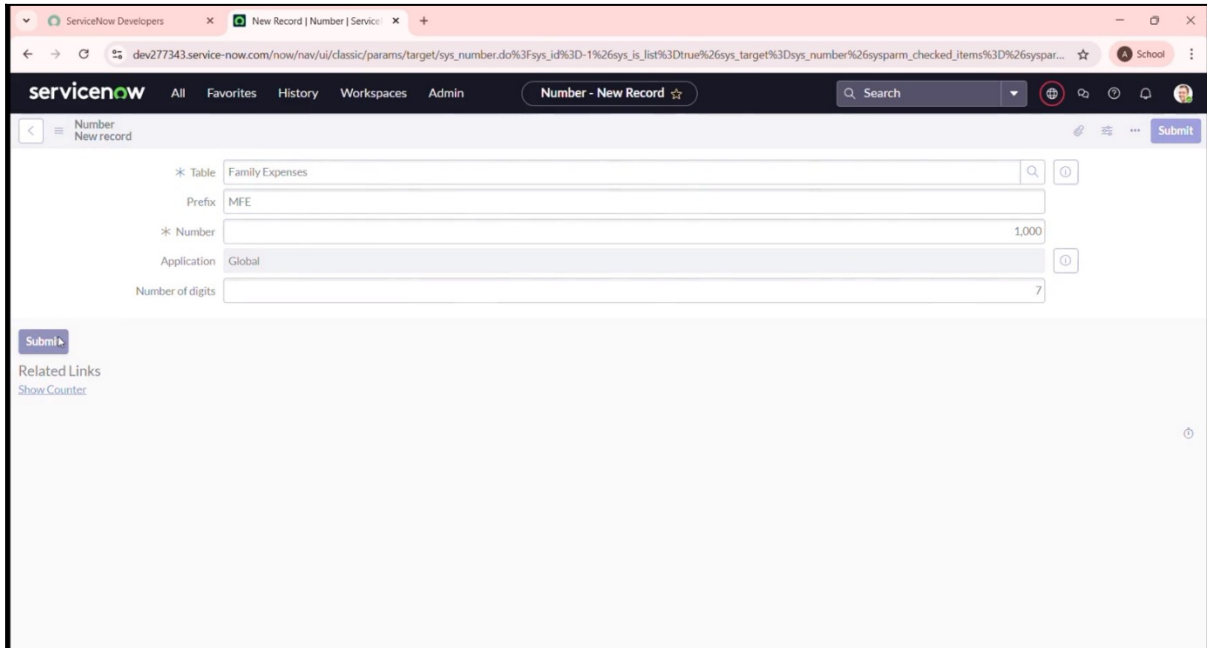
e. Go to all – search number maintenance select “Number Maintenance”

f. Click on new

g. Table: Family Expenses

Prefix: MFE

h. Click on “Submit” button



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

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

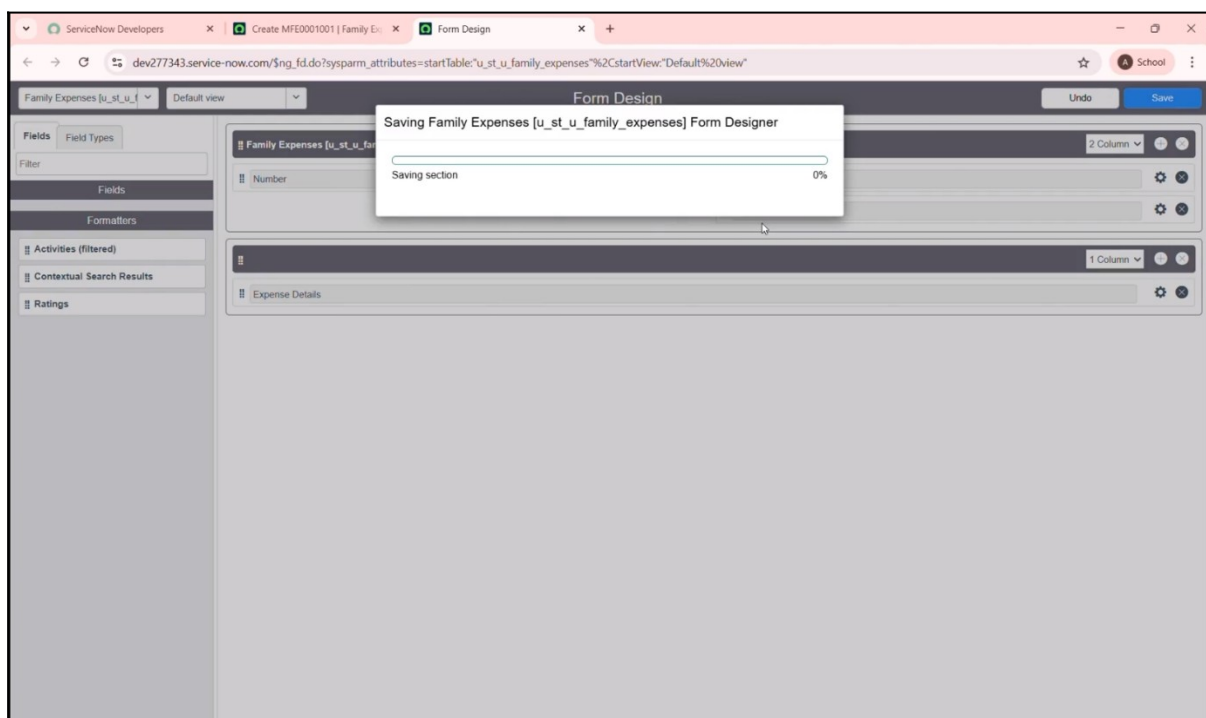
Below the form fields, there is a 'Submit' button and a 'Related Links' section with a 'Show Counter' link.

