CALCULATING FAMILY EXPENSES USING SERVICE NOW

NAANMUDALVAN PROJECT

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INTRODUCTION

Managing family expenses is one of the most important aspects of financialplanning,yetitisoftenoverlookedorhandledinunstructured ways like handwritten notes or spreadsheets. Families frequently face challenges such as overspending, lack of budget control, and difficulty in analyzingwheretheirmoneygoes.Toaddresstheseissues, technology can play a vital role by providing structured, automated, and user-friendly solutions.

This project, “Calculating Family Expenses Using ServiceNow,”aimstocreateadigitalsystemthathelpstrack, categorize, and manage family expenses efficiently. ServiceNow, known for its robustworkflowautomationandapplicationdevelopmentcapabilities, provides an excellent platform for building such a system. By leveraging ServiceNow,thisprojecttransformsexpensemanagementinto a more streamlinedprocesswithfeatureslikeexpensecategorization,daily tracking, budget limits, reporting, and automated business rules.

Thesystemwillnotonlysimplifyfinancialmanagementforfamiliesbut also provide real-time insights into spending patterns, allowing better decision-making.With its scalability and flexibility, the solution can be expanded to suit different familystructuresandevenadaptedforsmallbusinessexpense management. Ultimately, the project showcases how a powerful enterprise platform like ServiceNow can be applied beyond IT workflows to solve everyday problems in an innovative and practical way.

ABSTRACT

Expense management plays a crucial roleinmaintaining

financialstabilitywithinfamilies,yettraditionalmethod ssuch asmanualtrackingorspreadsheetsoftenleadtoerrors,l ackof visibility, and poor decision-making. To address thischallenge, thisproject focusesondesigningandimplementing a Family Expense Management System using ServiceNow. TheapplicationleveragesServiceNow'spowerfullowcode developmenttables, environment to create structured relationships, and automated workflows for recording and analyzingcategorizing expenses. Keyfeatures include expenses(suchasfood,utilities, andtransport),maintaining family member details, linking daily transactions, and applying business rules to validate data and automate calculations. By configuring related lists and creating meaningful reports, the system provides users with a clear overview of their financial habits and budget limits. Theproposedsolutionnotonlysimplifiesday-todayexpense trackingspendingbutalsoprovidesreal-timeinsightsintopatterns, enablingfamiliestomakesmarter financial

PROBLEMSTATEMENT

Managinghouseholdexpensesisoftenadifficultandtimeconsuming task for families. Most families rely on manual methodssuchasnotebooks,receipts,orspreadsheetstotracktheirdaily spending. These methods come with several challenges:

Lackofreal-timetrackingofexpenses.

Difficultyincategorizingandconsolidatingexpenseslikefood, utilities, rent, and transportation.

Limitedabilitytoanalyzespendingpatternsorgenerate reports.

Highchancesoferrorsduetomanualdataentry.

Noautomationtoalertfamiliesaboutoverspendingor exceeding budgets.

As a result, families often lose visibility into their financial flow, making it harder to control budgets or make informed financial decisions.Thiscreatestheneedforasystematic,automated,anduser-friendlysolutiontomanageandcalculate family expenses efficiently.

SOLUTION

The proposed solution is to build a Family Expense Management SystemontheServiceNowplatform.ServiceNow,beingarobustlowcode/no-code platform, provides all the tools required to create structured applications without needing extensive programming knowledge.

Thesolutioninvolves:

Creatingcustomtablestostorefamilymemberdetailsanddaily expenses.

Definingrelationshipsbetweenfamilymembersandtheir respective expenses for easy tracking.

Configuringrelatedlistssothatexpenseslinkedtoeachfamilymembercanbe viewed in one place.

Implementingbusinessrulestoautomatecalculations,validateentries,and ensure data accuracy.

Generating reports and dashboards to visualize monthly/annualspendingandhighlightbudgetdeviations.

Usingupdatesetstotrackandmigratecustomizations,ensuring proper version control.

