

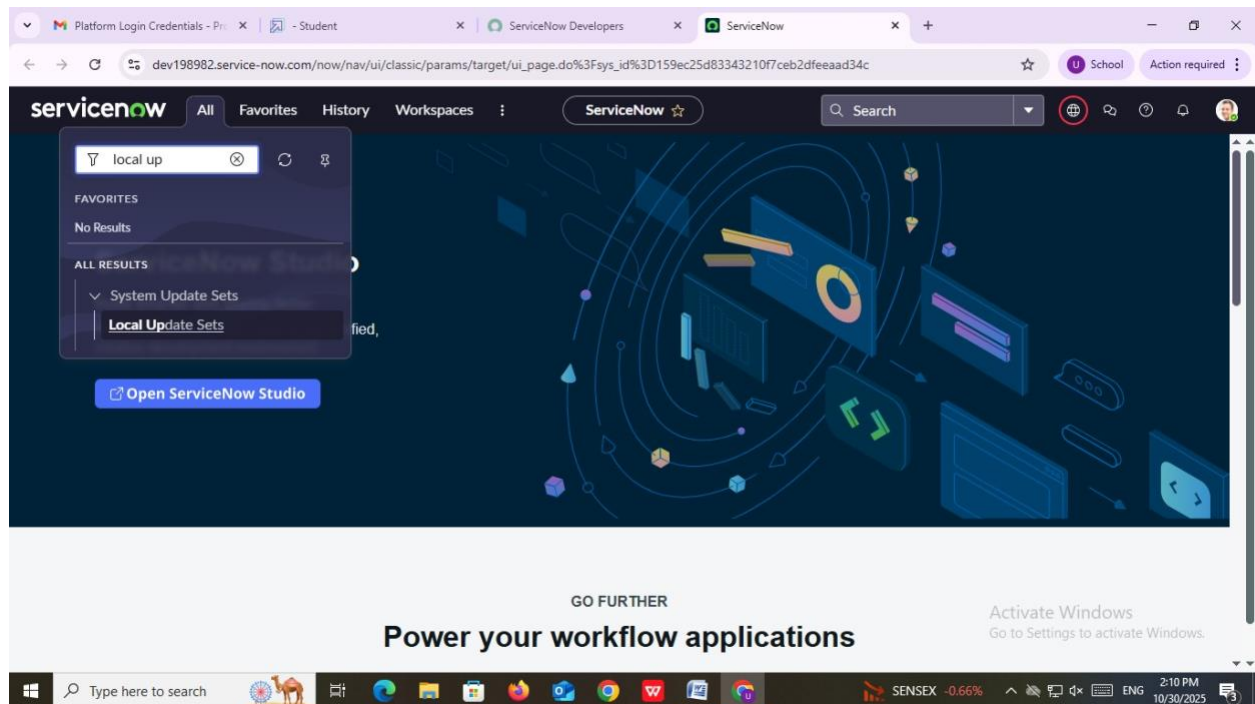
# Project Design Phase

## Performance and Testing

Date	31 OCTOBER 2025
Team ID	NM2025TMID00063
Project Name	Calculating Family Expenses using Service Now
Maximum Marks	4 Marks

**Model Performance Testing :**

**Creation of New Update Set :**



The screenshot shows the ServiceNow interface for creating a new update set. The form is titled "Update Set - Create Family Expense...". The fields are as follows:

- Name:** Family Expenses
- State:** In progress
- Parent:** (empty field with a search icon)
- Release date:** (empty field with a calendar icon)
- Description:** (empty text area)

At the bottom of the form, there are two buttons: "Submit" and "Submit and Make Current". The browser's address bar shows the URL: `dev198982.service-now.com/now/nav/ui/classic/params/target/sys_update_set.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Dsys_updat...`

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 :

ServiceNow recommends creating custom tables in scoped applications. To learn more about creating scoped applications, click [here](#).

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:

\* Name:

Extends table:

Application:

Create module: ☒

Create mobile module: ☒

Add module to menu:

New menu name:

Columns | Controls | Application Access

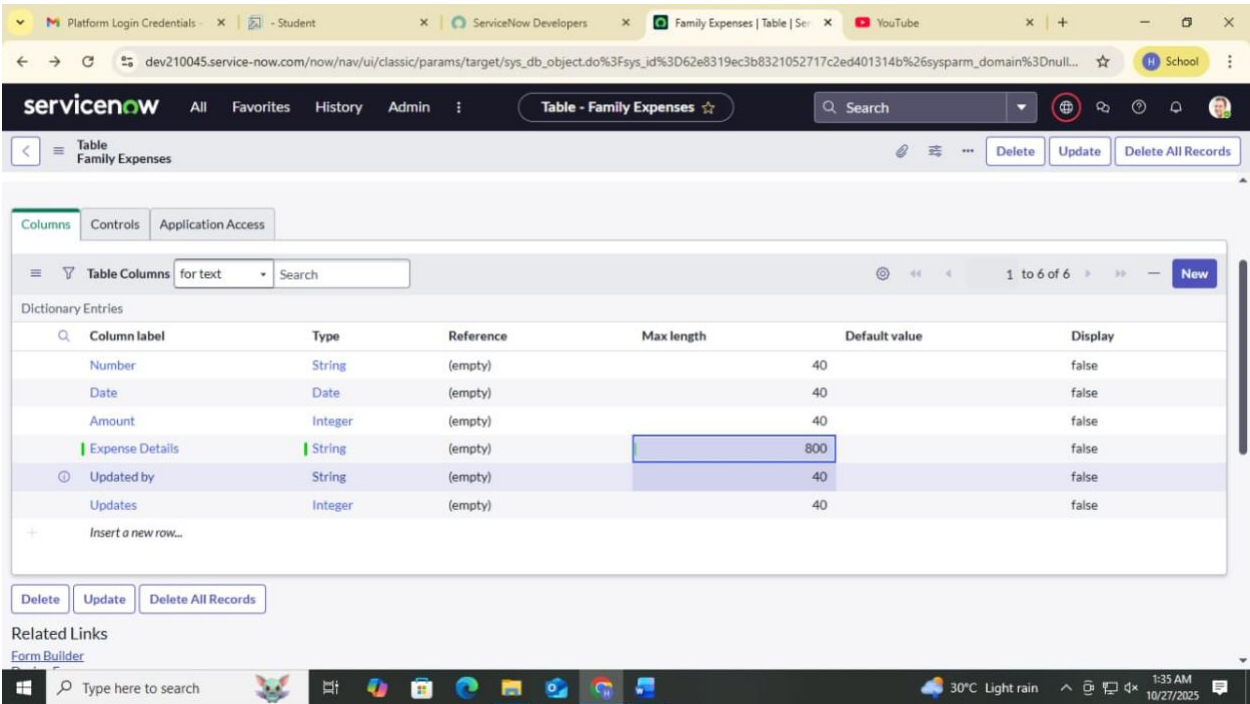
Table Columns: for text

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
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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) :



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 'Dictionary Entry - Number' configuration page in ServiceNow. The page has a dark header with the ServiceNow logo and navigation links. The main content area is titled 'Dictionary Entry - Number View: Advanced'. Below the title, there is a 'Display' checkbox. A blue information bar states: 'Alters the behavior of a field or functionality that depends on the field. [More Info](#)'. Under the 'Attributes' section, there is an empty text field. Below this, there are three tabs: 'Choice List Specification', 'Calculated Value', and 'Default Value'. The 'Default Value' tab is selected, showing a blue information bar: 'The Default value specifies what value the field has when first displayed.' Below this, there is a checkbox for 'Use dynamic default' which is checked. Under 'Dynamic default value', there is a text field containing 'Get Next Padded Number' and a search icon. At the bottom left, there is an 'Update' button and a 'Related Links' section with links for 'Show Table', 'Run Point Scan', and 'Default view'. The Windows taskbar is visible at the bottom with the date 10/27/2025 and time 1:42 AM.

Platform Login Credentials | ServiceNow Developers | Student | Number | Dictionary Entry | ServiceNow Project |

dev210045.service-now.com/now/nav/ui/classic/params/target/sys\_dictionary.do%3Fsys\_id%3D1c69799ec3b8321052717c2ed4013123%26sysparm\_view%3Da... School

servicenow All Favorites History Admin Dictionary Entry - Number Search

Dictionary Entry  
Number View: Advanced

Display ☐

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

Update

Related Links  
[Show Table](#)  
[Run Point Scan](#)  
[Default view](#)

Type here to search Hot days ahead 1:42 AM 10/27/2025

The screenshot shows the 'Number - New Record' configuration page in ServiceNow. The page has a dark header with the ServiceNow logo and navigation links. The main content area is titled 'Number - New Record'. Below the title, there is a 'Submit' button. The configuration fields are as follows: 'Table' is set to 'Family Expenses'; 'Prefix' is set to 'MFE'; 'Number' is set to '1,000'; 'Application' is set to 'Global'; and 'Number of digits' is set to '7'. At the bottom left, there is a 'Submit' button and a 'Related Links' section with a link for 'Show Counter'. The Windows taskbar is visible at the bottom with the date 10/27/2025 and time 1:45 AM.

