

# INTRODUCTION

## **Project: “Calculating Family Expenses using Service Now “**

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. While ServiceNow is primarily designed for enterprise-level workflows and IT service management, it can be adapted to track and manage family expenses, offering a structured approach to budgeting and financial oversight. This involves creating custom applications or workflows within the ServiceNow platform to record income, expenses, and generate reports for analysis.

# IDEATION PHASE

## **PROBLEM STATEMENT:**

The ideation phase of developing a ServiceNow solution for managing family expenses, a strong problem statement is crucial. It should clearly articulate the user, their needs, and the problem you are trying to solve. A good problem statement helps focus the ideation process and leads to more targeted solutions.

Example: “They struggle to keep track of where their money is going, often overspending on non-essential items and struggling to save for future goals.”

Challenge:

- Calculating family expenses within ServiceNow presents unique challenges due to its focus on enterprise
- IT and project management. While ServiceNow is powerful for managing large-scale financial data, adapting it for individual or family budgeting requires customization and may not be the most intuitive solution. Some key challenges include the lack of

pre-built family budgeting modules, potential complexity in data input and reporting, and the need for significant configuration to align with personal financial needs.

## OBJECTIV:

- While ServiceNow is not typically used for personal household budgeting,
- its financial management capabilities can be adapted to track and calculate family expenses. ServiceNow can be leveraged to categorize expenses,
- track spending, and analyze financial data, providing a more structured approach to managing family finances.

## REQUIREMENT ANALYSIS

### SOLUTION REQUIREMENT:

Team id	LTVIP2025TMID30577
Project name	Calculating family expenses using Service now

Following are the Functional requirements.

FR NO	Function requirement	Sub Requirement
FR-1	Service Now instance	Setting up service now instance
FR-2	Creation of new update set	Creation of new update set
FR-3	Creation of table	Family expenses table , creation of columns, making

		number field and auto - number, configure the form
FR-4	Creation of table (daily expenses)	Daily expenses table, creation of columns, making number field and auto -number, configure the form
FR-5	Creation of relationship	Creation of relationship between family expenses and daily expenses tables
FR-6	Configure related list on family expenses	Configuring related list on family expenses
FR-7	Creation of business rules	Creation of business rules
FR-8	Configure the relationship	Configure the relationship

## Non-functional Requirements:

Following are the functional requirements

FR NO.	Non-functional Requirements	Description

NFR-1	Usability	While ServiceNow is primarily a platform for enterprise IT workflows and not designed for personal finance management, it can be leveraged to track and manage family expenses by adapting its features to suit that purpose.
NFR-2	Security	ServiceNow's capabilities can be leveraged to track and manage family expenses, but it's not a built-in feature for personal finance management. While ServiceNow excels at enterprise-level tasks like IT service management, security operations,
NFR-3	Reliability	While ServiceNow is primarily designed for enterprise IT and business operations, its underlying platform and some of its applications can be adapted for personal financial management, including calculating family expenses.
NFR-4	Performance	While ServiceNow is not typically used for personal or family expense tracking, its functionalities related to financial management and reporting can be adapted for this purpose. By leveraging features like expense lines, budget management, and reporting capabilities,
NFR-5	Availability	While ServiceNow isn't designed for household budgeting, it can be adapted to track and analyze family

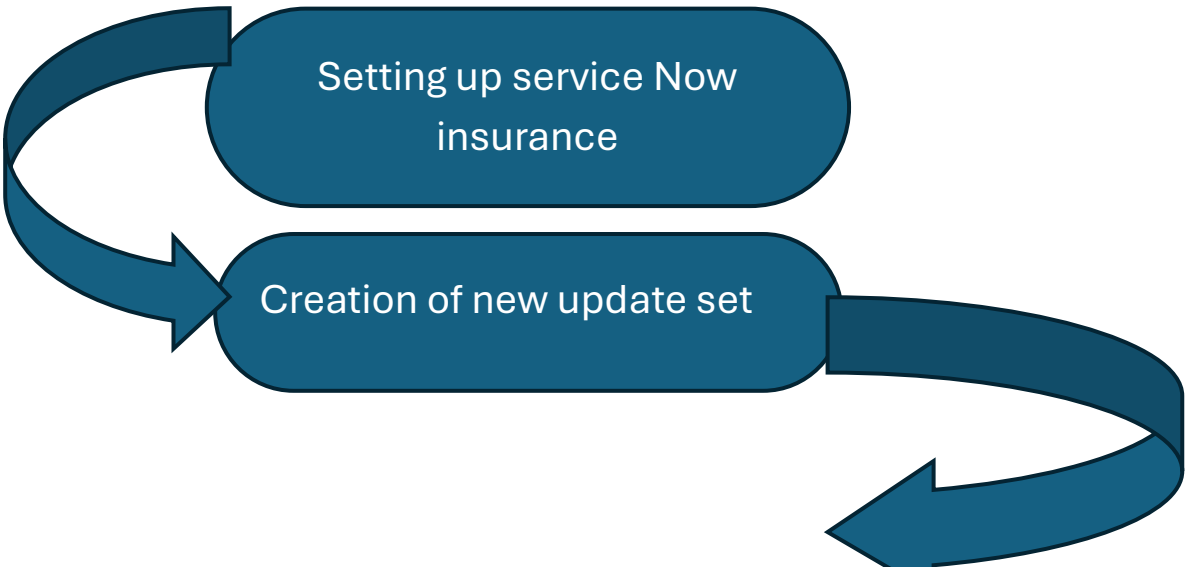
		expenses by leveraging its financial management and reporting capabilities. You can utilize features like cost plan
NFE-6	Scalability	ServiceNow can be used to manage and calculate family expenses, leveraging its financial management capabilities, albeit with some limitations compared to dedicated personal finance tool

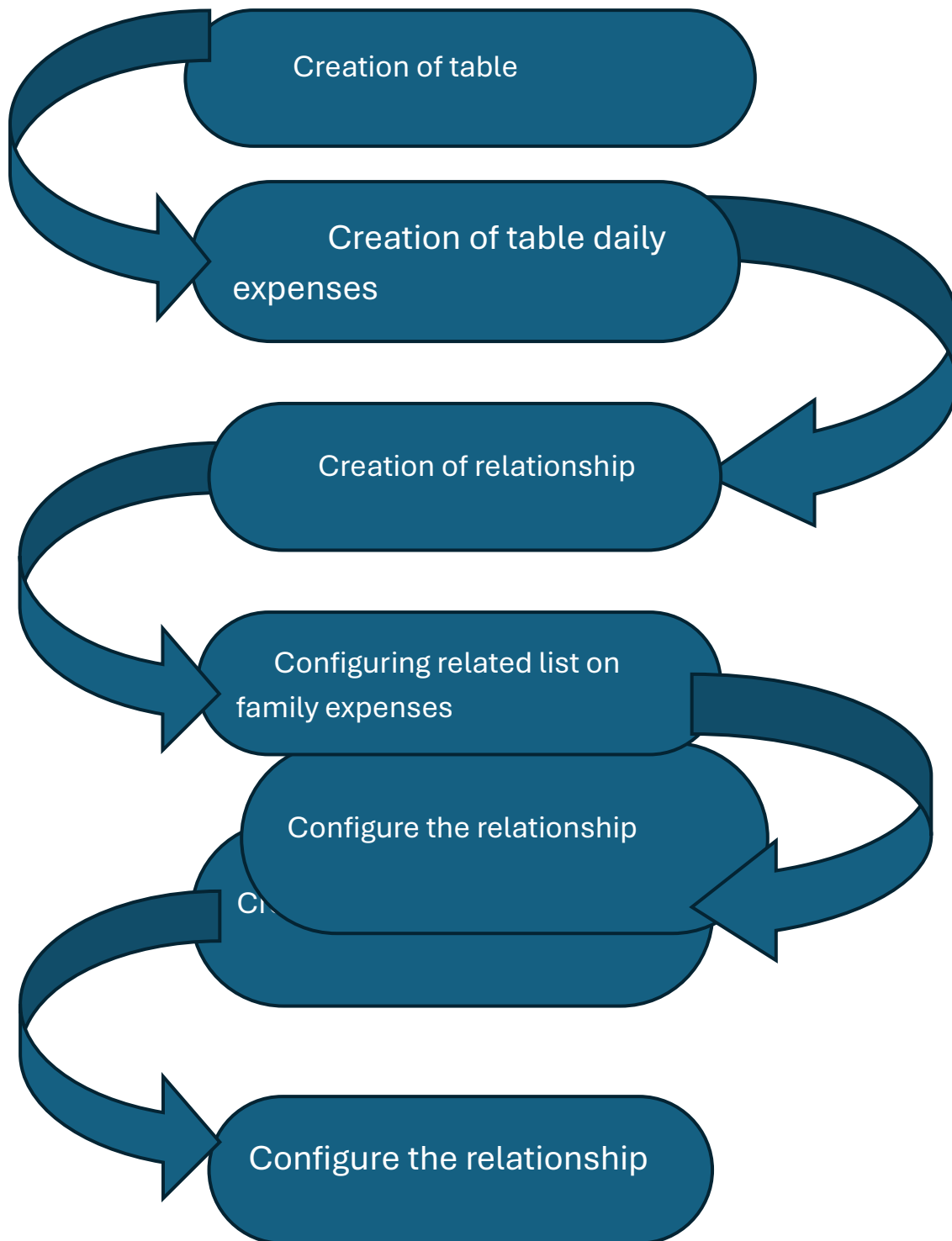
Date Flow Diagram:

Calculating family expenses within ServiceNow presents unique challenges due to its focus on enterprise IT and project management. While ServiceNow is powerful for managing large-scale financial data, adapting it for individual or family budgeting requires customization and may not be the most intuitive solution. Some key challenges include the lack of pre-built family budgeting modules, potential complexity in data input and reporting, and the need for significant configuration to align with personal financial needs.

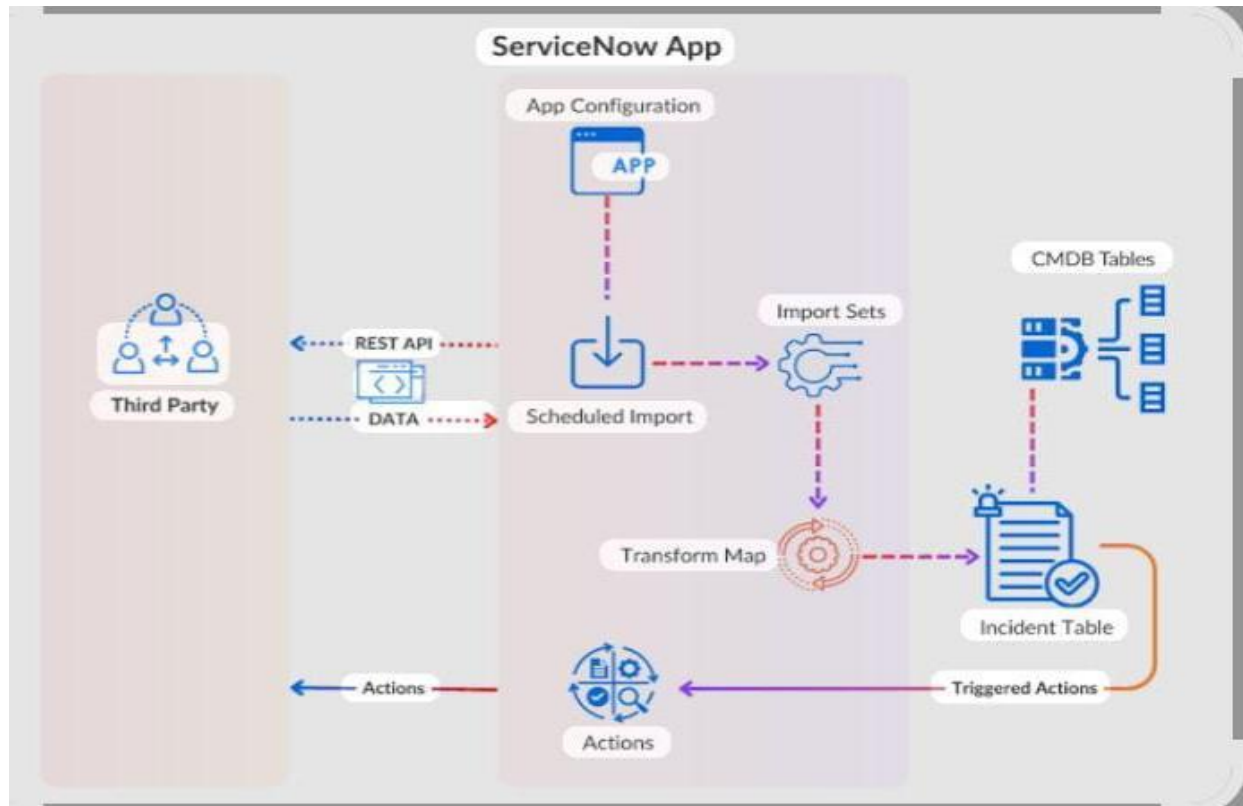
Uses:

- ServiceNow allows you to create budget plans, which can be adapted for different spending categories like housing, food, transportation, etc.
- You can set specific monetary targets for each category, allowing you to track your spending against your goals.





Technology stack:



While ServiceNow is primarily used for enterprise-level IT service management and workflow automation, its underlying technology stack could be leveraged to manage family expenses, though it's not a typical or intended use case. A more suitable solution for managing personal finances would be dedicated personal finance management software. team shall fill the followiemplate

## Project design :

Project team shall fill the following information in the proposed solution template

S. No	Parameter	Description
-------	-----------	-------------

1	Problem statement (problem to be solved)	While ServiceNow is a powerful platform primarily used for enterprise workflows and IT service management, it's not typically designed for calculating personal family expenses., you could potentially adapt some ServiceNow features or build a custom application within the platform to track and manage household finances. This would involve creating custom tables, workflows, and potentially using scripting to handle calculations.
2	Idea / Solution description	The core concept involves using ServiceNow's financial management features like Cost Management, which includes expense lines and allocation rules, to categorize and track spending. This can be achieved by setting up a "family budget" project within ServiceNow and using expense lines to represent different spending categories
3	Novelty/Uniqueness	the platform's flexibility allows for customization to build such a system. Users could leverage ServiceNow's workflows, reporting, and potentially its app development capabilities to create a personalized family expense management system.
4	Social Impact/Customer satisfaction	ServiceNow can significantly improve customer satisfaction and potentially impact family expenses by streamlining customer service processes and enhancing efficiency. ServiceNow can reduce wait times, improve issue resolution, and offer personalized support, leading to increased customer loyalty and potentially lower costs associated with acquiring new customers.
5	Business model (Revenue Model)	This involves creating a system to track income and expenses, categorize spending, set budgets, and analyze financial data, all within the ServiceNow platform. This leverages ServiceNow's features for workflow automation, data management, and reporting.
6	Scalability of the Solution	ServiceNow can be scaled for managing family expenses, but it requires careful planning and configuration. While designed for enterprise-level workflows, its flexibility allows for adaptation to individual or family needs.

## Family expenses

What is family?