## 4. Configure The Form

a. Search for Family Expenses and open it.

b. Click New

- c. Go to the Header >> Right click >> click on configure select from design
- d. Make the Number field read-only by clicking the gear icon and checking "Read-Only."
- e. Make Date and Amount mandatory fields by checking the mandatory option.
- f. Click save



## Creation of Table (Daily Expenses)

A related table was created to record individual daily expense entries linked to the main family record.

### 1. Creation of daily expenses table

a. Go to All >> search “Tables” >> click new

b. Enter the details

Label: Daily Expenses

Name : Auto – Populated

Add Module to menu : Family Expenditure

e. Click save

ServiceNow Developers | New Record | Table | ServiceNow

dev277343.service-now.com/now/nav/ui/classic/params/target/sys\_db\_object.do%3Fsys\_id%3D-1%26sys\_is\_list%3Dtrue%26sys\_target%3Dsys\_db\_object%26sysparm\_checked\_items%3D%26sys...

servicenow | All | Favorites | History | Workspaces | Admin | Table - New Record | Search

Table - New record

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 in a table. Applications use tables and records to manage data and processes. [More info](#)

\* Label: Daily Expenses

\* Name: u\_daily\_expenses

Extends table:

Save  
Track in Update Sets  
Configure  
Export  
Create Favorite  
Copy URL  
Copy sys\_id  
Reload form

Create mobile module ☒

Add module to menu: Family Expenditure

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  
[Track in Update Sets](#)

## 2. Creation of Columns (Fields)

a. Insert a new row for each column.

b. Column label: Number

Type: String

c. Column label: Date

Type: Date

d. Column label: Expense

Type: Reference

e. Column label: Family Member Name

Type: Reference

Max length: 800

f. Column label: Comments

Type: String

Max length: 800

g. Click on Save

The screenshot shows the ServiceNow Table Editor for 'Table - Daily Expenses'. The interface includes a top navigation bar with 'ServiceNow Developers' and 'Daily Expenses | Table | ServiceNow'. Below the navigation bar, there's a search bar and a 'Table - Daily Expenses' header. The main area displays a table of dictionary entries with columns: Column label, Type, Reference, Default value, and Display. The 'Expense' row is highlighted in blue. A context menu is open over the 'Expense' row, showing options like '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' row has a 'Reference' type and a 'Max length' of 800. The 'Comments' row has a 'String' type and a 'Max length' of 800. Below the table, there are buttons for 'Delete', 'Update', and 'Delete All Records'. At the bottom, there's a 'Related Links' section with links like 'Form Builder', 'Design Form', 'Layout List', 'Show Form', 'Show List', 'Show Schema Map', 'Add to Service Catalog', 'Run Point Scan', and 'Explore REST API'.

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

### 3. Making Number Field an Auto - Number

- a. Double click on the number Field
- b. Click Advanced View
- c. Click Default value
  - Use dynamic default: checks the box
  - Dynamic default value: Get Next Padded Number
- d. Click Update
- e. Go to all >> search for “number Maintenance select number Maintenance
- f. Click new
- g. Table: Daily Expenses
  - Prefix: DFE
- h. Click on submit

ServiceNow Developers

Daily Expenses | Table | ServiceNow

dev277343.service-now.com/now/nav/ui/classic/params/target/sys\_db\_object.do%3Fsys\_id%3D3D538b2d78c392ae109102bd73e401311b%26sysparm\_view%3D%26sysparm\_domain%3Dnull%26...

