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JAIN COLLEGE - MINJUR**
(Affiliated to the University of Madras)
(Accredited by NAAC)



PROJECT TITLE: calculating family expenses using service now

Team Id: NM2025TMID19517

Team Members:4

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calculating family expenses

Introduction:

Managing family expenses is an essential part of financial planning, ensuring that income is properly allocated towards daily needs, savings, and future goals. Traditionally, families depend on manual methods such as notebooks, spreadsheets, or mobile apps to track their spending. However, these methods often lack automation, centralized tracking, and analytical insights.

ServiceNow, a powerful cloud-based platform widely used in enterprises for IT service management and workflow automation, can also be adapted to manage personal and family-related financial tasks. By leveraging ServiceNow's database capabilities, forms, workflows, and reporting tools, families can record, categorize, and calculate their monthly expenses in a structured and automated manner. This approach not only simplifies expense management but also provides transparency, accuracy, and realtime insights into financial health.

Problem Statement:

Managing family expenses is often challenging due to lack of organization, manual tracking, and limited visibility into spending patterns. Many families rely on paper notes, spreadsheets, or memory to record daily expenses, which leads to errors, missing data, and poor financial planning.

There is a need for a digital, automated, and secure platform that can record, track, and analyze family expenses efficiently. ServiceNow, with its powerful workflow automation, reporting, and cloud capabilities, can provide a structured solution for managing family finances.

Objective:

- To develop a centralized system for recording and managing family expenses using ServiceNow.

- To categorize expenses (e.g., Food, Transport, Education, Utilities, Entertainment) for better financial visibility.
- To automate calculations of total expenses on a daily, monthly, and yearly basis.
- To set and monitor budgets for each category and notify users when limits are exceeded.
- To generate reports and dashboards that provide insights into spending patterns and trends.
- *To ensure data security and role-based access so that only authorized family members can add or view expenses.*

Skills:

ServiceNow Platform – Creating custom applications, tables, and forms. Configuring workflows, business rules, and notifications..

UI Policies & UI Actions – Designing user-friendly forms and dashboards for expense tracking.

Scripting – Basic JavaScript for client scripts and server-side scripts in ServiceNow.

Workflow Design – Understanding data structures, relationships, and queries in ServiceNow tables.

Testing & Validation – Building charts, dashboards, and scheduled reports in ServiceNow.

Problem-Solving – Identifying errors and resolving issues during development.

Communication & Documentation – Writing clear steps, capturing screenshots, and reporting results.