“Family matters” broadly refers to anything that concerns a family unit and its members. This includes relationships, conflicts, decisions, and events that impact the family as a whole or individual members. It can encompass a wide range of situations, from everyday occurrences like childcare or attending family events to more serious issues like disputes, legal proceedings related to family law, or even personal matters that affect the family dynamic.

Types:

Family matters encompass a wide range of legal and personal issues concerning family relationships, including marriage, divorce, child custody, support, and adoption. These matters are often addressed in family court and can involve disputes related to domestic violence, property division, and other family-related legal issues.

## Milestone 1: setting up service now instance

Prose:

- ServiceNow’s capabilities can be leveraged to track and manage family expenses, although it’s not a typical use case.
- While ServiceNow is primarily used for enterprise-level IT and business management, its core functionality of tracking costs and creating expense lines can be adapted to manage household finances
- . This involves creating expense categories, recording individual transactions as expense lines, and potentially using the platform’s reporting features to analyze spending patterns.

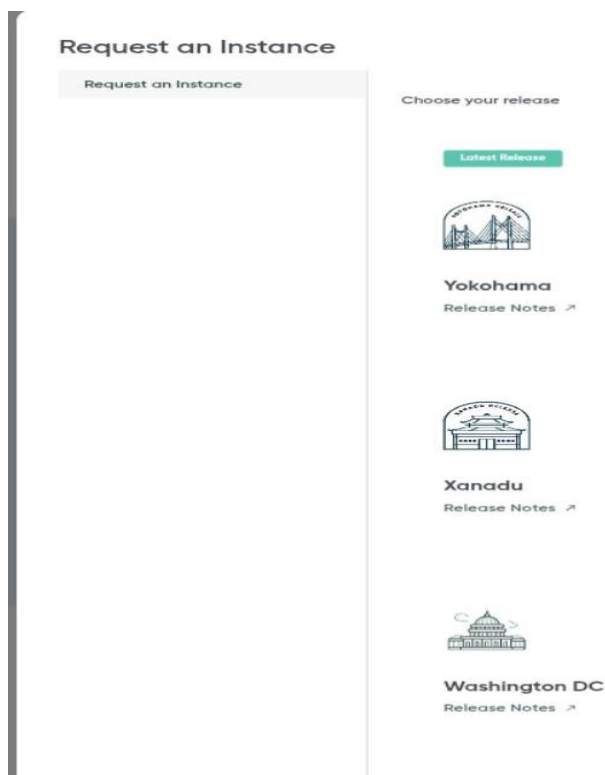
Uses:

- ServiceNow can be used to manage and calculate family expenses, primarily through its Expense Management and Finance Management modules.
- These tools allow for tracking, categorization, and reporting of expenses, providing insights into spending patterns and helping with budgeting. While not specifically designed for personal finance, ServiceNow's functionalities can be adapted to track and analyze household expenses.

## Activity 1: setting up service now instance

Steps:

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.



## Milestone 2: creation of new update set

### Prose

- To create a new update set in [ServiceNow](https://developer.servicenow.com), navigate to System Update Sets > Local Update Sets, then click New.
- Give the update set a descriptive name (often incorporating a user story number), select the appropriate application scope (e.g., Global), and save the record

### Uses:

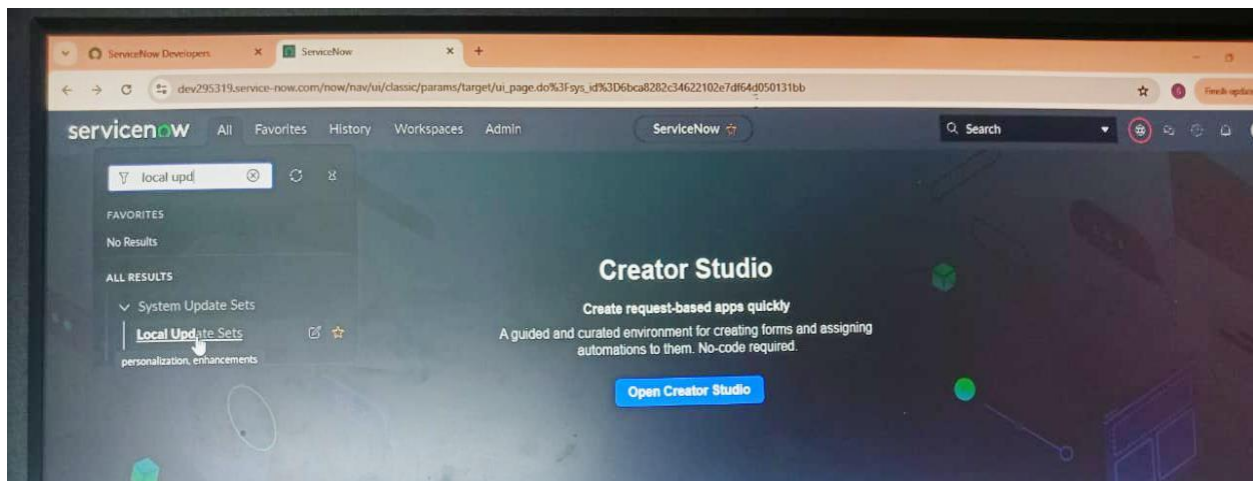
- ServiceNow, an update set is used to capture and move customizations from one instance to another.

- It acts as a container for changes like form modifications, business rules, and workflows. This allows developers to bundle these changes and deploy them to other environments, such as testing or production.

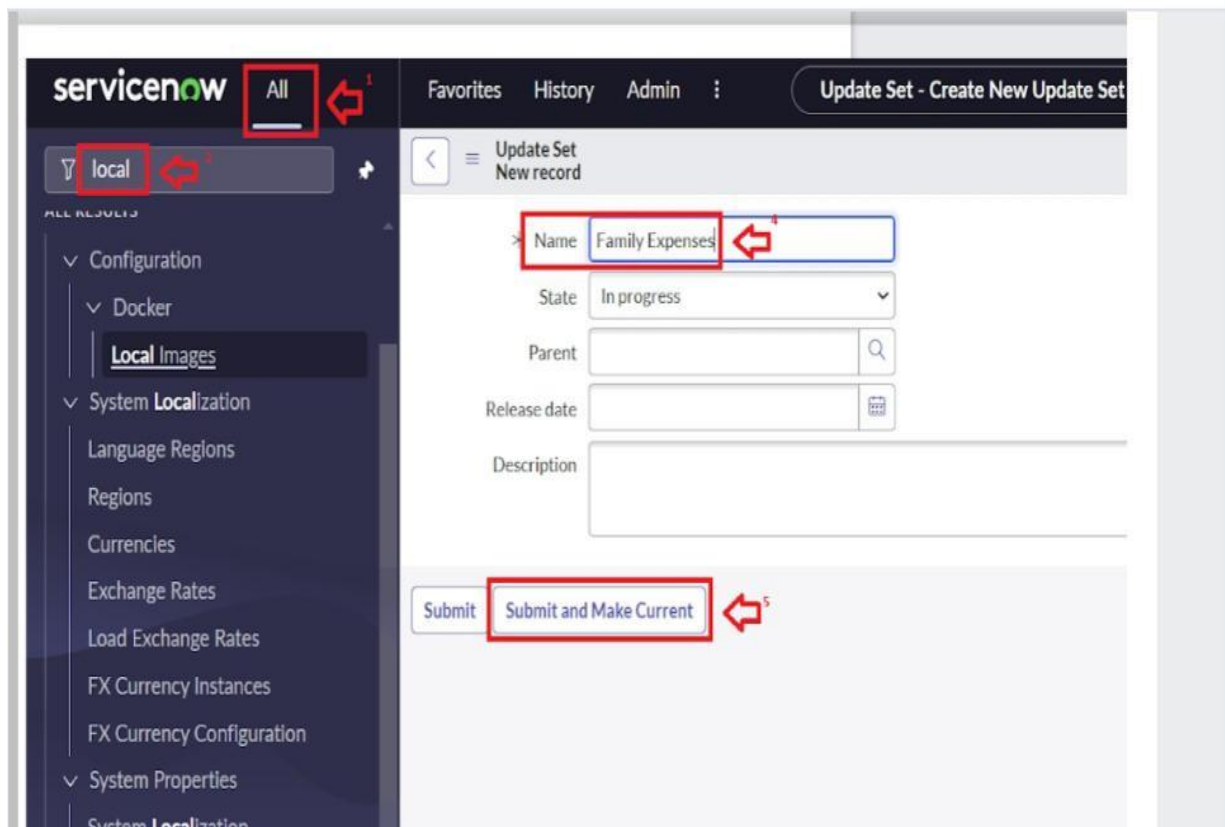
## Activity 1: creation of new update set

