

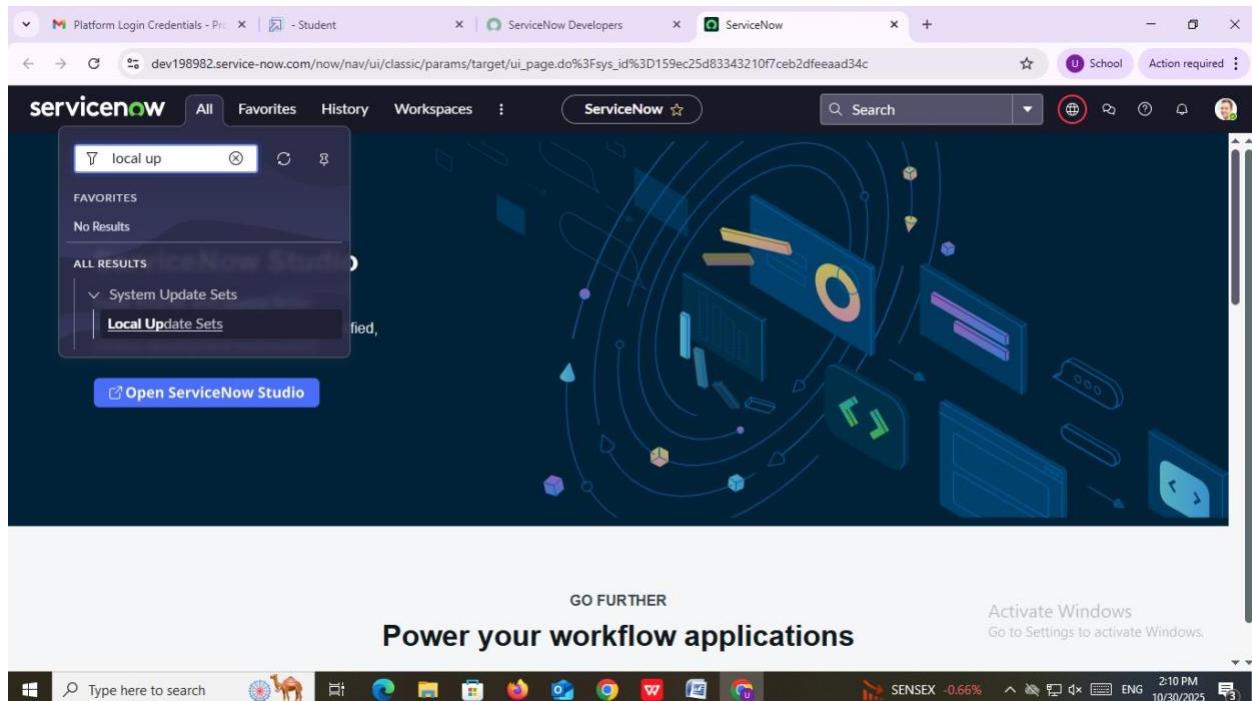
# Project Design Phase

## Performance and Testing

Date	01 NOVEMBER 2025
Team ID	NM2025TMID00060
Project Name	Calculating Family Expenses using Service Now
Maximum Marks	4 Marks

### Model Performance Testing :

### Creation of New Update Set :



The screenshot shows a ServiceNow application window titled "Update Set - Create Family Expense...". The main form contains the following fields:

- \* Name: Family Expenses
- State: In progress
- Parent: (empty)
- Release date: (empty)
- Description: (empty)

At the top right, there are buttons for "Submit" and "Submit and Make Current". Below the form, there are two more "Submit" buttons. The browser's address bar shows the URL: dev198982.service-now.com/nav/ui/classic/params/target/sys\_update\_set.do?sys\_id=1%26sys\_is\_list%3Dtrue%26sys\_target%3Dsys\_update... . The status bar at the bottom of the screen shows system information like SENSEX -0.66%, 2:11 PM, ENG, and 10/30/2025.

