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**9623 – AMRITA COLLEGE OF ENGINEERING AND
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**DEPARTMENT OF COMPUTER SCIENCE AND
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**CALCULATING FAMILY EXPENSES USING
SERVICENOW**

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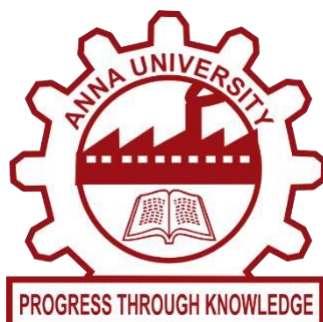
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Certified that, this is the Bonafide record of practical work done by **Mr./Ms.**of VII Semester in Information Technology of this College, in the **NM1051-ServiceNow Administrator** during academic year 2025-2026.

Staff-in-charge

Head of the Department

This record is submitted for the University Practical Examination held on

Internal Examiner

External Examiner

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ServiceNow

ServiceNow is a cloud-based digital workflow platform that helps organizations manage and automate their IT and business processes. It provides a centralized system for handling services such as IT Service Management (ITSM), IT Operations Management (ITOM), and IT Asset Management (ITAM). With ServiceNow, companies can streamline workflows, improve efficiency, and enhance user experiences by reducing manual tasks and ensuring faster service delivery. The platform is highly scalable, supports integrations with various enterprise tools, and offers advanced features like AI, analytics, and self-service portals to support continuous improvement within organizations.

Benefits Of ServiceNow

- Improves Efficiency Through Automation - ServiceNow automates repetitive and manual tasks, reducing human effort and speeding up service delivery.
- Centralized Platform for All Services - It provides a single system of record for managing IT and business processes, improving communication and visibility.
- Enhances User Experience - Self-service portals and knowledge bases enable users to resolve issues quickly without needing IT support.
- Better Incident and Problem Management - It helps track, prioritize, and resolve incidents efficiently, minimizing downtime and ensuring business continuity.
- Scalable and Flexible - ServiceNow can grow with the organization and can be customized to suit different business needs.

Features of ServiceNow

- IT Service Management (ITSM) - Provides tools for incident, problem, change, and request management to improve IT support services.
- Self-Service Portals - Users can raise requests, track progress, and find solutions through knowledge articles.
- Workflow Automation - Automates business processes using drag-and-drop workflow capabilities to reduce manual effort.
- Configuration Management Database (CMDB) - Maintains a centralized database of IT assets and their relationships to support better decision making.
- Service Catalog Management - Helps users easily request hardware, software, and services with standardized processes.

Calculating Family Expenses Using ServiceNow

Project Description:

The project aims to develop a comprehensive expense calculation system using the ServiceNow platform. This system will enable users to track and manage family expenses efficiently while offering essential features such as expense categorization, budget setting, real-time tracking, and reporting capabilities. By leveraging ServiceNow's robust and flexible framework, the system will ensure seamless integration, a user-friendly interface, and scalability to accommodate varying family sizes and financial complexities. The ultimate goal of this project is to empower users with intelligent tools that support informed financial decision-making and promote financial well-being within the family unit.

Abstract:

The Family Expense Calculation System developed on the ServiceNow platform aims to provide an efficient and user-friendly solution for managing and tracking household expenses. The system enables users to record, categorize, and analyze daily financial transactions under various expense categories such as food, utilities, education, healthcare, and entertainment. Through its budget-setting and real-time tracking features, users can monitor their spending patterns and identify areas for financial improvement.

The system leverages ServiceNow's powerful automation, reporting, and integration capabilities to deliver a seamless experience with accurate and timely data updates. A customized dashboard presents clear visual reports and summaries, helping users make informed financial decisions. Additionally, the project ensures data privacy, scalability, and flexibility, making it suitable for families of different sizes and financial structures.

By offering a centralized and digital platform for expense management, this project promotes financial discipline, transparency, and control over family finances. Ultimately, the Family Expense Calculation System empowers users to make smarter budgeting decisions, reduce unnecessary spending, and achieve long-term financial stability.