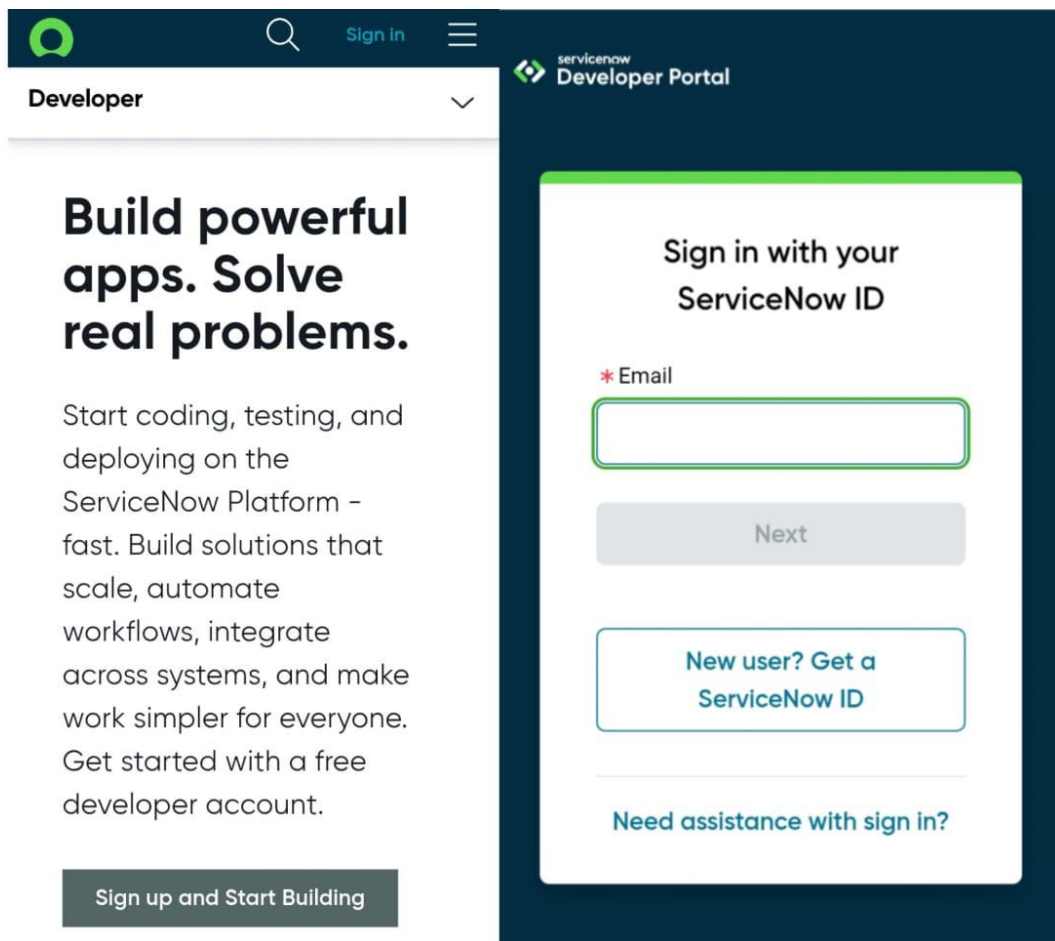
TASK INITIATION

Milestone 1: ServiceNow Instance

Activity 1: 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.

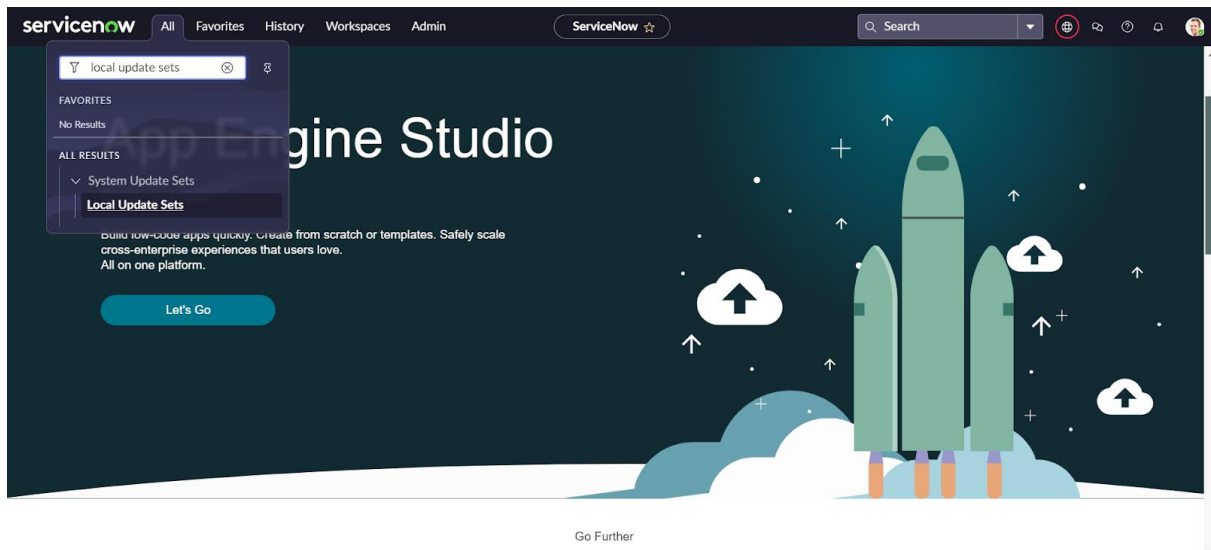
7. Now you will navigate to the ServiceNow.