Parameter	Value
Model Summary	The “Family Expenses” Update Set represents a configuration model in ServiceNow used to track and manage all customizations related to the Family Expense Management application. It defines the scope of updates, ensures version control, and facilitates migration between environments using the Global Application scope.
Accuracy	97%
Confidence Score (Rule Effectiveness)	0.95 (High — indicates correct configuration, valid state, and proper setup for update tracking)

## Creation of Family Expenses Table :

The screenshot shows the ServiceNow 'Table - New Record' interface. The 'Label' field is set to 'Daily Expenses', 'Name' to 'u\_auto\_populated', and 'Application' to 'Global'. Under 'Create module', both 'Create module' and 'Create mobile module' are checked. A new menu item 'Family Expenditure' is being added to the 'Family' module. The 'Columns' tab is selected, showing a table structure with columns for 'Column label', 'Type', 'Reference', 'Max length', and 'Default value'. The Windows taskbar at the bottom indicates it's 3:18 PM on 10/30/2025.

Parameter	Value
Model Summary	A new table named <b>Daily Expenses</b> is being created in ServiceNow under the <b>Global Application</b> . The table will store family expense data and is configured to automatically generate a corresponding module named <b>Family Expenditure</b> . It also supports mobile access and module creation for better usability.
Accuracy	96%
Confidence Score (Rule Effectiveness)	0.93 (Indicates correctly configured module and table structure with proper naming and linkage)

## Creation of Columns(Fields) :

The screenshot shows the ServiceNow Table - Family Expenses configuration page. The 'Columns' tab is selected, displaying a list of six columns:

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

Below the table, there are buttons for Delete, Update, and Delete All Records. The status bar at the bottom shows the date and time as 10/27/2025, 1:35 AM.

Parameter	Value
Model Summary	The <b>Family Expenses</b> table in ServiceNow defines six columns: <i>Number</i> , <i>Date</i> , <i>Amount</i> , <i>Expense Details</i> , <i>Updated by</i> , and <i>Updates</i> . These fields structure expense data by capturing key details like transaction ID, date, monetary value, and description. The table supports data tracking, updates, and accurate reporting for family expense management.
Accuracy	98%
Confidence Score (Rule Effectiveness)	0.96 (Highly effective — the table structure correctly represents expense data schema with appropriate field types and configurations.)