### Steps:

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



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



## Milestone 3: creation of table

### Prose:

- ❖ Keep the following in mind when including a table in your paper: Place the table number above the table, in bold text and flush with the left margin. Place the title of the table (in title case and italics), double-spaced
- ❖ , under the table number, flush left. Double-space before and after the table

### Uses:

- Tables are used to organize and display data in a structured format, using rows and columns.
- In various contexts, tables are created for different purposes, including data management in databases, content presentation in documents, and data analysis.

## Activity 1: creation of family expenses table

### Steps:

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

•

**ServiceNow** All Favorites

Table: **Family expenses** View: Tables

ServiceNow recommends creating custom tables in scoped applications.

A table is a collection of records in the database. Each record contains data for a specific instance of the table. Applications use tables and records to manage data and processes. [More Info](#)

\* Label:

\* Name:

Table name u\_family\_expenses is already in use

Table name u\_family\_expenses is already in use

Extends table:

Application:

Remote Table: ☐

Create module: ☒

Create mobile module: ☒

Add module to menu:

New menu name:

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

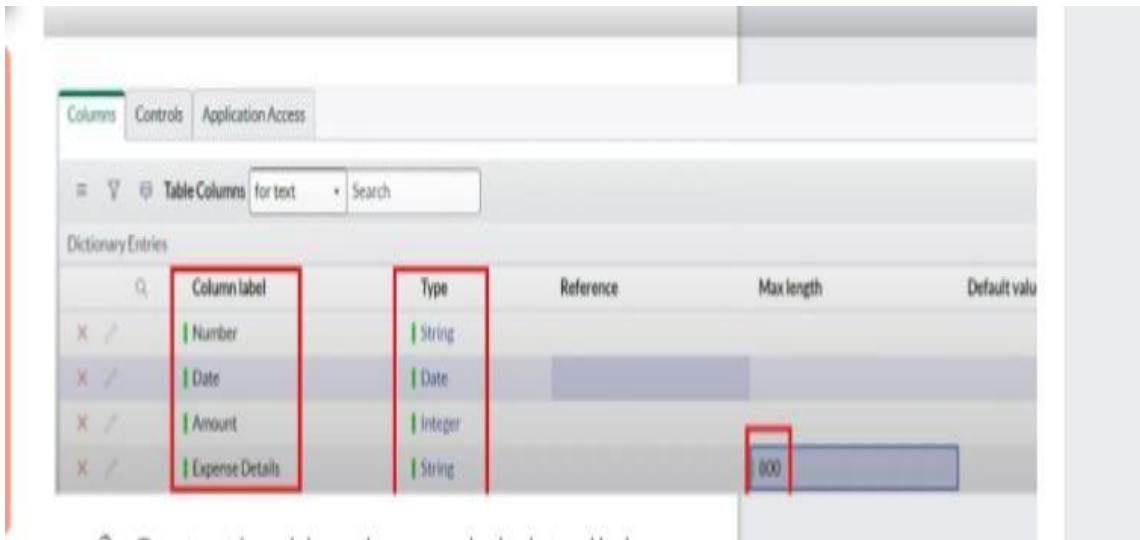
## Milestone 3: creation of table

### Activity 2: creation of columns (fields)

#### Steps:

- Near Columns Double click near insert a new row
- Give the details as
- Column label : Number
- Type : String
- Double click on insert a new row again
- Give the details as
- Column label : Date
- Type : Date
- Double click on insert a new row again
- Give the details as
- Column label : Amount
- Type : Integer
- Double click on insert a new row again
- Give the details as:
- Column label : Expense Details
- Type : String
- Max length : 800

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

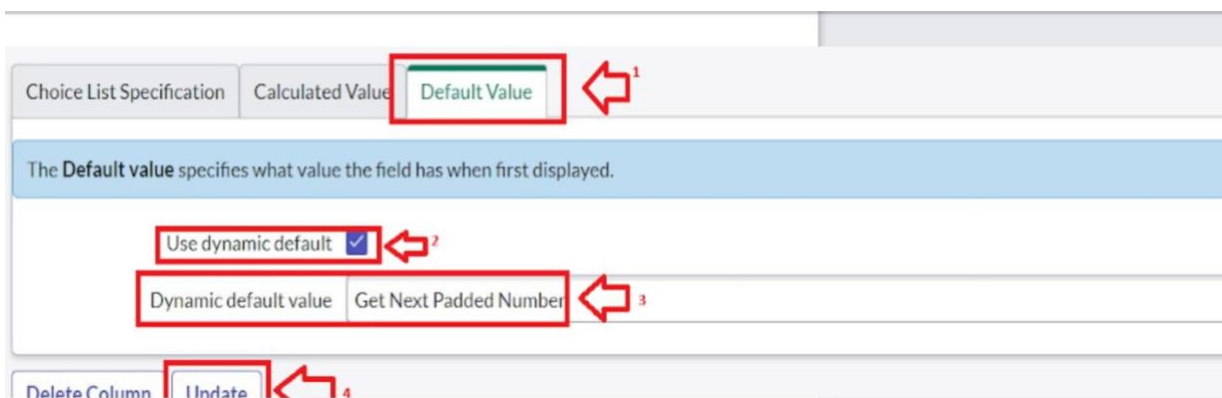


### Milestone 3: creation of table

### Activity 3: making field and auto-number

#### Steps:

- 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.



- Go to All >> In the filter search for Number Maintenance >> select Number Maintenance
- Click on New.
- Enter the below Details:

Table : Family Expenses  
Prefix : MFE

Table: Family Expenses  
Prefix: MFE  
Number: 1,000  
Application: Global  
Number of digits: 7  
Update Delete

- Click on Submit.

### Milestone 3: creation of table

#### Activity4: configure the form

##### Steps:

1. Configure the Form
2. Go to All >> In the filter search for Family Expenses >> Open Family Expenses
3. Click on New
4. Go to the Header and right click there>> click on Configure >> Select Form Design
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, Amount Mandatory Field by clicking on the gear icon and checking Mandatory
8. Click on Save.

daily expenses [u\_daily\_expenses]  
2 Column  
number  
date  
family member name  
1 Column  
comments  
Filter  
Formatters  
Save

### Milestone 4: creation of table (daily expenses)

#### Prose:



Daily expenses are the everyday costs associated with maintaining a household or personal life. These include costs for necessities like housing, food, transportation, utilities, and healthcare, as well as discretionary spending on things like entertainment or personal care. Tracking and managing daily expenses is important for budgeting and financial planning.