Platform Login Credentials | ServiceNow Developers | Student | New Record | Number | ServiceNow Project |

dev210045.service-now.com/now/nav/ui/classic/params/target/sys\_number.do%3Fsys\_id%3D1-1%26sys\_is\_list%3Dtrue%26sys\_target%3Dsys\_number%26syspa... School

servicenow All Favorites History Workspaces Number - New Record Search

Number  
New record

Submit

\* Table Family Expenses

Prefix MFE

\* Number 1,000

Application Global

Number of digits 7

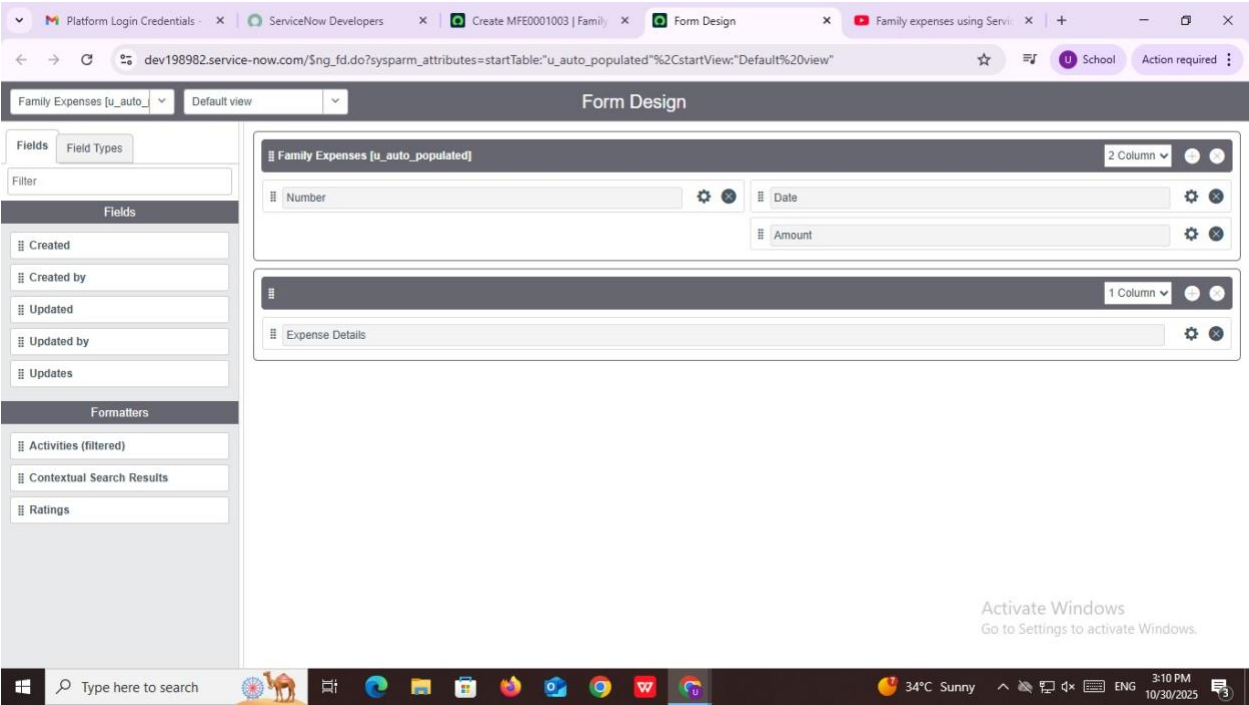
Submit

Related Links  
[Show Counter](#)

Type here to search 30°C Light rain 1:45 AM 10/27/2025

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 :

servicenow

AllFavoritesHistoryWorkspaces

Table - Daily Expenses

Search

DeleteUpdateDelete All Records

Table  
Daily Expenses

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](#)