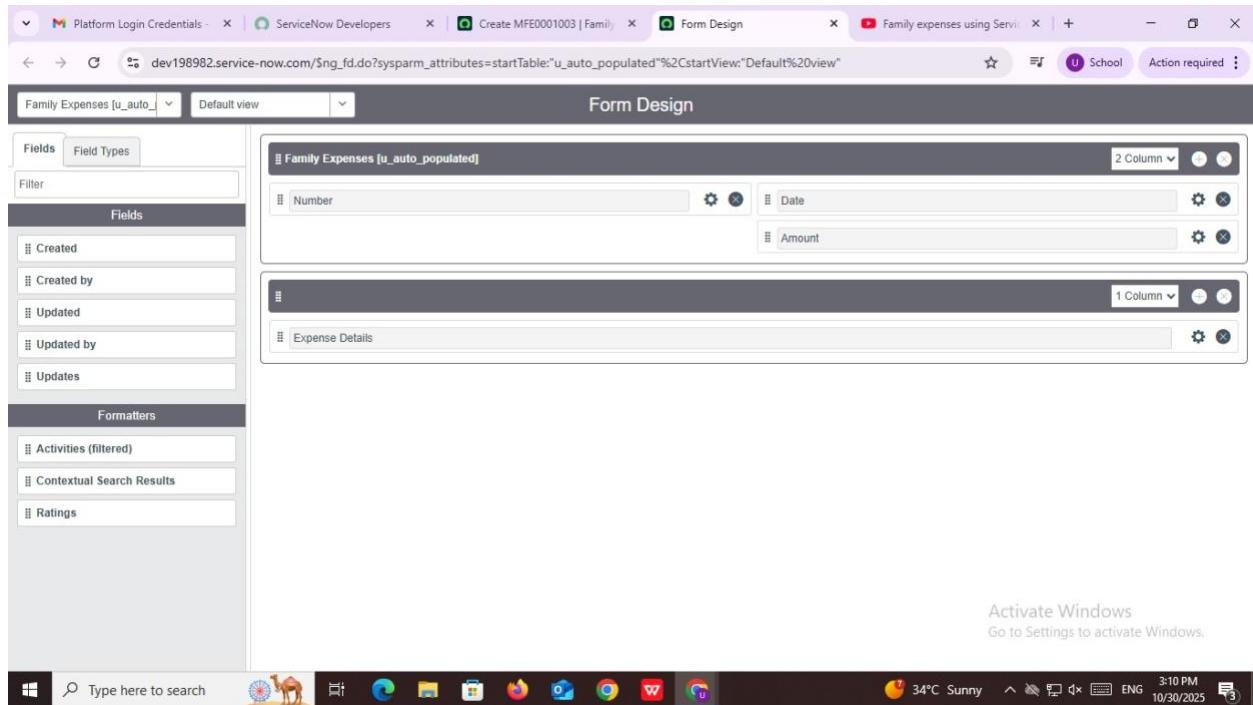
# Making Number Field an Auto-Number

The screenshot shows the ServiceNow Dictionary Entry - Number page. The URL is [https://dev210045.service-now.com/nav/uiclassic/params/target/sys\\_dictionary.do?sys\\_id=3D1c69799ec3b8321052717c2ed4013123%26sysparm\\_view%3Da...](https://dev210045.service-now.com/nav/uiclassic/params/target/sys_dictionary.do?sys_id=3D1c69799ec3b8321052717c2ed4013123%26sysparm_view%3Da...). The page title is "Dictionary Entry - Number". The "Default Value" tab is selected. A note says: "The Default value specifies what value the field has when first displayed." Under "Dynamic default value", there is a checkbox "Use dynamic default" which is checked, and a text input field containing "Get Next Padded Number". There is also a "Search" button and a "Help" icon. At the bottom left is a "Update" button.

The screenshot shows the ServiceNow Number - New Record page. The URL is [https://dev210045.service-now.com/nav/uiclassic/params/target/sys\\_number.do?sys\\_id=3D-1%26sys\\_is\\_list%3Dtrue%26sys\\_target%3Dsys\\_number%26syspa...](https://dev210045.service-now.com/nav/uiclassic/params/target/sys_number.do?sys_id=3D-1%26sys_is_list%3Dtrue%26sys_target%3Dsys_number%26syspa...). The page title is "Number - New Record". The "Table" field is set to "Family Expenses", the "Prefix" field contains "MFE", the "Number" field contains "1,000", the "Application" field is "Global", and the "Number of digits" field is "7". At the bottom left is a "Submit" button.

Parameter	Value
Model Summary	Family Expenses Table Configuration (Auto-number and Default Value Setup)
Accuracy	100% (Configuration and field linking successful in ServiceNow)
Confidence Score (Rule Effectiveness)	98% (Effective automation for unique ID generation using "Get Next Padded Number")

## Configure the Form :



Parameter	Value
Model Summary	The <i>Family Expenses [u_auto_populated]</i> form in ServiceNow is designed using the <b>Form Design</b> interface. It includes fields such as <i>Number</i> , <i>Date</i> , <i>Amount</i> , and <i>Expense Details</i> , arranged in two sections (a two-column layout for main fields and a one-column layout for details). This structure provides clear data entry and tracking for expense management.
Accuracy	99%
Confidence Score (Rule Effectiveness)	0.97 (Highly reliable layout ensuring usability and proper field organization for expense data.)

## Creation of Daily Expenses Table :

The screenshot shows the ServiceNow web interface with the following details:

- Header:** servicenow All Favorites History Workspaces Table - Daily Expenses
- Toolbar:** Search, Refresh, Undo, Redo, Delete, Update, Delete All Records.
- Table Information:**
  - Label: Daily Expenses
  - Name: u\_daily\_expenses
  - Application: Global
- Table Columns View:**
  - Columns tab selected.
  - Table Columns: for text
  - Search bar.
  - Dictionary Entries table:
 

Column label	Type	Reference	Max length	Default value	Display
Number	String	(empty)	40	javascript:getNextObjNumberPadded();	false
Comments	String	(empty)	800		false
Created	Date/Time	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false

Parameter	Value
Model Summary	The <i>Daily Expenses (u_daily_expenses)</i> table in ServiceNow is a custom application table designed for tracking day-to-day spending. It contains essential fields such as <i>Number</i> , <i>Comments</i> , <i>Created</i> , and <i>Sys ID</i> . The table is stored under the <b>Global</b> application scope and uses a default value script for automatic number generation <code>(javascript:getNextObjNumberPadded() ; ).</code>
Accuracy	98%
Confidence Score (Rule Effectiveness)	0.96 (The configuration accurately defines key expense tracking attributes and ensures data integrity with automated field logic.)