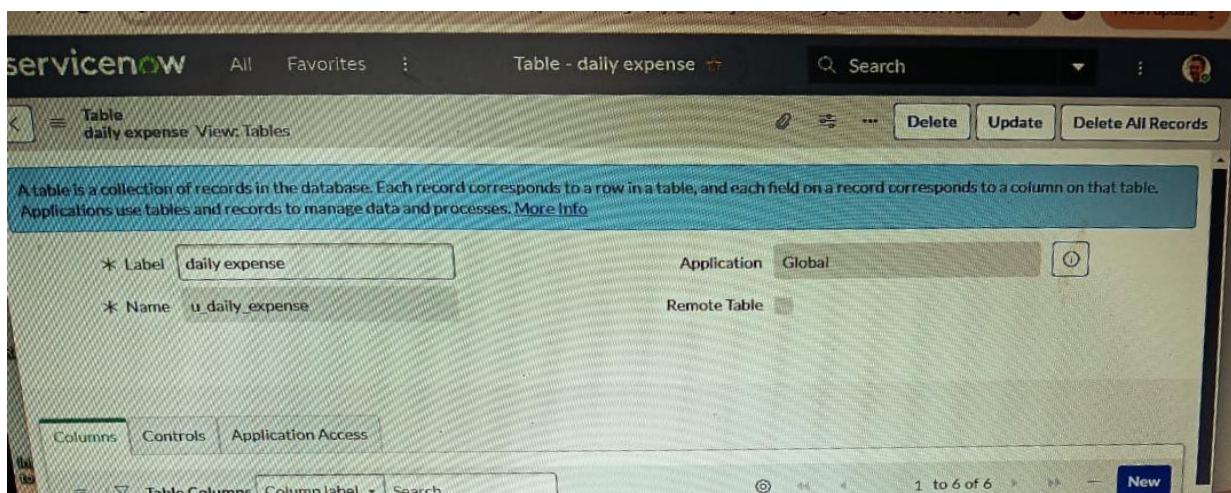
## Uses:

Daily expenses encompass the everyday costs of living and include necessities like food, transportation, utilities, and housing, as well as discretionary spending on entertainment and personal care. Tracking these expenses, whether through budgeting apps or simple spreadsheets, is crucial for financial management, enabling individuals to identify areas where they can cut costs, save more, and achieve financial goals.

## Activity1: creation of daily expenses table

### Steps:

1. Go to All > In the filter search for Tables > click on New.
2. Enter the Detail  
Label : Daily Expenses  
Label : Daily Expenses  
Name : Auto-Populated  
Add Module to menu : Family Expenditure
3. Go to the Header and right click there>> click on Save.



## Milestone 4: creation of table (daily expenses)



## Activity 2: creation of columns (fields)

### Steps:

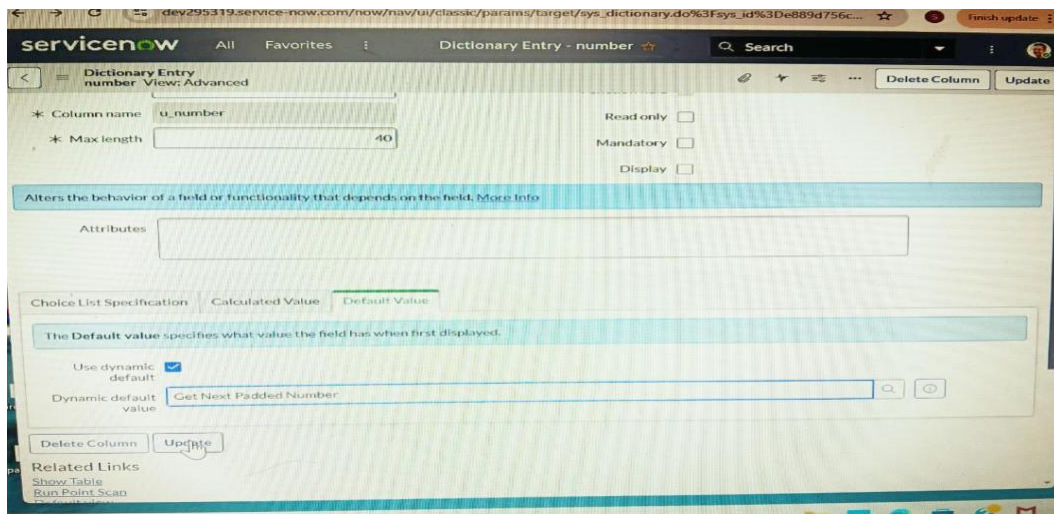
1. Near Columns Double click near insert a new row.
2. Give the details as
3. Column label : Number  
Type : String
4. Double click on insert a new row again
5. Give the details as  
Column label : Date  
Type : Date
- Double click on insert a new row again
1. Give the details as:  
Column label : Expense  
Type : Integer
2. Double click on insert a new row again
3. Give the details as:  
Column label : Family Member Nam  
Type : Reference  
Max length : 800

## Milestone 4: creation of table (daily expenses)

### Activity 3: making number field an auto-number

#### Steps:

- 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.



- Go to All >> In the filter search for Number Maintenance >> select Number Maintenance
- Click on New.
- Enter the below Details
- Table : Family Expenses
- Prefix : MFE
- Click on Submit.

The screenshot shows the 'Number - New Record' form in ServiceNow. The form has the following fields and values:

Field	Value
Table	daily expense
Prefix	MFE
Number	
Application	Global
Number of digits	7

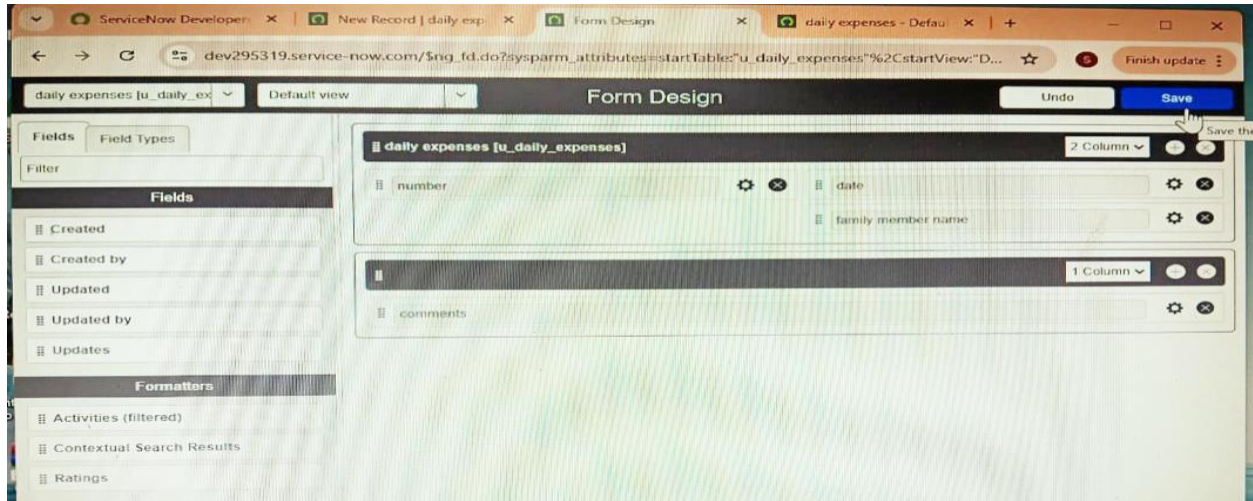
A 'Submit' button is located at the bottom left of the form. Below the form, there is a 'Related Links' section with a 'Show Counter' link.

## Milestone 4: creation of table daily (expenses)

### Activity 4: configure of form

#### Steps:

- Go to All >> In the filter search for Daily Expenses >> Open Daily Expenses
- Click on New
- Go to the Header and right click there>> click on Configure >> Select Form Design
- Customize or Drag Drop the form as per your requirement.



