Calculating Family Expenses Using ServiceNow

Introduction

- The project titled “Calculating Family Expenses Using ServiceNow” focuses on designing a system to manage and track household expenses using the ServiceNow platform. Effective budgeting and financial planning depend on recording daily expenses accurately, identifying spending patterns, and making informed decisions to control costs.This project leverages ServiceNow’s low-code capabilities to create custom tables for storing family and daily expenses, define relationships between them, and automate calculations through business rules. By doing so, it not only helps in organizing and monitoring family finances efficiently but also demonstrates how ServiceNow can be adapted to develop practical, real-world solutions beyond traditional IT services.The project serves as a practical exercise for beginners to understand the basics of application development in ServiceNow, such as instance setup, table creation, relationship configuration, and automation — providing both learning value and a useful expense management tool.

Abstract

- This project, titled “Calculating Family Expenses Using ServiceNow,” demonstrates how to design and implement a simple expense tracking system within the ServiceNow platform. By leveraging ServiceNow’s low-code/no-code tools, the project sets up custom tables to record and manage both family and daily expenses, establishes relationships between them, and configures business rules to automate calculations.The goal of the project is to provide an organized and automated way to monitor family spending patterns, making financial management easier and more transparent. This guided project helps students and beginners gain hands-on experience with ServiceNow’s instance setup, table creation, relationship mapping, and business rule configuration — ultimately showcasing how cloud-based platforms can be adapted to solve real-life problems.

Setting Up ServiceNow Instance

To begin building the family expenses tracking application, the first step is to set up a ServiceNow Personal Developer Instance (PDI). This instance serves as a private environment where all configurations and development can be safely done.Steps:1. Register:Visit developer.servicenow.com.Sign up for a free developer account.2. Request Instance:Log in to the Developer Portal.Navigate to Manage → Instance → Request Instance.Choose the latest available release version.3. Activate Instance:Wait for the email or portal notification.Click the provided link to open your PDI.4. Access the Instance:Login using the provided admin credentials.Your instance is now ready for customization and project development.Purpose:Create a dedicated space to design tables, relationships, and business rules without affecting production environments.Gain hands-on practice with ServiceNow’s features in a real environment.

Creation of New Update Set

- An Update Set in ServiceNow is a container used to group and track configuration changes, customizations, and development work so they can be moved easily between different instances.Steps to create a new Update Set:

1. Navigate:Go to the navigation filter and type:System Update Sets → Local Update Sets
2. 2. Create New:Click on New.Enter a descriptive name, e.g.,FamilyExpensesProjectOptionally add a short description of the project scope.
3. 3. Save & Mark Active:Save the update set.Mark it as Current to make sure all upcoming changes are captured inside this set.

Creation of Tables

- To track family expenses effectively, you need to create custom tables in ServiceNow. These tables store the necessary data and serve as the foundation of your application.Steps to Create Tables:1. Navigate:Go to:System Definition → Tables2. Create New Table:Click New.Enter table name, for example:Family ExpensesOptionally check "Create module" to generate a menu link automatically.3. Add Fields:Add required fields to capture data, e.g.:Member Name (String)Expense Category (Choice)Amount (Decimal)Date (Date)Remarks (String)---Creation of Daily Expenses Table:1. Repeat the same process.2. Table name:Daily Expenses3. Add fields like:Expense Date (Date)Item (String)Cost (Decimal)Paid By (String)

Creation of Relationships

- Creation of Relationships To link data stored in different tables, ServiceNow allows you to create relationships.In this project, the goal is to connect each family member's overall expense record with their detailed daily expenses.
- Steps to Create Relationships:
- 1. Navigate to the Daily Expenses Table:Go to:System Definition → Tables → Daily Expenses
- 2. Add Reference Field:In the Daily Expenses table, add a new field:Field type: ReferenceReference to table: Family ExpensesName the field, e.g., Family Member
- 3. Save:Save the table to apply changes.Purpose of the Relationship:Establishes a one-to-many relationship:One family member (Family Expenses) → many daily expenses (Daily Expenses).Makes it easy to view all daily expenses for a family member directly from their main expense record.

Configuring Related List on Family Expenses

- After creating the relationship between tables, you need to configure the form so that users can easily see related daily expenses from the family member's record.Steps to Configure Related List:

1.Navigate to Family Expenses Table Form Layout:Go to:System UI → Forms → Configure → Related ListsOr directly open a form record from the Family Expenses table.

2. Add Related List:In the "Available" list, look for Daily Expenses.Move it to the "Selected" list to add it as a related list.

3. Save:Save and reload the form.

Creation of Business Rules

- Business rules in ServiceNow are server-side scripts that automate tasks, enforce data integrity, and ensure workflow consistency. In this project, they are used to update or validate family expenses automatically when daily expenses are added or modified.---Steps to Create a Business Rule:

1. Navigate to Business Rules:Go to:System Definition → Business Rules
2. Create New Rule:Click New.Name: Update Total ExpenseTable: Family ExpensesWhen: After Insert or UpdateCheck the box: ✅ Active
3. Define Conditions and Script:Use a script to calculate the total of all daily expenses for the related family member and update the total expense field in the Family Expenses table.

Configure the Relationship

- After creating the reference field to link Daily Expenses with Family Expenses, it’s important to configure the relationship settings to ensure data behaves as expected.---Steps to Configure the Relationship:

1.Open the Reference Field:Go to:System Definition → Tables → Daily ExpensesClick on the reference field you added (e.g., Family Member).

2.Set Additional Properties:Confirm the reference table is correctly set to Family Expenses.Optionally set properties like:Display Value: Show a readable name instead of the sys_id.Mandatory: Make the field required.Dependent field / Filter: To control which records are selectable.

3.Save Changes:Save and publish the table definition.

Conclusion

In this project, titled “Calculating Family Expenses Using ServiceNow,” we built a simple and effective expense tracking system using the ServiceNow platform.We started by setting up a personal developer instance, created custom tables for family and daily expenses, and established relationships between them. We also configured related lists to make data easier to view and added business rules to automate expense calculations.This project demonstrates how ServiceNow’s low-code capabilities can be applied beyond traditional IT services — offering practical solutions for everyday needs like family budgeting. Overall, it helps users gain hands-on experience in designing, configuring, and automating applications within ServiceNow.

Thank you