Objectives:

The main objective of this project is to develop a Family Expense Management System on the ServiceNow platform that enables efficient tracking, categorization, and budgeting of household expenses. The specific objectives are as follows:

- To provide real-time monitoring and interactive dashboards for better financial visibility.
- To generate insightful analytical reports that help users make informed financial decisions.
- To ensure scalability and adaptability for families of different sizes and financial needs.
- To promote financial discipline through detailed spending analysis and budgeting tools.
- To maintain data security and integrity using ServiceNow's built-in security features.

Milestone 1

Setting up ServiceNow Instance

Activity: 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.

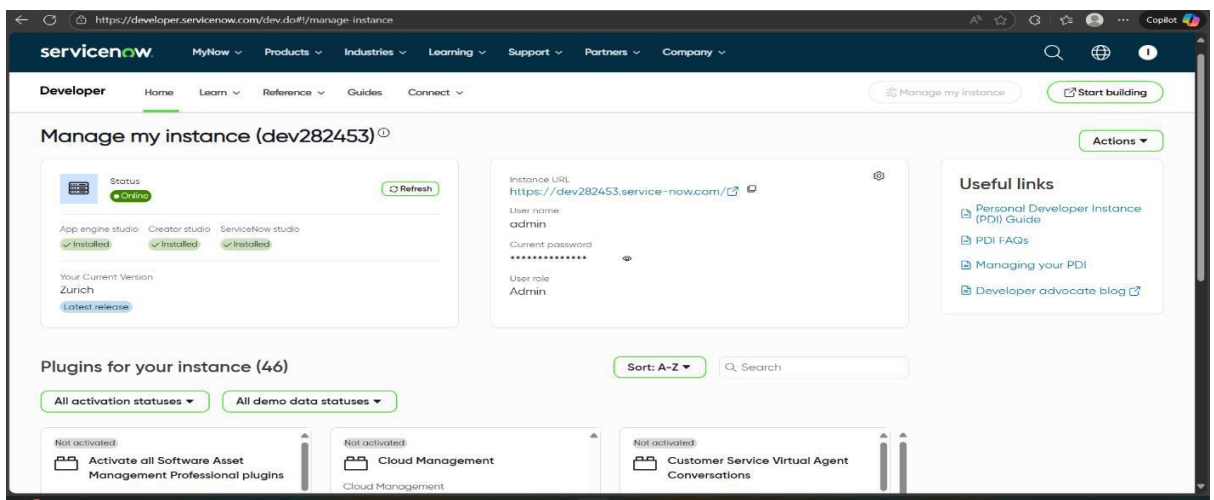


Figure No:1

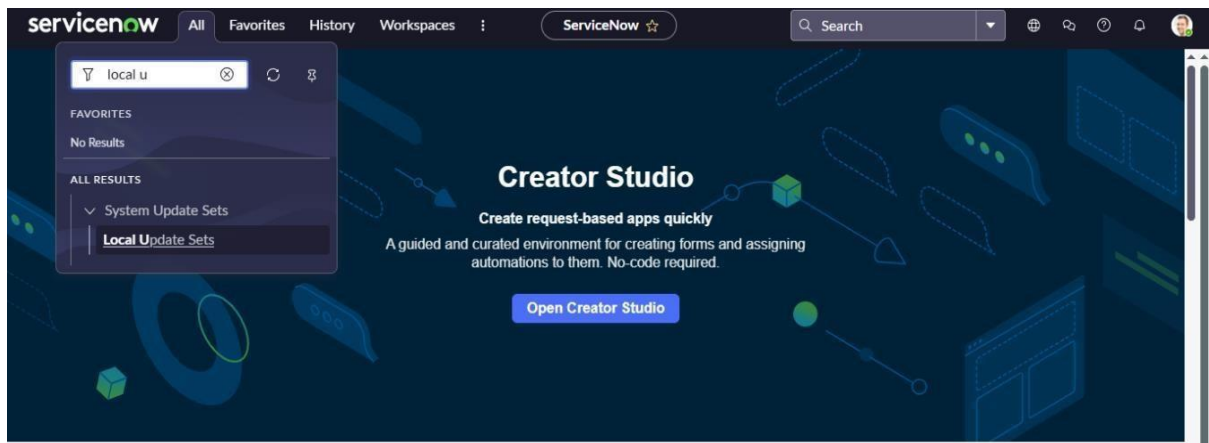
7. Now you will navigate to the ServiceNow.