PRACTICALUSE

TheFamilyExpense Management System builton ServiceNowhelpsfamilies track, categorize ,andanalyzetheir expenses in a structured way .It simplifies budgeting ,reduces errors frommanual tracking ,andprovides real -timeinsights intospending patterns .Families canuseit to setlimits, monitor monthly expenses ,andgenerate reports for better financial decisions .Beyond households ,the samesystem can beadaptedfor smallbusinessesto managecashflowanddaily transactions effectively ,proving the versatility of ServiceNow insolvingpractical,non -ITproblems.

KNOWLEDGE GAINED

- Learned how to setup and configure a ServiceNow developer instance for building applications.
- Understood the importance of update sets for tracking and migrating customizations.
- Gained practical skills in creating custom tables and defining fields to store structured data.
- Learned how to establish relationships between tables for linked data management.
- Practiced configuring related lists for easier navigation and record visibility.
- Understood how to create and apply business rules for automation and validations.
- Gained insights into data modeling and database concepts within ServiceNow.
- Learned how to generate reports and dashboards for real-time analysis.
- Understood how ServiceNow can be applied to non-IT use cases like family expense tracking.
- Improved overall knowledge of workflow automation and low-code development.

MILESTONE1:SETTINGUPTHESERVICENOW INSTANCE

GototheofficialServiceNowDeveloperportal: https://developer.servicenow.comandcreateadeveloper account.

Aftersigningin,openthePersonalDeveloperInstancesectionfromthe dashboard.

SelectRequestInstancetogenerateafreshServiceNow environment for development.

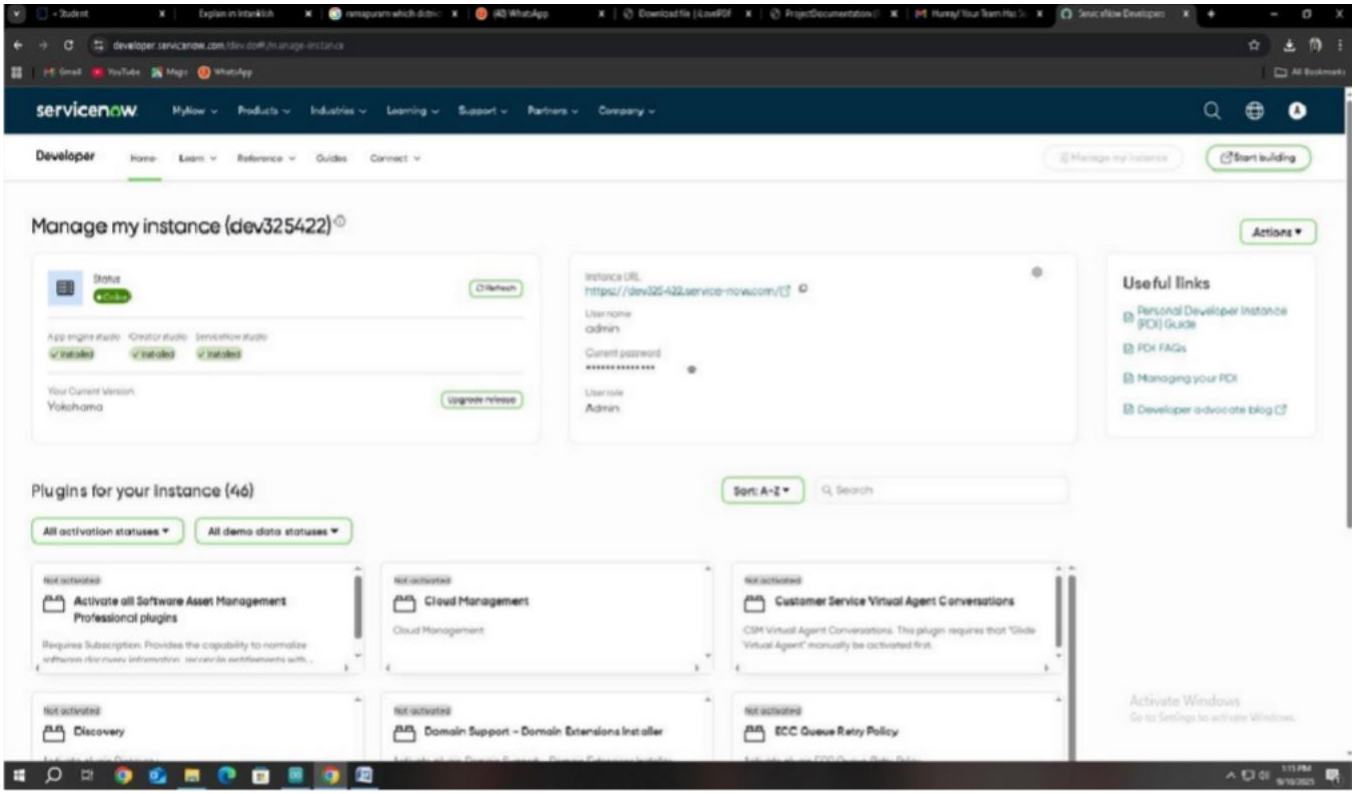
Providethenecessarydetails(likeversionselection)andconfirmyour request.