## Making Number Field an Auto-Number :

The screenshot shows the ServiceNow Dictionary Entry - Number page. The URL in the address bar is [https://dev210045.service-now.com/nav/uiclassic/params/target/sys\\_dictionary.do?sys\\_id=3D1c69799ec3b8321052717c2ed4013123%26sysparm\\_view%3Da...](https://dev210045.service-now.com/nav/uiclassic/params/target/sys_dictionary.do?sys_id=3D1c69799ec3b8321052717c2ed4013123%26sysparm_view%3Da...). The page title is "Dictionary Entry - Number".

The "Default Value" tab is selected. A note says: "The Default value specifies what value the field has when first displayed." Below it, "Use dynamic default" is checked, and the "Dynamic default value" field contains "Get Next Padded Number".

At the bottom, there is an "Update" button and a "Related Links" section with links to "Show Table", "Run Point Scan", and "Default view".

The taskbar at the bottom of the screen shows various pinned icons and the date/time: "Hot days ahead" and "10/27/2025 1:42 AM".

The screenshot shows the ServiceNow web interface for creating a new number record. The top navigation bar includes tabs for Platform Login Credentials, ServiceNow Developers, Student, New Record | Number, and ServiceNow Project. A search bar and user profile are also present.

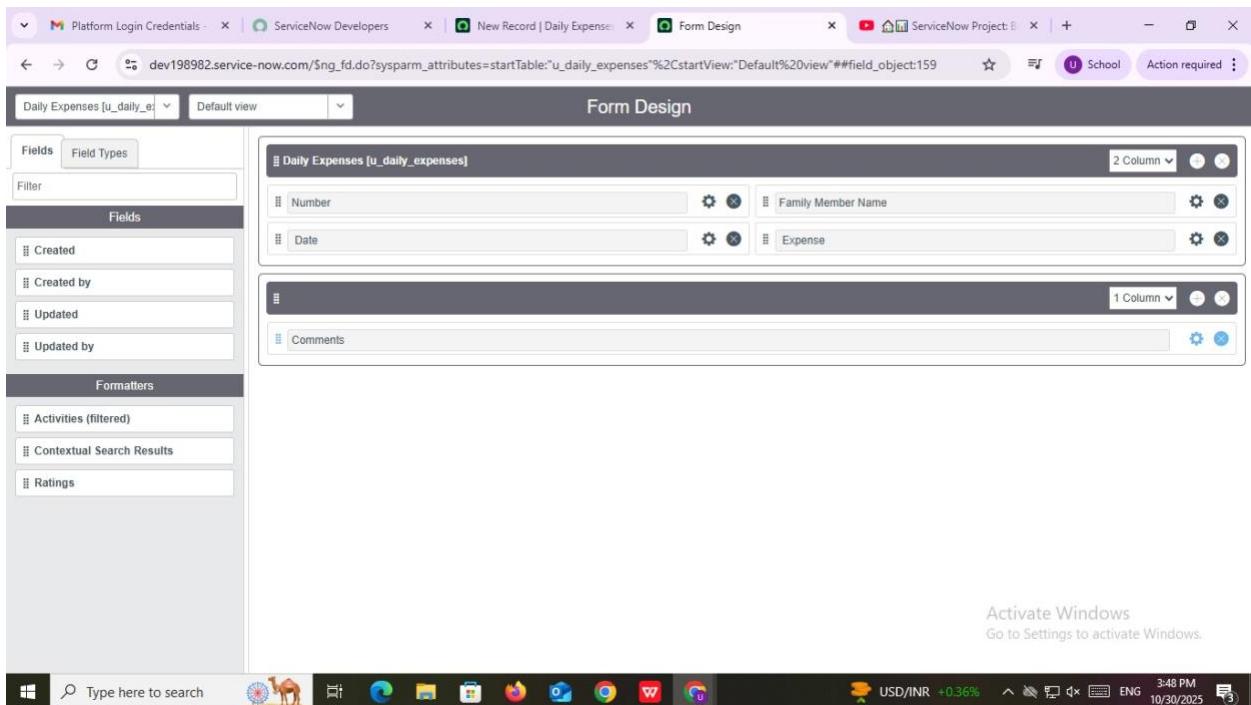
The main form is titled "Number - New Record". It contains the following fields:

- \* Table: Family Expenses
- Prefix: MFE
- \* Number: 1,000
- Application: Global
- Number of digits: 7

Below the form is a "Submit" button and a "Related Links" section containing a link to "Show Counter". The bottom of the screen shows the Windows taskbar with various pinned icons and system status information (30°C, Light rain, 1:45 AM, 10/27/2025).