Milestone 2

Creation of New Update Set

Activity: Creation of New Update Set

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



2. Enter the Details as:
Name: Go to All >> In the filter search for Local Update set > click on New Family Expenses
3. Then click on Submit and Make current

A screenshot of the 'Update Set - Create New Update Set' form in ServiceNow. The form has a header with 'Update Set - Create New Update Set' and a search bar. Below the header, there are several input fields: 'Name' (with a red asterisk) containing 'Family Expenses', 'State' (a dropdown menu showing 'In progress'), 'Parent' (a searchable text field), 'Release date' (a date picker), and 'Description' (a large text area). To the right of the 'Name' field, there's an 'Application' dropdown set to 'Global'. At the bottom left, there are two buttons: 'Submit' and 'Submit and Make Current'. At the bottom right, there's a small circular icon with a plus sign.

Milestone 3

Creation of Table

Activity: Creation of Table

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



2. Enter the Details as:
Name: Family Expenses

ServiceNow interface for creating a new update set. The form includes the following fields:

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

Buttons: Submit, Submit and Make Current

3. Then click on Submit and Make current

Milestone 4:

Creation of Table

Activity 1: 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

servicenow All Favorites History Workspaces : 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_family_expenses Create module ☒

Extends table ⓘ Create mobile module ☒

Add module to menu -- Create new --

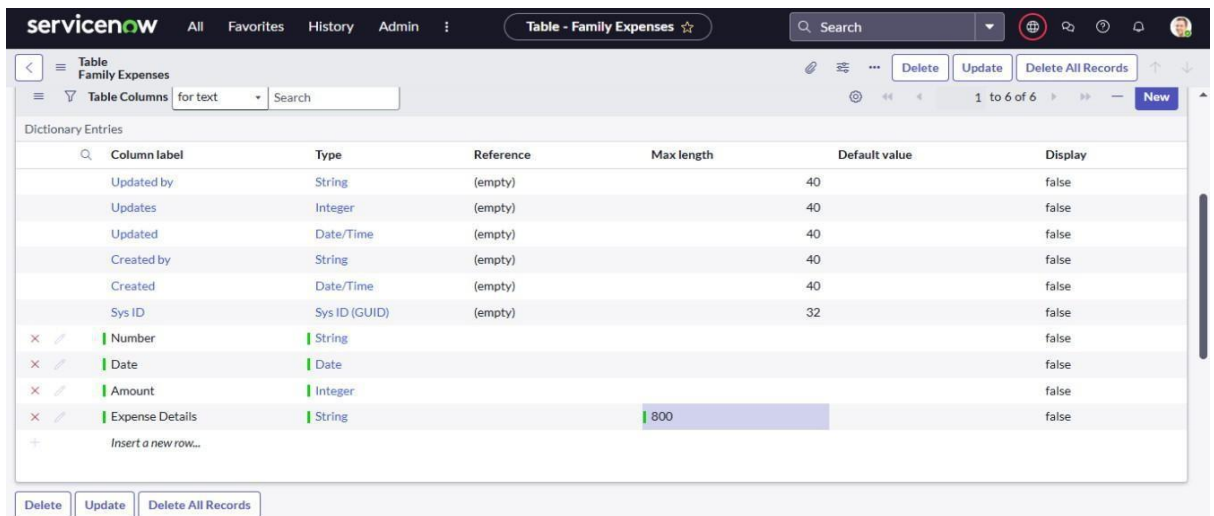
New menu name Family Expenditure

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

Activity 2: Creation of Columns (Fields)

1. Near Columns Double click near insert a new row.
Give the details as:
i. Column label: Number
ii. Type: String
2. Double click on insert a new row again
Give the details as:
i. Column label: Date
ii. Type: Date

3. Double click on insert a new row again
Give the details as:
 - i.Column label: Amount
 - ii.Type: Integer
4. Double click on insert a new row again
Give the details as:
 - i.Column label: Expense Details
 - ii.Type: String
 - iii.Max length: 800



The screenshot shows the ServiceNow interface for the 'Table - Family Expenses'. The 'Table Columns' section is active, displaying a list of columns. The 'Expense Details' column is highlighted, showing a max length of 800. The interface includes a search bar, a 'New' button, and buttons for 'Delete', 'Update', and 'Delete All Records'.