ServiceNow

AllFavoritesHistoryWorkspacesAdmin

Table - Daily Expenses

Search

Table Daily Expenses

ColumnsControlsApplication Access

Table Columnsfor textSearch

1 to 10 of 10New

Dictionary Entries

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

DeleteUpdateDelete All Records

Related Links

[Form Builder](#)[Design Form](#)[Layout Form](#)[Layout List](#)[Show Form](#)[Show List](#)[Show Schema Map](#)

ServiceNow Developers

Number | Dictionary Entry | ServiceNow

dev277343.service-now.com/now/nav/ui/classic/params/target/sys\_dictionary.do%3Fsys\_id%3D3D3fbb21b8c392ae109102bd73e401311e%26sysparm\_view%3Dadvanced

ServiceNow

AllFavoritesHistoryWorkspaces

Dictionary Entry - Number

Search

Dictionary Entry Number View: Advanced

Delete ColumnUpdate

Display

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

Attributes

Choice List SpecificationCalculated ValueDefault Value

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

Use dynamic default

Dynamic default valueGet Next Padded Number

Delete ColumnUpdate

Related Links

[Show Table](#)[Run Point Scan](#)[Default view](#)

Access ControlsChoicesAttributesLabels (1)

NameSearch

Access Controls

Name	Decision Type	Operation	Type	Active	Updated by	Updated
------	---------------	-----------	------	--------	------------	---------

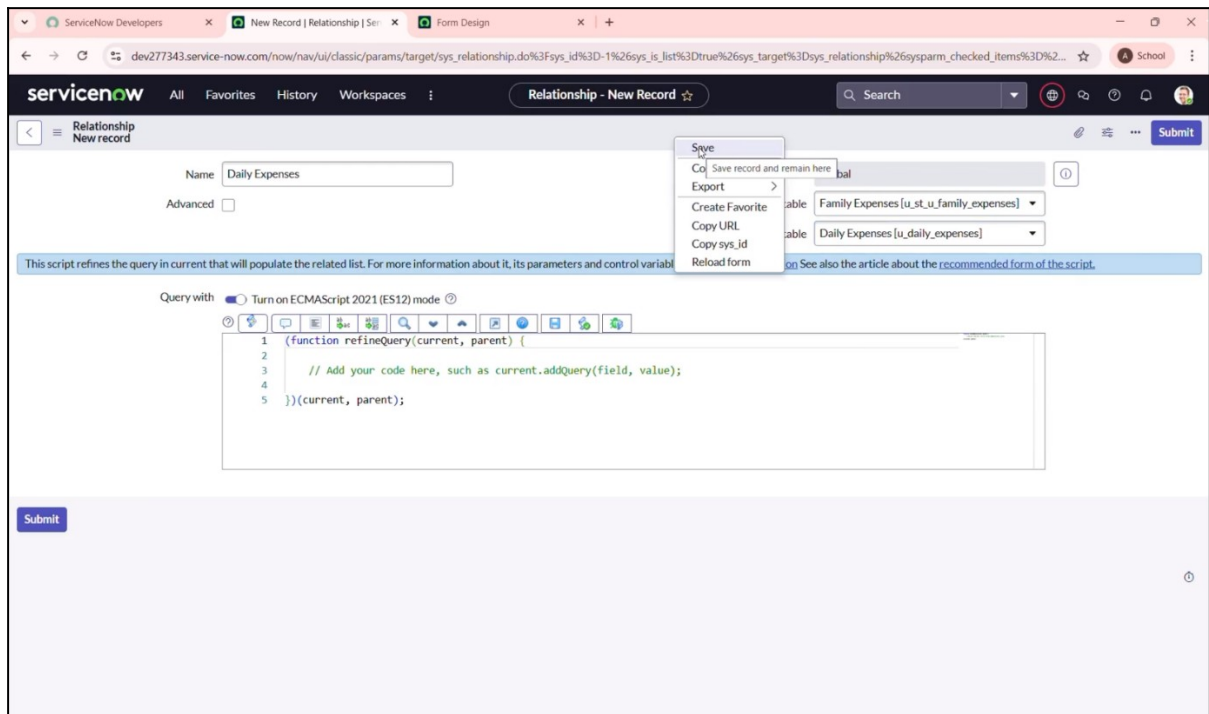


# Creation Of Relationship

Define the relationship between the Family Expenses and Daily Expenses tables to enable hierarchical tracking.