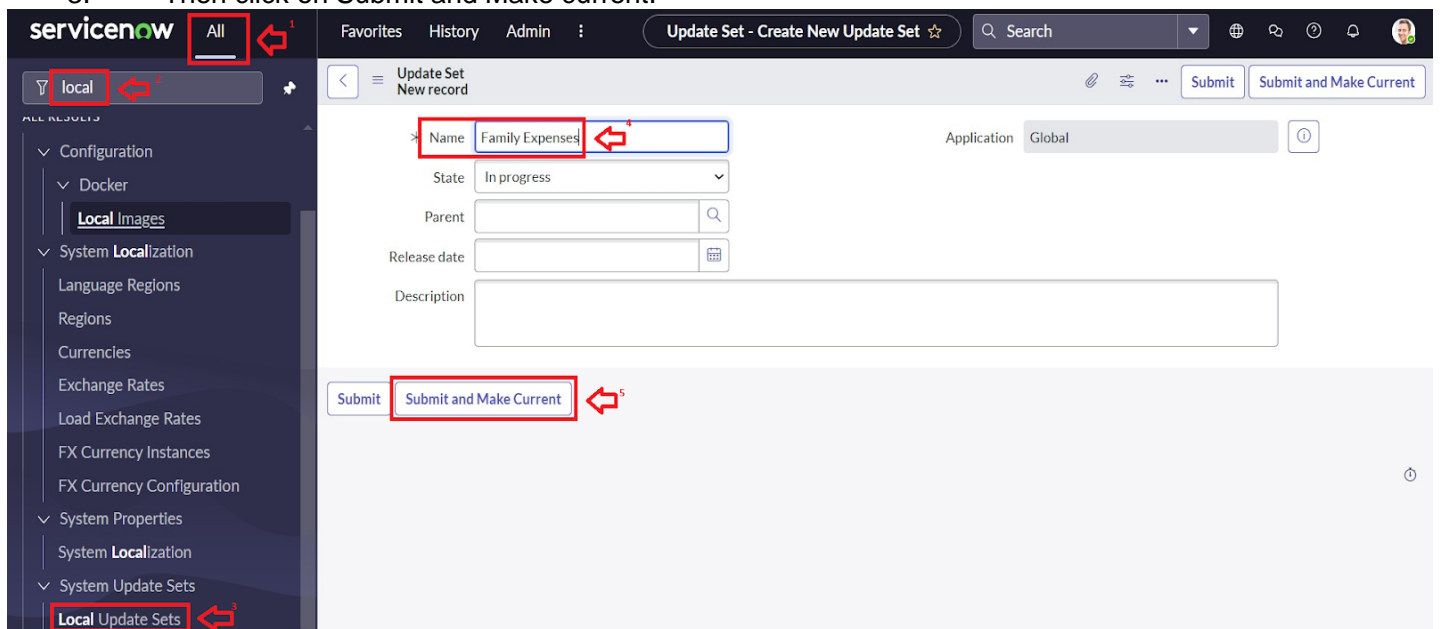
Milestone 2: Update Set

Activity 2: Creation of update set

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



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



Milestone 3: Family expenses

Activity 3: 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

* Label
 * Name

Application ⓘ
 Remote Table ☒
 Create module ☒
 Create mobile module ☒
 Add module to menu
 New menu name

Columns Controls Application Access

Table Columns ⓘ

Dictionary Entries

	Column label	Type	Reference	Max length	Default value	Display
<input checked="" type="checkbox"/> <input type="text"/>	Number	String				false
<input checked="" type="checkbox"/> <input type="text"/>	Date	Date				false
<input checked="" type="checkbox"/> <input type="text"/>	Amount	Integer				false

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

Milestone 4: Column

Activity 4: Creation of Columns(Fields)

1. Near Columns Double click near insert a new row.
2. Give the details as:
Column label : Number
Type : String
3. Double click on insert a new row again
4. Give the details as:
Column label : Date
Type : Date
5. Double click on insert a new row again
6. Give the details as:
Column label : Amount
Type : Integer
7. Double click on insert a new row again
8. Give the details as:
Column label : Expense Details
Type : String
Max length : 800

Table Columns						
Dictionary Entries	Column label	Type	Reference	Max length	Default value	Display
	Number	String				false
	Date	Date				false
	Amount	Integer				false
	Expense Details	String		800		false

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

Milestone 5: Number field

Activity 5: Making Number Field an Auto-Number

- 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.

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

Get Next Padded Number

Delete Column

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

9. Click on Submit.

Milestone 6: Drag and Drop

Activity 6: Configure the Form

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

Milestone 7: Daily expenses

Activity 7: Creation of Daily Expenses Table

1. Go to All > In the filter search for Tables > click on New.
2. Enter the Details:
 Label : Daily Expenses
 Name : Auto-Populated
 Add Module to menu : Family Expenditure

> Label Daily Expenses  1

> Name u_daily_expenses  2

Extends table

Application Global 

Create module ☒

Create mobile module ☒

Application Menu

Add module to menu Family Expenditure  3

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

Milestone 8: Column

Activity 8: Creation of Columns(Fields)

1. Near Columns Double click near insert a new row.
2. Give the details as:
Column label : Number
Type : String
3. Double click on insert a new row again
4. Give the details as:
Column label : Date
Type : Date
5. Double click on insert a new row again
6. Give the details as:
Column label : Expense
Type : Integer
7. Double click on insert a new row again
8. Give the details as:
Column label : Family Member Name
Type : Reference
Max length : 800
9. Double click on insert a new row again
10. Give the details as:
Column label : Comments
Type : String
Max length : 800
11. Go to the Header and right click there>> click on Save.

Milestone 9: Number field

Activity 9: 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.

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 Maintenance
6. Click on New.
7. Enter the below Details:
Table : Family Expenses
Prefix : MFE
- 8.

< ≡ Number New record 🔍 ? ⚙️ ... **Submit**

* Table

Prefix

* Number

Application

Number of digits

Submit

9. Click on Submit.

Milestone 10: Drag and Drop

Activity 10: 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. Customize or Drag Drop the form as per your requirement.

The screenshot shows a form configuration window for 'Daily Expenses [u_daily_expenses]'. The form is configured with a '2 Column' layout. It contains four fields: 'Number', 'Date', 'Family Member Name', and 'Expense'. Each field has a gear icon for configuration. Below this, there is a section for 'Comments' with a '1 Column' layout.