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

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

Activity 3: 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

The screenshot shows the 'Dictionary Entry' form for 'Number' in 'Advanced' view. The 'Default Value' tab is selected. A blue informational bar states: 'Alters the behavior of a field or functionality that depends on the field. [More Info](#)'. Below this, there is an 'Attributes' text input field. Further down, another blue bar states: 'The Default value specifies what value the field has when first displayed.' Underneath, the 'Use dynamic default' checkbox is checked. The 'Dynamic default value' dropdown menu is set to 'Get Next Padded Number'. At the bottom, there are 'Delete Column' and 'Update' buttons.

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
Prefix: MFE

The screenshot shows the 'servicenow' 'Number - New Record' form. The form fields are: 'Table' (Family Expenses), 'Prefix' (MFE), 'Number' (1,000), 'Application' (Global), and 'Number of digits' (7). There is a 'Submit' button at the bottom left. Below the form, there is a 'Related Links' section with a 'Show Counter' link.

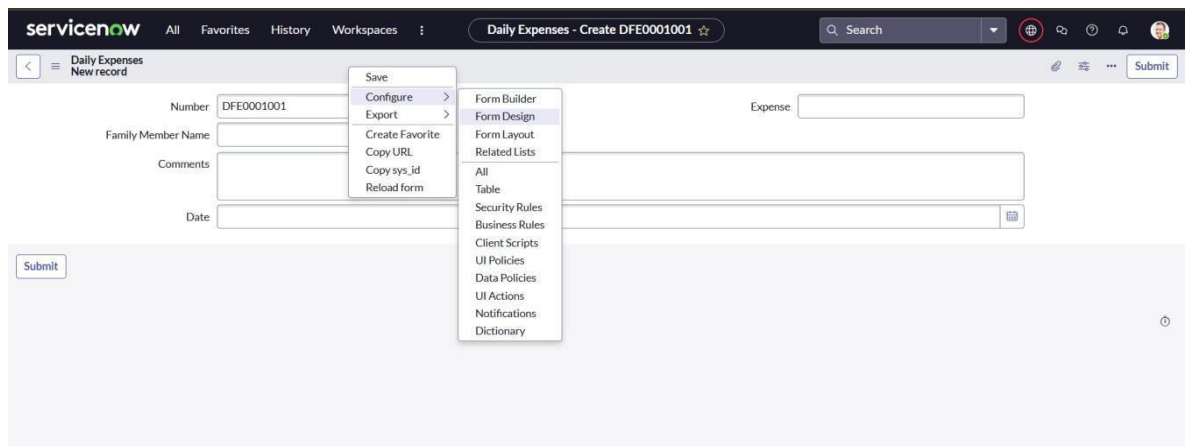
8. Click on Submit.

Activity 4: Configure the Form

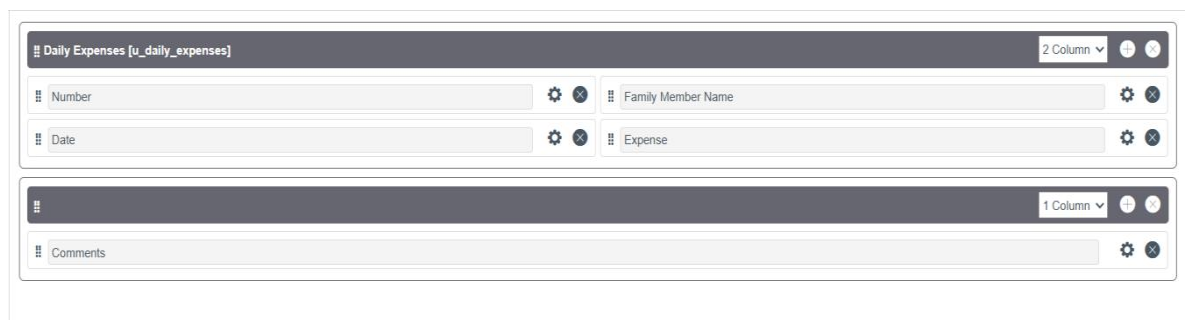
1. Go to All >> In the filter search for Daily Expenses >> Open Daily Expenses
2. Click on New
3. Go to the Header and right click there>> click on Configure >>

Select Form Design

- 4.