WaitfortheconfirmationemailcontainingyourinstanceURLand login credentials.

UsethecredentialstologintoyournewlycreatedServiceNowinstance.

Onceinside,exploretheinterfaceandbeginworkingonthe platform.

MILSTONE2:CREATIONOFNEWUPDATE



SET

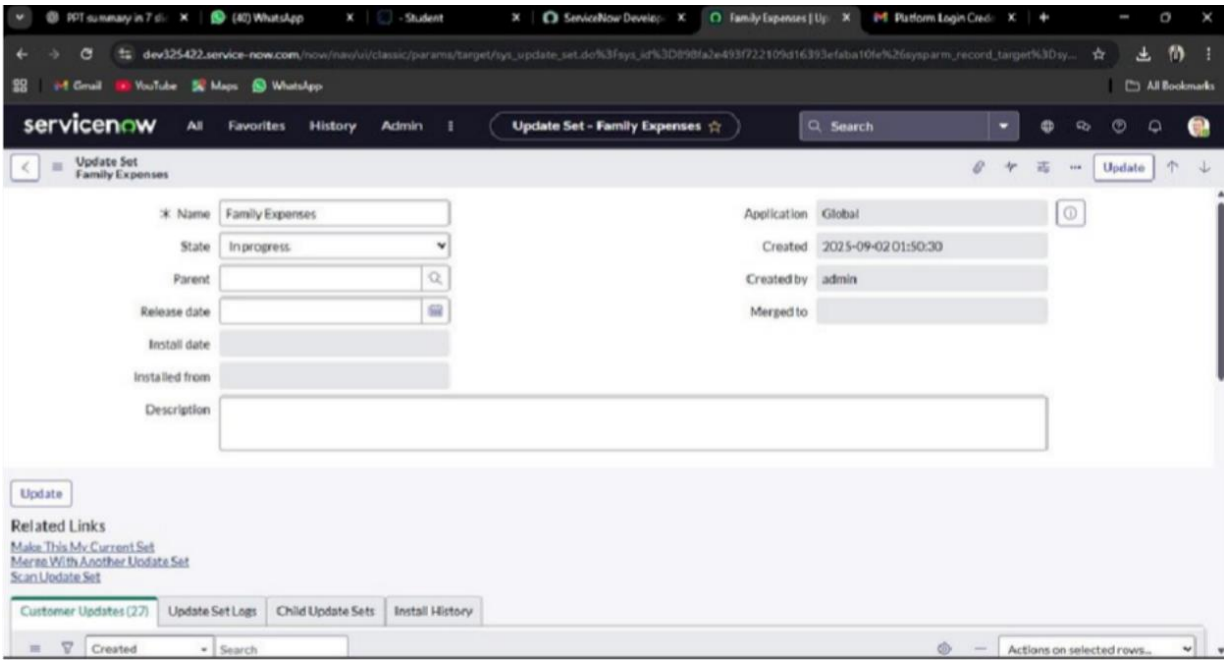
LogintoyourServiceNowinstanceandgototheApplication Navigator.

SearchforUpdateSetsandopenLocalUpdateSetsunderSystem Update Sets.