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
7. Click on Save.

Milestone 11: creation of relationship

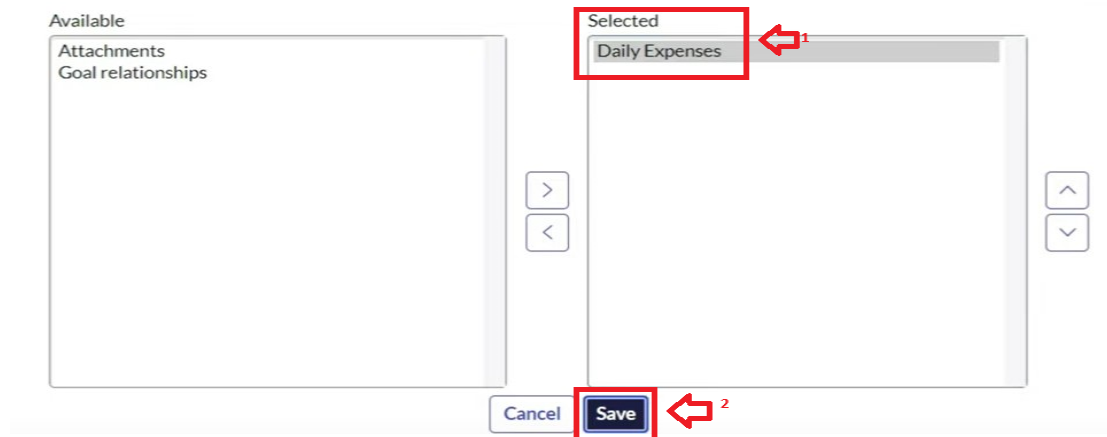
Activity 11: Creation of Relationship between Family Expenses and Daily Expenses tables

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
4. Click Save.

Milestone 12: Related list of family expenses

Activity 12: Configuring Related List on Family Expenses

1. Go to All >> In the filter search for Family Expenses >> Open Family Expenses
2. Click on New
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 13: Business rules

Activity 13: 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

Business Rule
New record

ss 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

Name	Family Expenses BR	↩ ¹	Application	Global	ⓘ
Table	Daily Expenses [u.daily_expenses]	↩ ²	Active	<input checked="" type="checkbox"/>	
			Advanced	<input checked="" type="checkbox"/>	↩ ³

4. In when to run Check Insert and Update

When to run  Actions **Advanced**


Specify whether the business rule should run on **Insert** or **Update**. Use **Filter Conditions** to specify under which conditions

When

Order

Filter Conditions

-- choose field -- -- oper -- -- value --

Role conditions 

Insert ☒

Update ☒

Delete ☐

Query ☐

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

```
(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);
```

```

Script
1 (function executeRule(current, previous /*null when async*/) {
2
3     var FamilyExpenses = new GlideRecord('u_family_expenses');
4     FamilyExpenses.addQuery('u_date',current.u_date);
5     FamilyExpenses.query();
6     if(FamilyExpenses.next())
7     {
8         FamilyExpenses.u_amount += current.u_expense;
9         FamilyExpenses.u_expense_details += ">" + current.u_comments + ":" + "Rs." + current.u_expense + "/-";
10        FamilyExpenses.update();
11    }
12    else
13    {
14        var NewFamilyExpenses = new GlideRecord('u_family_expenses');
15        NewFamilyExpenses.u_date = current.u_date;
16        NewFamilyExpenses.u_amount = current.u_expense;
17        NewFamilyExpenses.u_expense_details += ">" + current.u_comments + ":" + "Rs." + current.u_expense + "/-";
18        NewFamilyExpenses.insert();
19    }
20
21 })(current, previous);

```

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

Milestone 14: Configure the relationship

Activity 14: Configure the Relationship

1. Go to All >> In the filter 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);
```

5. Click on Update.

Relationship
Daily Expenses

Name: Daily Expenses

Application: Global

Advanced: ☐

Applies to table: Family Expenses [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

```
1 (function refineQuery(current, parent) {  
2  
3     // Add your code here, such as current.addQuery(field, value);  
4     current.addQuery('u_date', parent.u_date);  
5     current.query();  
6  
7 })(current, parent);
```

Update Delete

Conclusion:

The project “Calculating Family Expenses using ServiceNow” successfully demonstrates how a powerful cloud-based platform can be applied to solve day-to-day financial management challenges within a family. By digitizing the expense tracking process, the system eliminates the inefficiencies of manual methods and provides a structured, automated, and secure approach to financial planning.

Overall, the project achieves its objectives of improving financial awareness, promoting savings, and

showcasing the real-world application of ServiceNow in household expense management.

THANK YOU