## Creation of relationship between family expenses and daily expenses tables

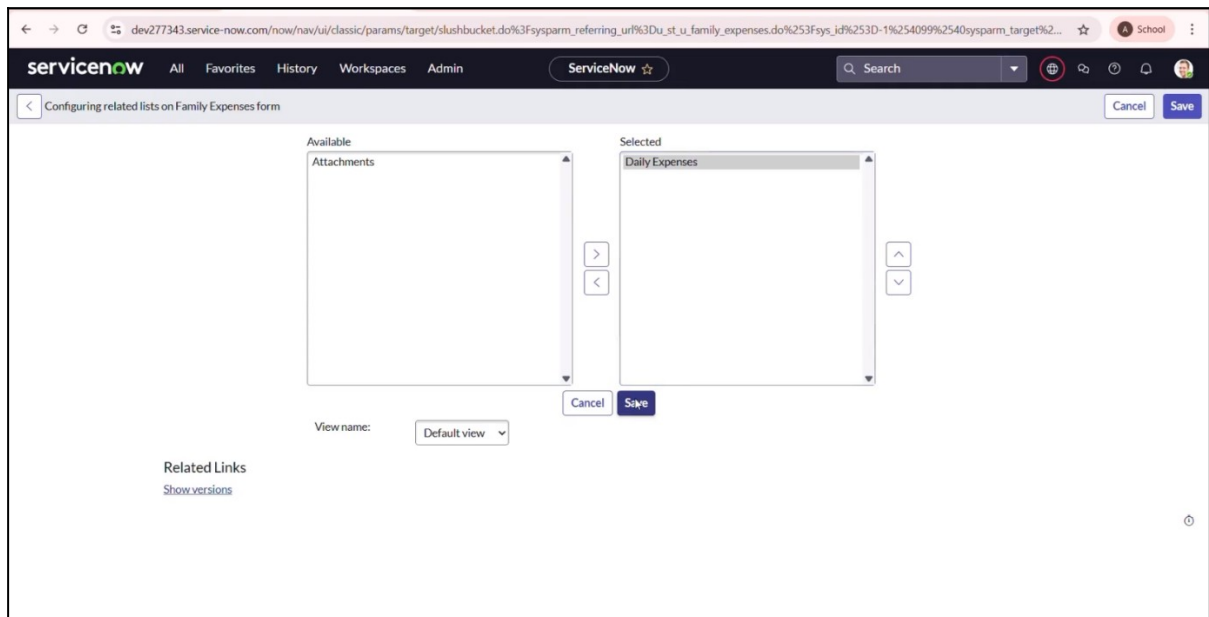
- a. Go to all >> search Relationships >> open relationships
- b. Click on New
- c. Name : Daily Expenses
  - Applies to table : Select Family Expenses
  - Daily Expenses : Select Daily Expenses
- d. Click save



# Configuring Related list on family expenses

Set up a related list in the family expenses form to view all liked daily expenses for easy reference

- a. Go to all>>search "Family Expenses">>open family Expenses
- b. Click new >> configure
- d. add Daily Expenses to the Selected area
- e. Click on save



## Creation of Business Rules

Implemented business logic using Business Rules to automate tasks like field validations, updates, or notifications.

- a. Go to all>>search>>Business Rules
- b. Click new
- c. Name : Family Expenses BR  
Table : Select Daily Expenses
- d. In when to run check insert and update
- e. Write the code

A business 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. [More Info](#)

Name:

Table:

Application:

Active: ☒

Advanced: ☒

When to run:

Script: ☒ Turn on ECMAScript 2021 (ES12) mode

```

1 (function executeRule(current, previous /*null when async*/) {
2
3   // Add your code here
4
5 })(current, previous);

```

## Configure the Relationship

Used ServiceNow's dictionary setting to fine-tune the relationship (one-to-many) between the tables for accurate data linkage.

- Go to all>>search>>open relationship
- Open Daily Expenses Relationship
- For applies to table : Select Family Expenses
- In Query with
- Click Update

ServiceNow Developers | Daily Expenses | Relationship |

dev277343.service-now.com/now/nav/ui/classic/params/target/sys\_relationship.do%3Fsys\_id%3Db9bda17cc392ae109102bd73e40131b7%26sysparm\_record\_target%3Dsys\_relationship%26sys...

Relationship - Daily Expenses

Name: Daily Expenses

Application: Global

Advanced: ☐

Applies to table: Family Expenses [u\_st\_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

```
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);
```

Update Delete

Related Links

[Run Point Scan](#)

ServiceNow Developers | ServiceNow

dev277343.service-now.com/now/nav/ui/classic/params/target/ui\_page.do%3Fsys\_id%3Df9cc6ff5c30622109102bd73e401310f

ServiceNow

Creator Studio

Create request-based apps quickly

A guided and curated environment for creating forms and assigning automations to them. No-code required.

Open Creator Studio

GO FURTHER

Power your workflow applications

# Conclusion

Used ServiceNow to implement and tested the end-to-end application and confirmed that it allows for efficient recording, tracking, and management of family expenses, providing users with a real-time financial overview.