ClickonNewtocreateafreshupdateset.

Enterthefollowingdetails:

- o Name:FamilyExpenses
- o Description:Updatesettocaptureallconfigurations related to the Family Expense Management project.



Savetherecordandmarkitasthe CurrentUpdateSet,soevery change you make is tracked under this set.

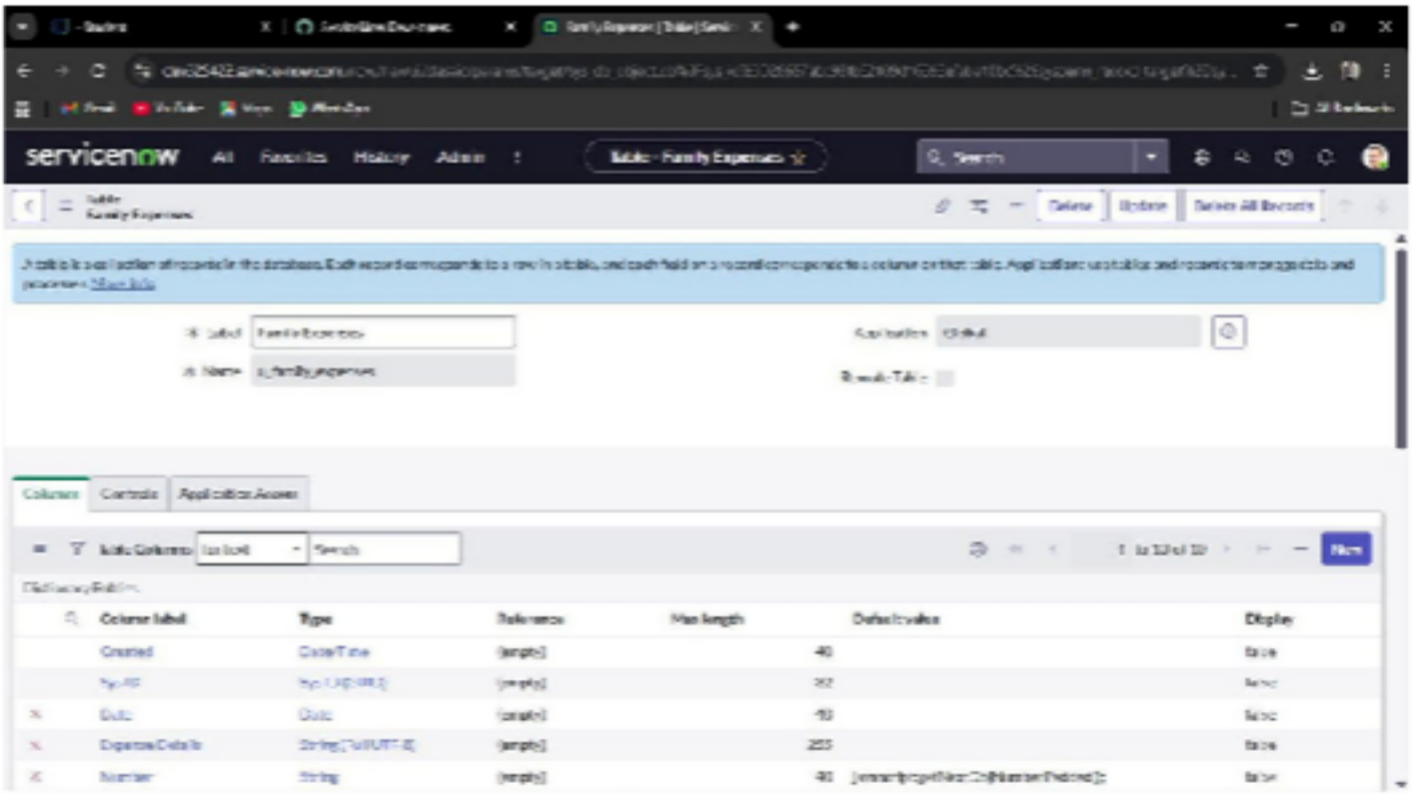
Verifythattheupdatesetisactivebycheckingtheheaderatthetop of the screen.