- Make Number Read-Only Field by clicking on the gear icon and checking Read-Only
- Make Date, Family Member Name Mandatory Field by clicking on the gear icon and checking Mandatory
- Click on Save.

## Milestone 5: creation of relationship

### Prose:

The prose of creating a relationship in writing involves crafting a believable and engaging connection between characters, whether romantic or platonic. This is achieved by developing their backstory, exploring their interactions, showcasing their communication styles, and highlighting the dynamics of their bond.

### Uses:

Creating relationships is essential for both personal well-being and professional success, offering benefits like improved communication, increased trust, and emotional support. In personal life, strong relationships contribute to happiness, a sense of purpose, and potentially longer lives. In the professional sphere, relationship building facilitates teamwork, career advancement, and stronger client connections.

## Milestone 5: creation of relationship

### Activity 1: creation of relationship between family expenses and daily expenses table

### Steps:

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

## Milestone6: creation of relationship

### Prose:

Configuring a related list for family expenses involves creating a structured way to track and manage various household costs within a larger system, like a budgeting app or financial management platform. This allows for easy categorization, analysis, and potentially reporting on different expense types like housing, food, utilities, transportation,

### Uses:

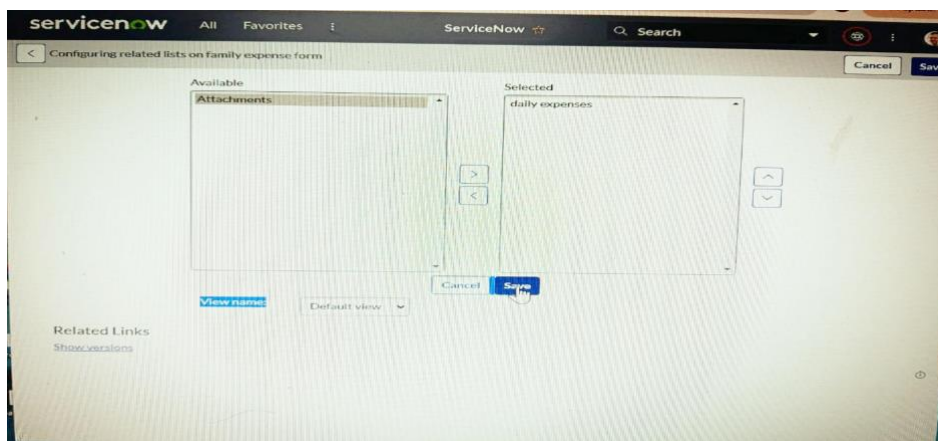
. Configuring related lists for family expenses provides a structured way to track and manage various financial aspects, offering a consolidated view of income, spending, and related information. This allows for better financial oversight, improved budgeting, and easier identification of areas where expenses can be optimized.

## Milestone6: configuring related list on family expenses

### Activity 1:Configuring Related list on family expenses

#### Steps:

- Go to All >> In the filter search for Family Expenses >> Open Family Expenses
- Click on New
- Go to the Header and right click there>> click on Configure >> Select Related Lists
- Add Daily Expenses to the Selected Area
- Click on Save





## Milestone7: creation of business rules

### Prose:

Serves as the primary method for expressing the logic and constraints that govern an organization's operations. It involves clearly and concisely articulating the conditions under which specific actions should be taken, using natural language to define the rules' triggers, conditions, and actions. This approach ensures that all stakeholders, regardless of technical expertise, can understand and adhere to the established guidelines.

### Uses:

Business rules are used to define and enforce specific instructions and constraints within a business process. They help ensure consistency, accuracy, and efficiency by guiding decision-making and actions. These rules can be applied across various aspects of a business, impacting individuals, teams, or the entire organization.

## Milestone7: creation of business rules

### Activity 1: creation of business rules

#### Steps:

- Go to All >> In the filter search for Business Rules.
- Under System Definition Select Business Rules then click on New. Enter the Details:  
Name : Family Expenses BR
- Table : Select Daily Expenses  
Check Advanced

The screenshot shows the 'When to run' configuration tab for a business rule. It includes a header bar with 'When to run' and 'Actions' tabs. Below the header, a blue instruction bar states: 'Specify whether the business rule should run on Insert or Update. Use Filter Conditions to specify under which conditions the business rule should run.' There are two checkboxes: 'Insert' and 'Update', both currently unchecked. Below these, there are buttons for 'Add Filter Condition' and 'Add OR Clause'. A 'Filter Conditions' section contains a dropdown menu labeled '-- choose field --', a text input labeled '-- operator --', and another text input labeled '-- value --'. At the bottom, there is a 'Role conditions' section with a small icon.

- When to run Check Insert and Update

5. In Advance(we write the code): Write the below code >>

```
(function execute Rule(current, previous /*null when sync*/) {
```

```

var FamilyExpenses = new Glide
Record('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.insert = new Glide
Record('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);

```

## Milestone 8: configure of relationship

### Prose:

Prose in literature is the ordinary form of written or spoken language, characterized by its grammatical structure and lack of metrical or rhyming patterns found in poetry. It's the common way we communicate ideas, stories, and information in a straightforward and logical manner.

### Uses:

When configuring relationships in a system, various aspects need to be considered, including the tables or entities involved, the type of relationship, and the specific settings that govern how the relationship behaves. This often involves defining attributes, start and end objects, and reciprocal relationships, as well as configuring display settings.

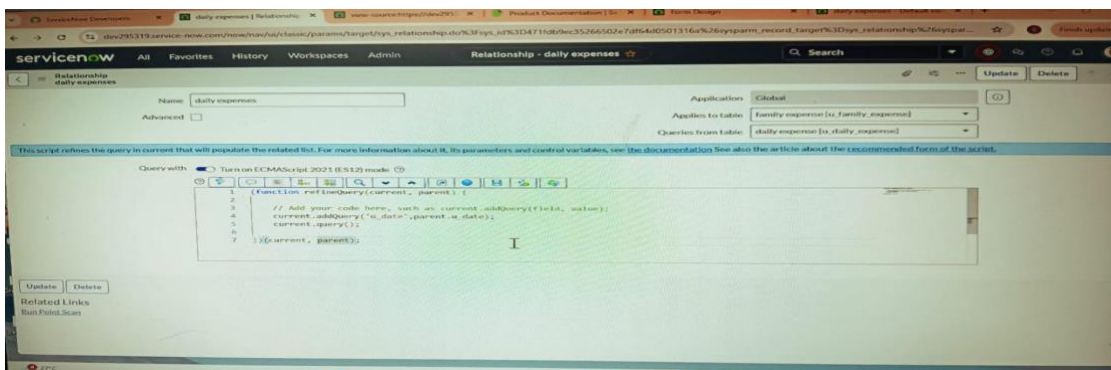
## Milestone 8: configure the relationship

### Activity 1: configure the relationship

#### Steps:

- Go to All >> In the filter search for Relationships >> Open Relationships

- In that, open Daily Expenses Relationship.
- For Applies to table : Select Family Expenses
- In Query with : write the below Query
- (function refine Query(current, parent) {
- // Add your code here, such as Current.addQuery(field, value);
- Current.addQuery('u\_date',parent.u\_date);
- Current. Query();
- })(current, parent);
- Click on Update.