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, Family Member Name Mandatory Field by clicking on the gear icon and checking Mandatory



8. Click on Save.

Milestone 5:

Creation of Table

Activity 1: 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

More Info'. The form fields are: Label (Family Expenses), Name (u_family_expenses), Extends table (empty), Application (Global), Create module (checked), Create mobile module (checked), Add module to menu (-- Create new --), and New menu name (Family Expenditure)."/>

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

Activity 2: Creation of Columns (Fields)

6. Near Columns Double click near insert a new row.
Give the details as:
 - i. Column label: Number
 - ii. Type: String
7. Double click on insert a new row again
Give the details as:
 - i. Column label: Date
 - ii. Type: Date
8. Double click on insert a new row again
Give the details as:
 - i. Column label: Amount
 - ii. Type: Integer
9. Double click on insert a new row again
Give the details as:

- i.Column label: Expense Details
- ii.Type: String
- iii.Max length: 800

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

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

Activity 3: 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

Dictionary Entry
Number View: Advanced

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

Attributes

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

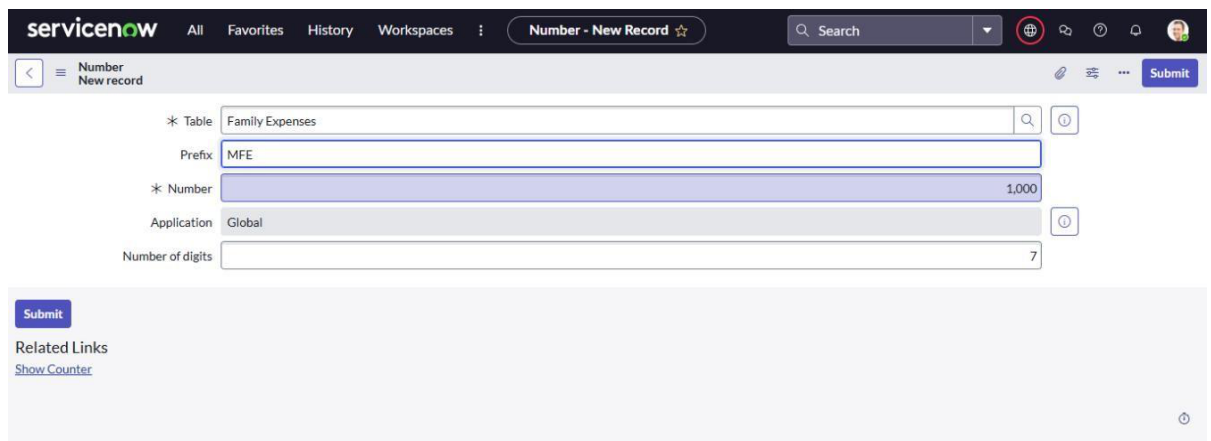
5.Go to All >> In the filter search for Number Maintenance >> select Number Maintain

6.Click on New.

7.Enter the below Details:

Table: Family Expenses

Prefix: MFE



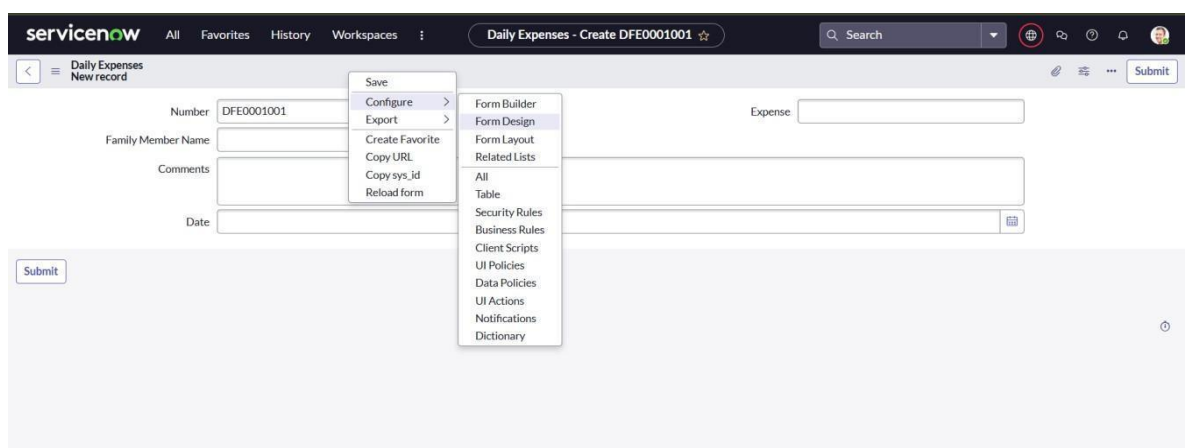
8.Click on Submit.