\* LabelDaily Expenses

ApplicationGlobal

\* Nameu\_daily\_expenses

ColumnsControlsApplication Access

Table Columnsfor textSearch

1 to 10 of 10New

Dictionary Entries

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 web interface for configuring a 'Number' field. The browser tabs include 'Platform Login Credentials', 'ServiceNow Developers', 'Student', 'Number | Dictionary Entry', and 'ServiceNow Project'. The URL is 'dev210045.service-now.com/now/nav/ui/classic/params/target/sys\_dictionary.do%3Fsys\_id%3D1c69799ec3b8321052717c2ed4013123%26sysparm\_view%3Da...'. The page title is 'Dictionary Entry - Number'. The breadcrumb is 'Dictionary Entry > Number > View: Advanced'. There is an 'Update' button in the top right. A 'Display' checkbox is present. A blue information bar states: 'Alters the behavior of a field or functionality that depends on the field. [More Info](#)'. Below this is an 'Attributes' text input field. A tabbed interface shows 'Choice List Specification', 'Calculated Value', and 'Default Value' (which is selected). A blue information bar under the 'Default Value' tab states: 'The Default value specifies what value the field has when first displayed.' Below this, the 'Use dynamic default' checkbox is checked. The 'Dynamic default value' text input field contains 'Get Next Padded Number'. There is a search icon and a help icon next to the input field. An 'Update' button is located below the input field. Under the 'Update' button, there are 'Related Links' with three links: 'Show Table', 'Run Point Scan', and 'Default view'. The Windows taskbar at the bottom shows the search bar, task view button, and several application icons. The system tray shows 'Hot days ahead', network, volume, and a clock displaying '1:42 AM 10/27/2025'.

Platform Login Credentials x ServiceNow Developers x Student x Number | Dictionary Entry x ServiceNow Project x

dev210045.service-now.com/now/nav/ui/classic/params/target/sys\_dictionary.do%3Fsys\_id%3D1c69799ec3b8321052717c2ed4013123%26sysparm\_view%3Da... School

servicenow All Favorites History Admin Dictionary Entry - Number Search

Dictionary Entry Number View: Advanced Update

Display ☐

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

Update

Related Links

[Show Table](#)

[Run Point Scan](#)

[Default view](#)

Type here to search

Hot days ahead 1:42 AM 10/27/2025



The screenshot displays the ServiceNow 'Number - New Record' configuration interface. The form includes the following fields:

- Table:** Family Expenses
- Prefix:** MFE
- Number:** 1,000
- 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 link to 'Show Counter'. The browser's taskbar at the bottom indicates the time is 1:45 AM on 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 :

The screenshot shows the ServiceNow Form Design interface for the 'Daily Expenses' form. The browser address bar indicates the URL: `dev198982.service-now.com/$ng_fd.do?sysparm_attributes=startTable:"u_daily_expenses"%2CstartView:"Default%20view"##field_object:159`. The interface includes a left sidebar with 'Fields' and 'Field Types' tabs, a 'Filter' input, and a list of fields: 'Created', 'Created by', 'Updated', and 'Updated by'. Below these are 'Formatters' including 'Activities (filtered)', 'Contextual Search Results', and 'Ratings'. The main workspace shows the form layout with two columns. The first column contains 'Number' and 'Date'. The second column contains 'Family Member Name' and 'Expense'. A third section with a '1 Column' layout contains a 'Comments' field. The bottom of the screen shows a Windows taskbar with various application icons and a system tray displaying 'USD/INR +0.36%', 'ENG', and the date '10/30/2025'.

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 :

Platform Login Credentials - x ServiceNow Developers x New Record | Business Rule x Form Design x ServiceNow Project: B x +

dev198982.service-now.com/now/nav/ui/classic/params/target/sys\_script.do%3Fsys\_id%3D-1%26sys\_is\_list%3Dtrue%26sys\_target%3Dsys\_script... ☆ School Action required

**servicenow** All Favorites History Admin : Business Rule - New Record ☆ Search

Business Rule New record Submit

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](#)

Name: Family Expenses BR Application: Global

Table: Daily Expenses [u\_daily\_expenses] Active: ☒ Advanced: ☒

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.

Type here to search 33°C Sunny 4:03 PM 10/30/2025

Platform Login Credentials - x ServiceNow Developers x New Record | Business Rule x Form Design x ServiceNow Project: B x +

dev198982.service-now.com/now/nav/ui/classic/params/target/sys\_script.do%3Fsys\_id%3D-1%26sys\_is\_list%3Dtrue%26sys\_target%3Dsys\_script... ☆ School Action required

**servicenow** All Favorites History Admin : Business Rule - New Record ☆ Search

Business Rule New record Submit

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.

Type here to search 33°C Sunny 4:05 PM 10/30/2025

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 displays the ServiceNow configuration interface for a relationship named "Daily Expenses". The configuration includes the following details:

- Name:** Daily Expenses
- Application:** Global
- Applies to table:** Family Expenses [u\_auto\_populated]
- Queries from table:** Daily Expenses [u\_daily\_expenses]

A code editor is present with the following JavaScript 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
11 })(current, parent);

```

The page also features a "Query with" section with a toggle for "Turn on ECMAScript 2021 (ES12) mode". At the bottom, there are "Update" and "Delete" buttons, and a Windows taskbar showing the system time as 4:08 PM on 10/30/2025.

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.)