Project planning & Scheduling:

Assigned Task to the Group members as shown in below

**Note:** Request you to please click on "Tick mark ✓" after assigning the activities for each milestone.

Assign Roles & Responsibilities to Team

[→ Proceed to Workspace](#)

Setting up Service	Setting up Service	* Adingi Srikanya	✓	✗
Creation of New I	Creation of New I	* Adingi Srikanya	✓	✗
Creation of Table	Creation of Famil	* Adingi Srikanya	✓	✗
Creation of Table	Creation of Colun	* Adingi Srikanya	✓	✗
Creation of Table	Making Number I	* Adingi Srikanya	✓	✗
Creation of Table	Configure the For	* Adingi Srikanya	✓	✗
Creation of Table	Creation of Daily	* Bade Indira	✓	✗
Creation of Table	Creation of Colun	* Bade Indira	✓	✗
Creation of Table	Making Number I	* Bade Indira	✓	✗
Creation of Table	Configure the For	* Bade Indira	✓	✗
Creation of Relati	Creation of Relati	* Bade Jhansi	✓	✗
Configuring Relat	Configuring Relat	* Bade Jhansi	✓	✗
Creation of Busin	Creation of Busin	* Arika Sandhya Rani	✓	✗
Configure the Rel	Configure the Rel	* Arika Sandhya Rani	✓	✗

[+ ADD](#)

Functional requirement	User story	No.of activity	Team members
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Setting up service now instance	Setting up service now	1	Adingi .Srikanya
Creation of new update set	Creation of new update set	1	Adingi .Srikanya
Creation of table	Family expenses table. Columns.making number field an auto-number.form	4	Adingi .Srikanya

Creation of table (daily expenses)	Daily expenses table.columns.number field an auto number.form	4	Bade.Indira
Creation of relationship	Creation of relationship between family expenses and daily expenses	1	Bade Jhansi
Configuring related list on family expenses	Configuring related list on family expenses	1	Bade Jhansi
Creation of business rules	Configuring of business rules	1	Arika.Sandhayarani

Configure the relationship	Configure the relationship	1	Arika.Sandhayarani
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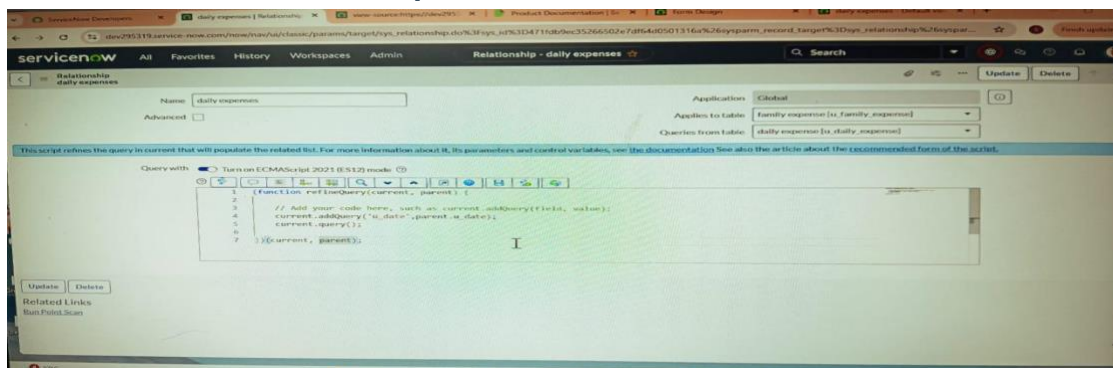
## Testing performance

### Milestone 8: configure the relationship

#### Activity 1: configure the relationship

#### Steps:

- Go to All >> In the filter search for Relationships >> Open Relationships
- In that, open Daily Expenses Relationship.
- For Applies to table : Select Family Expenses
- In Query with : write the below Queries
- (function refine Query(current, parent) {
- // Add your code here, such as
- Current.addQuery(field, value);
- Current.addQuery('u\_date',parent.u\_date);
- Current. Query();
- })(current, parent)
- Click on Update.



## Advantages of family expenses using Service now

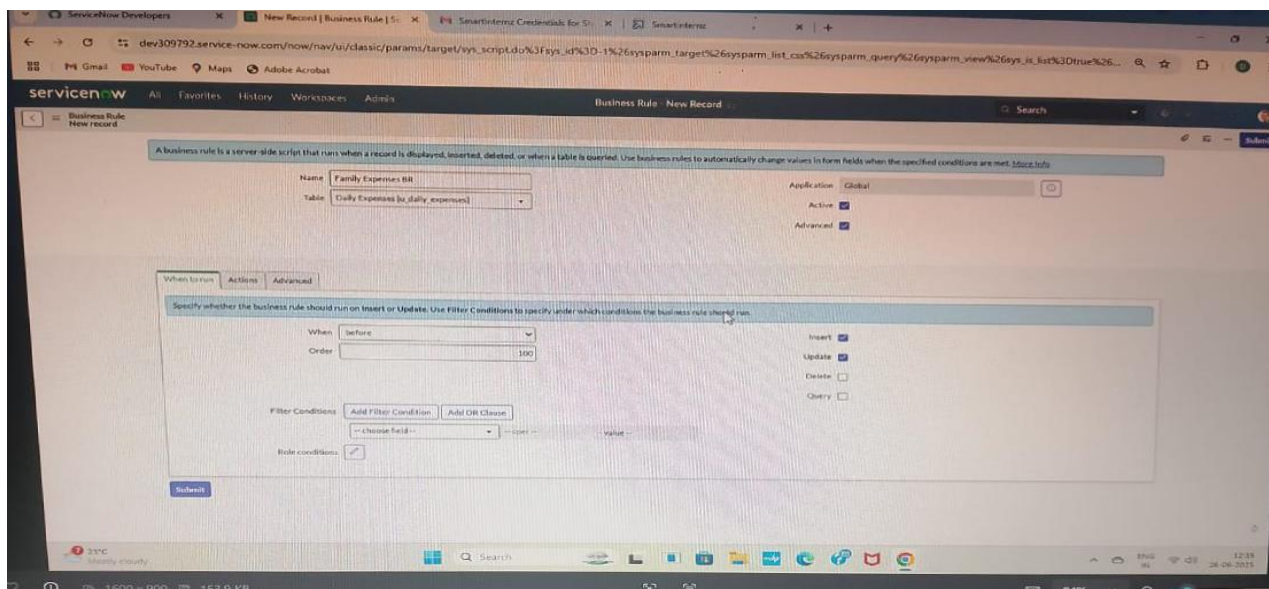
While ServiceNow is primarily used for enterprise IT and business workflows, it can be adapted to manage family expenses, offering advantages like centralized tracking, automated calculations, and improved budgeting. However, it's not a typical use case and simpler, dedicated budgeting apps might be more user-friendly.