Activity 4 : 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.

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

The screenshot shows a form builder interface for a form titled "Daily Expenses [u_daily_expenses]". The form is configured with a "2 Column" layout. It contains four input fields: "Number", "Date", "Family Member Name", and "Expense". Each field has a gear icon to its right, indicating that it can be customized. Below the main form, there is a separate section for "Comments" with a "1 Column" layout. The interface is clean and modern, with a light gray background and dark text.

7. Click on Save.

Milestone 6:

Creation of Relationship

Activity: 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

The screenshot shows the ServiceNow 'Relationship - New Record' form. The 'Name' field is set to 'Daily Expenses'. A dropdown menu is open over the 'Applies to table' field, showing options like 'Family Expenses [u_family_expenses]'. The 'Queries from table' field is set to 'Daily Expenses [u_daily_expenses]'. A code editor is visible at the bottom with a JavaScript function 'refineQuery'.

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

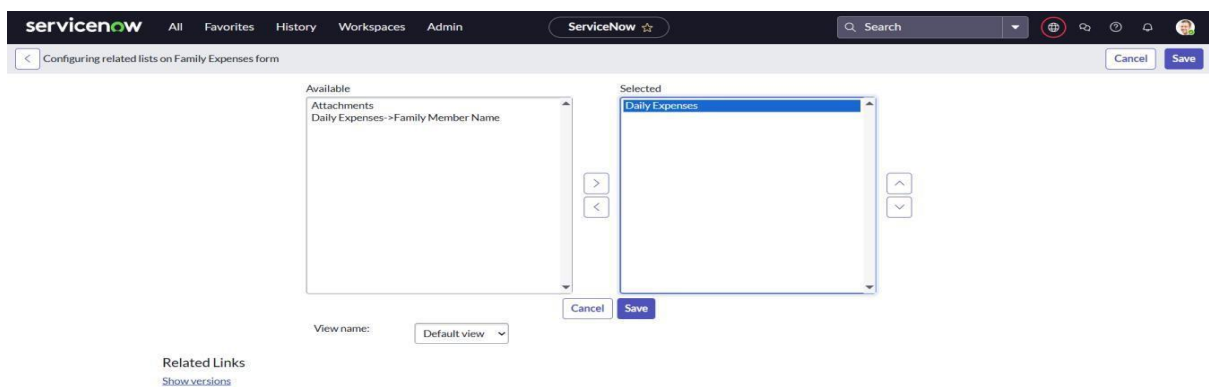
4. Click Save.

Milestone 7:

Configuring Related List on Family Expenses

Activity: Configuring Related List on Family Expenses

1. Go to All >> In the filter search for Family Expenses >> Open Family Expenses 2.
2. Click on New 3.
3. Go to the Header and right click there>> click on Configure >> Select Related Lists
4. Add Daily Expenses to the Selected Area.



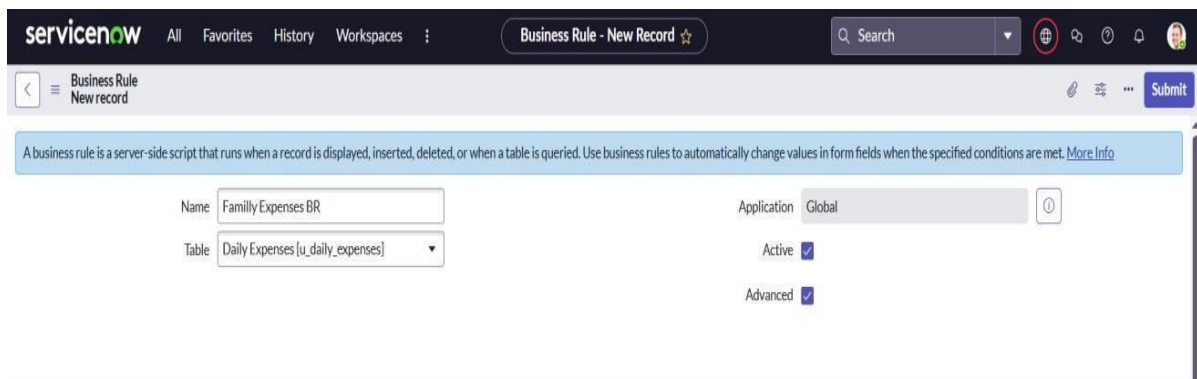
5. Click on Save

Milestone 8:

Creation of Business Rules

Activity: 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 - New Record' form. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and a 'Business Rule - New Record' button. A search bar is on the right. Below the navigation bar, there's a breadcrumb 'Business Rule > New record' and a 'Submit' button. A blue informational banner states: '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](#)'. The form fields include: 'Name' (Family Expenses BR), 'Table' (Daily Expenses [u_daily_expenses]), 'Application' (Global), 'Active' (checked), and 'Advanced' (checked).

- 4.In when to run Check Insert and Update
- 5.In Advance View (we write the code): Write the below

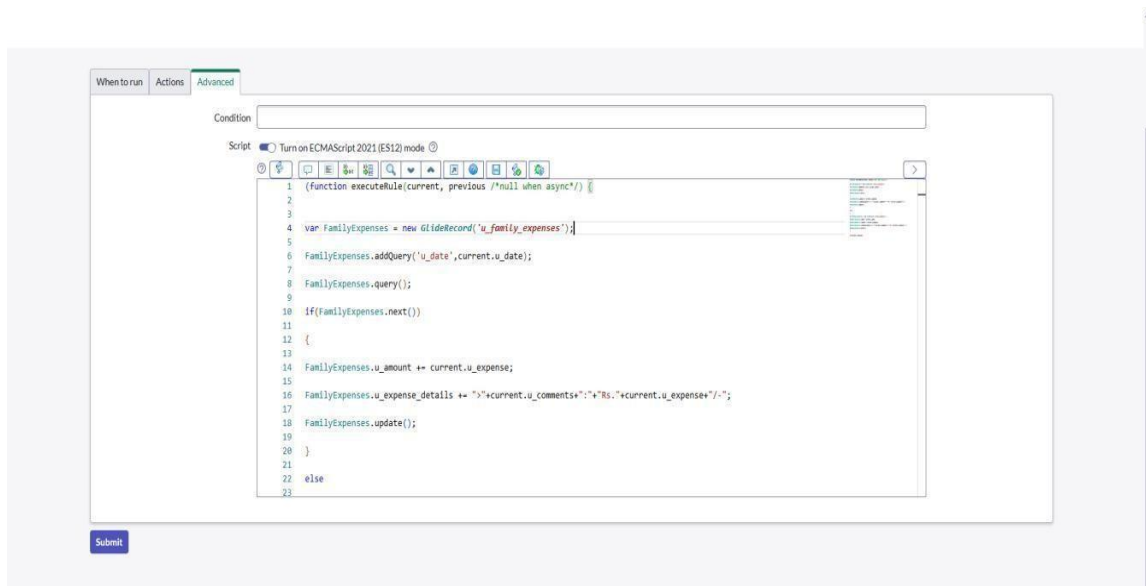
```
(function executeRule(current, previous /*null when async*/) {  
    var FamilyExpenses = new GlideRecord('u_family_expenses');  
    FamilyExpenses.addQuery('u_date',current.u_date);  
    FamilyExpenses.query();  
    if(FamilyExpenses.next())  
    {  
        FamilyExpenses.u_amount += current.u_expense;  
        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);

```



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

Milestone 9:

Configure the Relationship

Activity: Configure the Relationship

1. 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);
```

servicenow All Favorites History Workspaces Relationship - Daily Expenses Search

Relationship Daily Expenses Update Delete

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 ☐ Turn on ECMAScript 2021 (ES12) mode

```
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  
11 })(current, parent);  
12  
13
```

Update Delete

5. Click on Update.

Conclusion:

The project “Calculating Family Expenses using ServiceNow” demonstrates how technology can streamline and simplify household financial management. By leveraging the features of ServiceNow, the system provides efficient expense tracking, categorization, budgeting, and reporting while ensuring scalability, data security, and ease of use. The customized components, such as tables, forms, and business rules, enable a user-friendly and automated solution that promotes financial awareness and discipline. Overall, the project highlights the potential of ServiceNow as a versatile platform capable of supporting real-world applications beyond traditional IT service management