

PROJECT DESIGN PHASE

Date	01/11/2025
Team ID	NM2025TMID04001
Project Name	Calculating Family Expenses using Service Now

Introduction

The design phase focuses on creating the structure and layout of the Family Expense Calculation System. In this phase, the database tables, forms, workflows, and reports are designed using the ServiceNow platform.

Steps:

1. Creation of new update set:

The screenshot shows a ServiceNow web interface for creating a new update set. The title bar reads "Update Set - Create Family Expenses 2". The main form has the following fields:

- * Name: Family Expenses (highlighted with a green border)
- State: In progress
- Parent: (empty field)
- Release date: (empty field)
- Description: (empty text area)

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

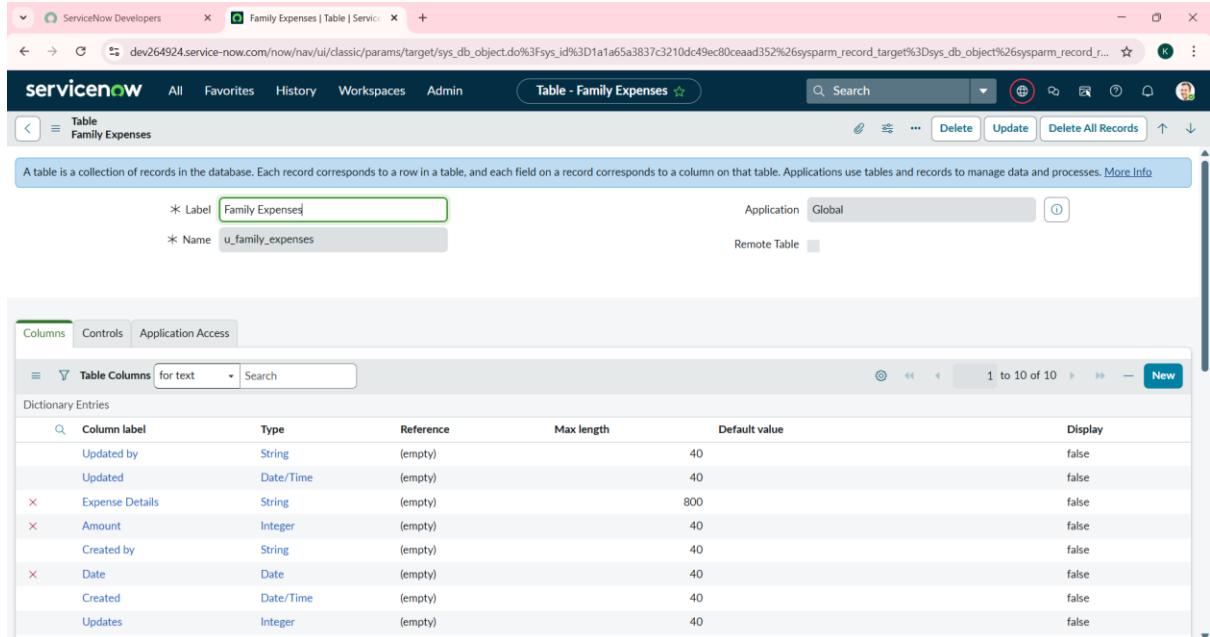
Go to All >> In the filter search for Local Update set > click on New.

Enter the Details as:

Name : Family Expenses then click submit and make current

2.Table creation:

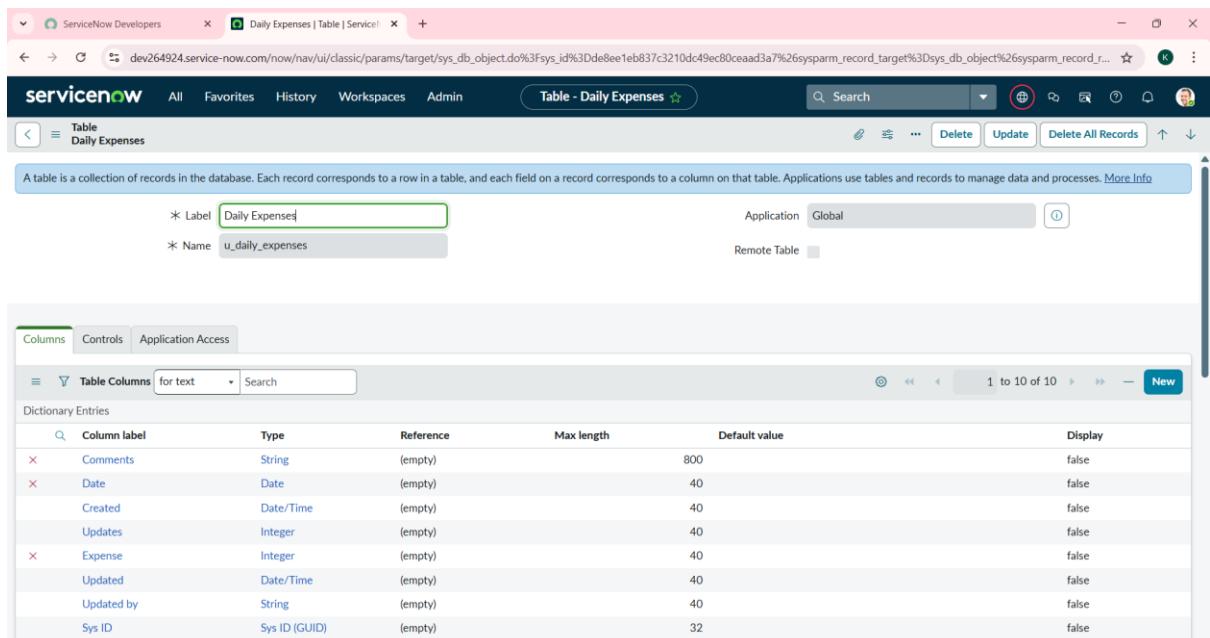
Family expenses table:



The screenshot shows the ServiceNow Table configuration interface for the 'Family Expenses' table. At the top, there are tabs for 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The current tab is 'Table - Family Expenses'. Below the tabs, there are fields for 'Label' (set to 'Family Expenses') and 'Name' (set to 'u_family_expenses'). To the right, there are buttons for 'Search', 'Delete', 'Update', and 'Delete All Records'. A note below the fields states: '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 also present. The main area displays a table of columns with the following data:

Column label	Type	Reference	Max length	Default value	Display
Updated by	String	(empty)	40		false
Updated	Date/Time	(empty)	40		false
Expense Details	String	(empty)	800		false
Amount	Integer	(empty)	40		false
Created by	String	(empty)	40		false
Date	Date	(empty)	40		false
Created	Date/Time	(empty)	40		false
Updates	Integer	(empty)	40		false

Daily expenses table:



The screenshot shows the ServiceNow Table configuration interface for the 'Daily Expenses' table. The layout is identical to the 'Family Expenses' table, with tabs for 'All', 'Favorites', 'History', 'Workspaces', and 'Admin', and the current tab being 'Table - Daily Expenses'. The 'Label' is set to 'Daily Expenses' and 'Name' is set to 'u_daily_expenses'. The main area displays a table of columns with the following data:

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

3.Creation of relationship:

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.

The screenshot shows the ServiceNow Relationship editor interface. At the top, there's a navigation bar with tabs like 'All', 'Favorites', 'History', and 'Workspaces'. The main title is 'Relationship - Daily Expenses'. Below the title, there are several input fields: 'Name' (set to 'Daily Expenses'), 'Application' (set to 'Global'), 'Advanced' (checkbox), 'Applies to table' (set to 'Family Expenses [u_family_expenses]'), and 'Queries from table' (set to 'Daily Expenses [u_daily_expenses]'). A note below these fields says: '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 note is a code editor window containing the following ECMAScript 2021 (ES12) code:

```
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 }) (current, parent);  
11 }));
```

At the bottom of the editor, there are buttons for 'Run Query Diagnostics', 'Update', and 'Delete'. To the left of the editor, there's a sidebar with 'Related Links' and a 'Run Point Scan' button.

4.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 Business Rule configuration page for 'Family Expenses BR'. The 'Name' field is set to 'Family Expenses BR', 'Application' is 'Global', and 'Table' is 'Daily Expenses [u_daily_expenses]'. The 'Active' and 'Advanced' checkboxes are checked. The 'When to run' tab is selected, showing 'When' set to 'before' and 'Order' set to '100'. Under 'When to run', 'Insert' and 'Update' checkboxes are checked, while 'Delete' and 'Query' are unchecked. There are buttons for 'Add Filter Condition' and 'Add OR Clause', and a dropdown for 'choose field', 'oper', and 'value'. A note at the bottom says 'javascript:void(0)'.

Configure the Relationship:

The screenshot shows the ServiceNow Relationship configuration page for 'Daily Expenses'. The 'Name' field is set to 'Daily Expenses', 'Application' is 'Global', and 'Advanced' is unchecked. 'Applies to table' is set to 'Family Expenses [u_family_expenses]' and 'Queries from table' is set to 'Daily Expenses [u_daily_expenses]'. A note at the top says 'This script refines the query in current that will populate the related list.' Below it is a code editor with ECMAScript 2021 (ES12) mode turned on. The code is as follows:

```

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 })(current, parent);
11

```

At the bottom, there are buttons for 'Run Query Diagnostics', 'Update', and 'Delete', and a link to 'Related Links'.

Conclusion

The design phase successfully established the structure and layout of the Family Expense Calculation System in ServiceNow. During this phase, the tables, forms, and workflows were carefully planned to ensure smooth data flow and easy user interaction. The design provides a strong foundation for the development phase, ensuring that the system will function efficiently and meet user requirements for accurate expense tracking and reporting.