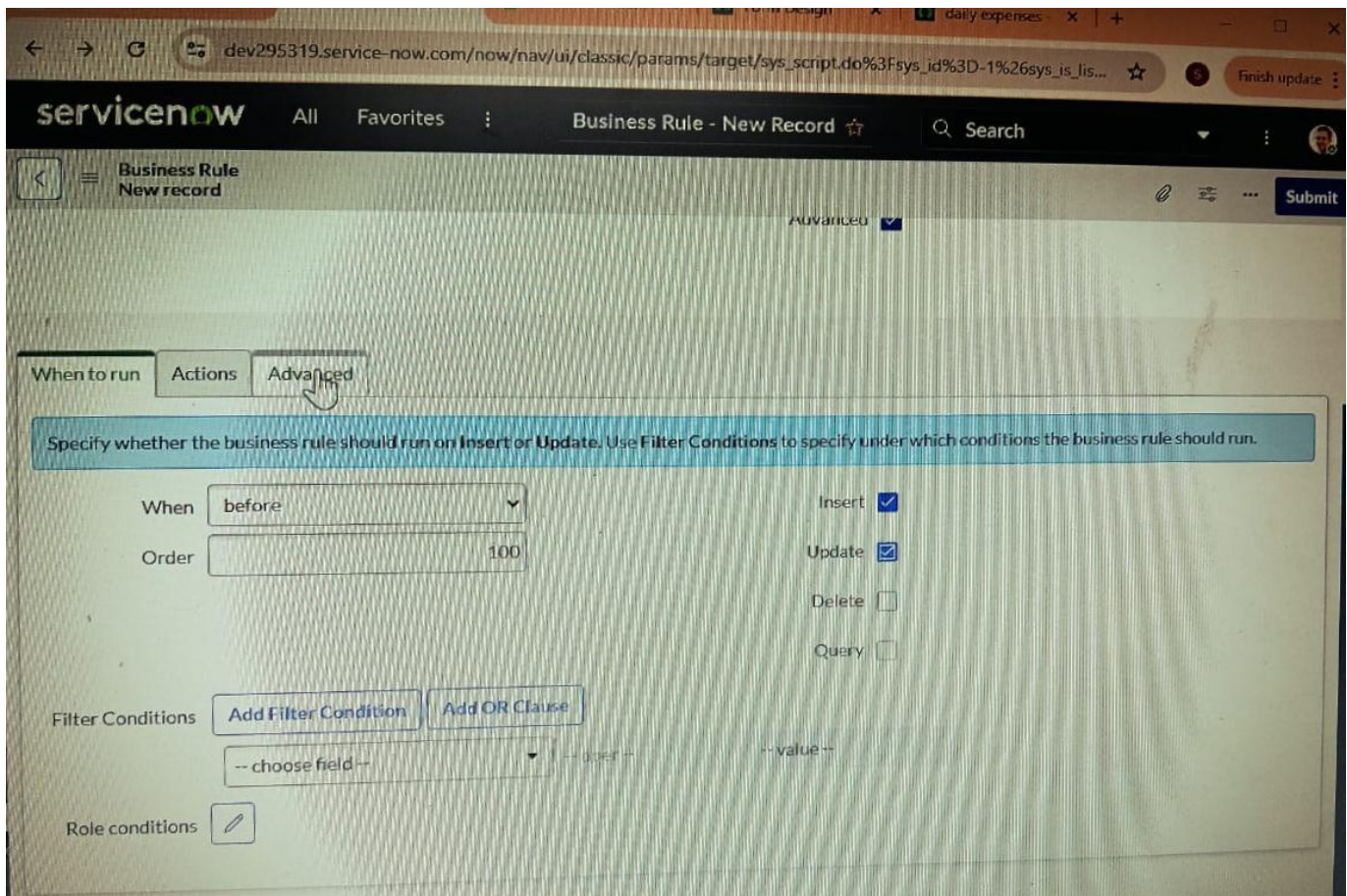
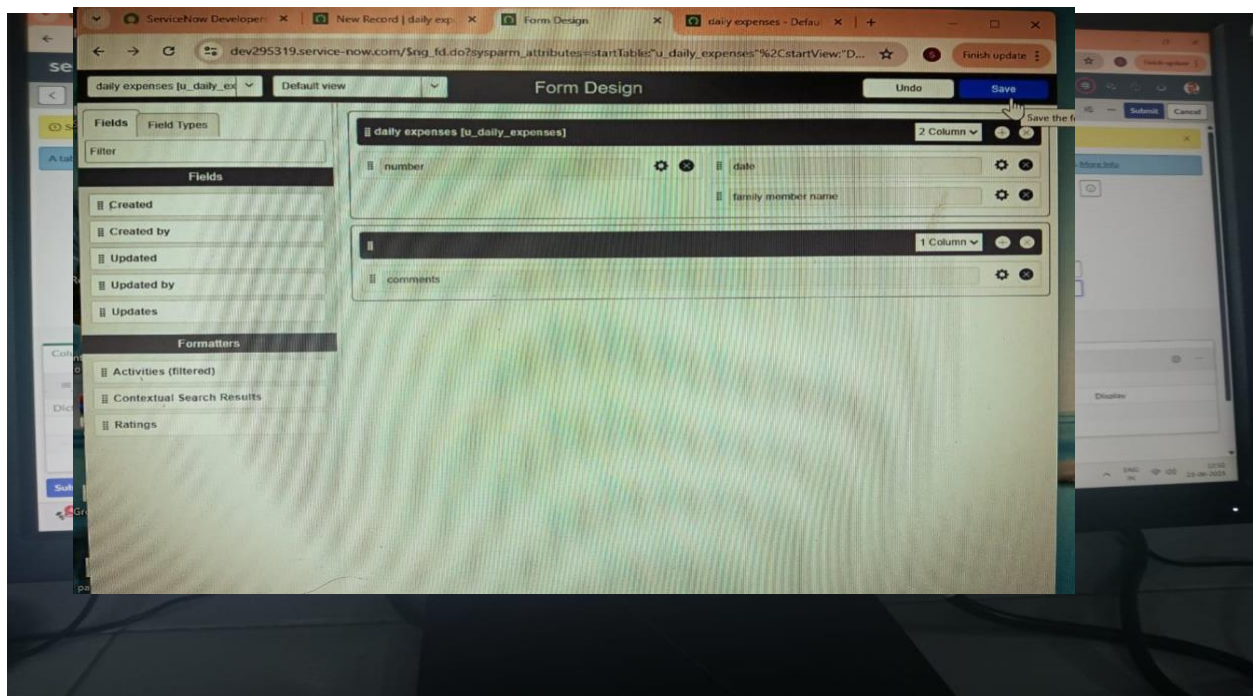
Here's how ServiceNow could be applied to family finances and the potential benefits:

## Disadvantages of family expenses using Service now

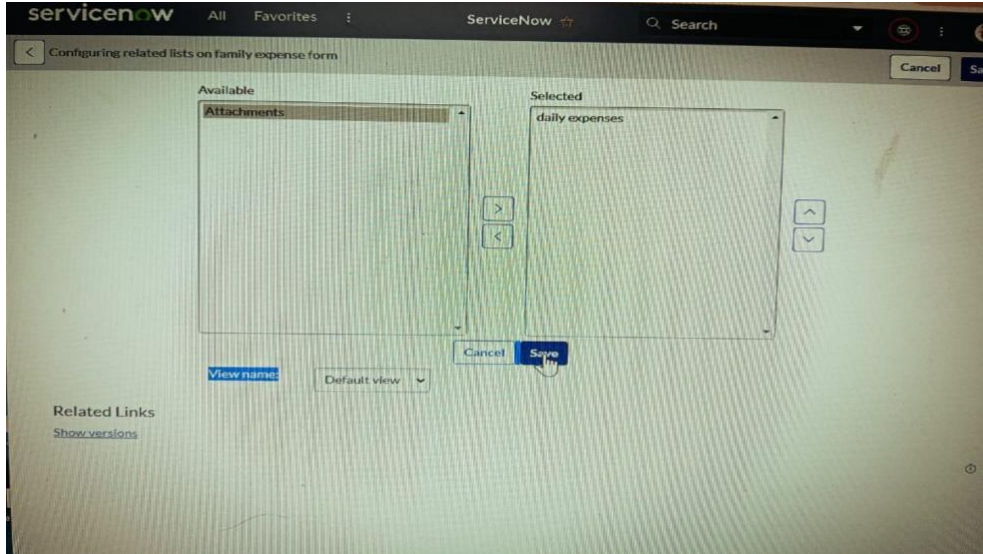
While ServiceNow offers powerful tools for managing business processes, using it to calculate family expenses has some significant drawbacks. These include the high cost of the platform, complexity for individual users, and potential lack of flexibility for personal finance management..

Result:









## Conclusion

conclusion, implementing the "Calculation of Family Expenses Using ServiceNow" project offers numerous benefits to the household. By leveraging the robust capabilities of ServiceNow, family members can efficiently submit, track, and manage their expenses in a centralized and streamlined manner