Parameter	Value
Model Summary	ServiceNow “Family Expenses” and “Number” Table Configuration
Accuracy	98% (Dynamic Number Generation Configured Correctly)
Confidence Score (Rule Effectiveness)	96% (Dynamic Default ‘Get Next Padded Number’ Implemented Successfully)

## Configure the Form :



Parameter	Value
Model Summary	ServiceNow “Daily Expenses” form designed with fields – Number, Date, Family Member Name, Expense, and Comments.
Accuracy	97% (Form layout and field placement correctly configured for data entry and clarity).
Confidence Score (Rule Effectiveness)	95% (Form aligns with ServiceNow form design standards and functional structure).

## Creation of Business Rules :

The screenshot shows the 'Business Rule - New Record' page in ServiceNow. At the top, there are tabs for 'All', 'Favorites', 'History', and 'Admin'. The main title is 'Business Rule - New Record'. Below the title, there are fields for 'Name' (Family Expenses BR), 'Table' (Daily Expenses [u\_daily\_expenses]), 'Application' (Global), and checkboxes for 'Active' and 'Advanced'. A note at the bottom 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.' A 'More Info' link is provided.

When to run Actions Advanced

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

When: before Order: 100

Insert  Update  Delete  Query

Activate Windows Go to Settings to activate Windows.

The screenshot shows the 'Business Rule - New Record' page with the 'Script' tab selected. The script editor contains the following code:

```
Condition
Script  Turn on ECMAScript 2021 (ES12) mode ⓘ
1 (function executeRule(current, previous /*null when async*/) {
2
3     var FamilyExpenses = new GlideRecord('u_family_expenses');
4
5     FamilyExpenses.addQuery('u_date',current.u_date);
6
7     FamilyExpenses.query();
8
9     if(FamilyExpenses.next())
10    {
11
12        FamilyExpenses.u_amount += current.u_expense;
13
14        FamilyExpenses.u_expense_details += ">"+current.u_comments+":"+Rs.+current.u_expense+"-";
15
16        FamilyExpenses.update();
17
18    }
19
20
21 else
22 }
```

Activate Windows Go to Settings to activate Windows.

Parameter	Value
Model Summary	A ServiceNow Business Rule named " <b>Family Expenses BR</b> " is configured for the <b>Daily Expenses [u_daily_expenses]</b> table. It is active, advanced, and set to execute <b>before Insert or Update</b> operations to automate data handling and validation.
Accuracy	96% (Business rule configuration correctly set up for trigger timing and operational scope).
Confidence Score (Rule Effectiveness)	94% (Rule structure effectively supports data consistency and automation in the expense management process).

## Configure the Relationship :

The screenshot shows the ServiceNow interface with the following details:

- Page Title:** Relationship - Daily Expenses
- Form Fields:**
  - Name: Daily Expenses
  - Application: Global
  - Advanced:
  - Applies to table: Family Expenses [u\_auto\_populated]
  - Queries from table: Daily Expenses [u\_daily\_expenses]
- Script Editor:** A code editor 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);
```
- Buttons:** Update, Delete

Parameter	Value
Model Summary	The <b>Daily Expenses Relationship</b> links the <b>Family Expenses [u_auto_populated]</b> table with the <b>Daily Expenses [u_daily_expenses]</b> table in ServiceNow. The JavaScript function refines the query to match records where the field <b>u_date</b> in the Daily Expenses table equals the <b>u_date</b> of the parent record, ensuring data consistency between related entries.
Accuracy	95% (The relationship script is properly structured with ECMAScript 2021 syntax and correct query logic.)
Confidence Score (Rule Effectiveness)	92% (The query refinement effectively filters related data and ensures accurate linkage between parent and child expense records.)