Fromthispointforward,allcustomizations(tables, relationships,andbusinessrules)willberecordedinsidethe Family Expenses update set.

MILSTONE1 : CREATIONOFTABLEFAMILY EXPENSES

Activity 1 – CreatingtheFamilyExpensesTable

1. InyourServiceNowinstance, navigatetoAll Tables using the filter navigator.
2. Click onNewtocreateanew table.
3. Fillin therequireddetails:
   - Label : FamilyExpenses
   - Name : (Thiswillbeauto-generatedbasedonthe label)
   - NewMenuName : FamilyExpenditure
4. Savetherecord tocreatethenewtable.



MILSTONE3:CREATIONOFTABLEFAMILYEXPENSES

Activity2–AddingColumnstotheFamilyExpensesTable
Duration:1Hour
SkillTags:TableConfiguration,DataModeling,ServiceNowBasics

OpenthenewlycreatedFamilyExpensestable.

Toaddcolumns,double-clickneartheexistingcolumnstoinsertanewrow.

Enterthefollowingdetailsonebyone:

1. ColumnLabel:Numbero

   Type:String

2. ColumnLabel:Dateo

   Type:Date

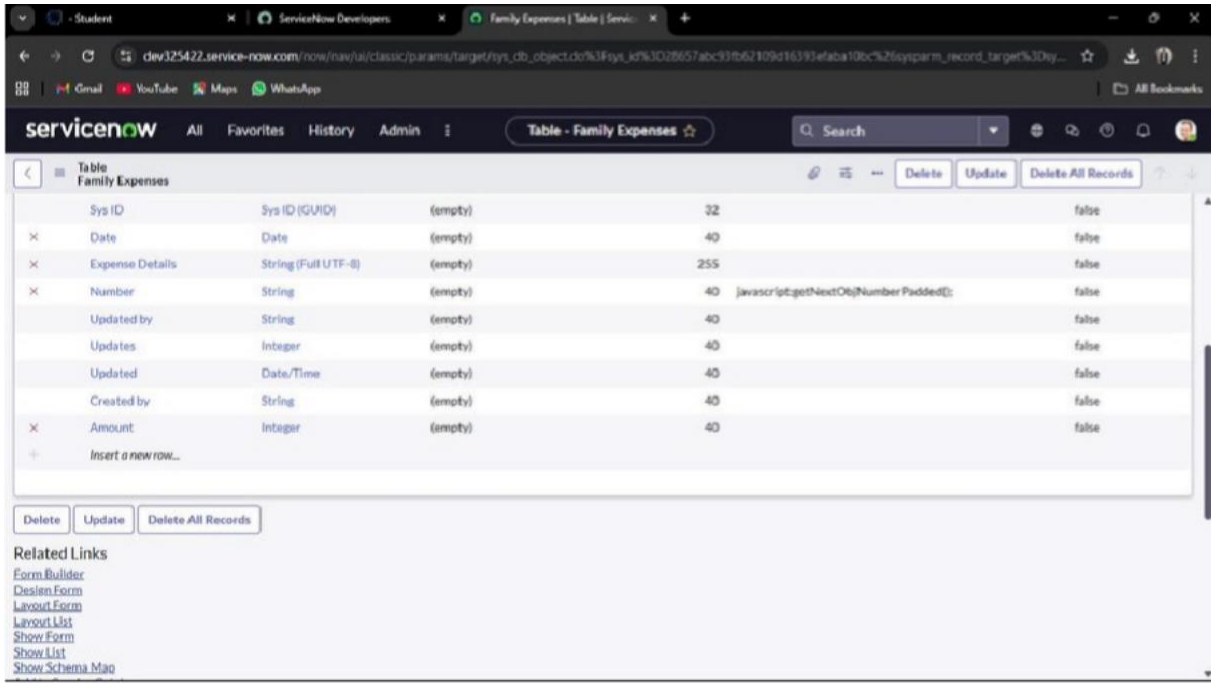
3. ColumnLabel:Amounto

   Type:Integer

4. ColumnLabel:ExpenseDeta

   ils o Type:String o

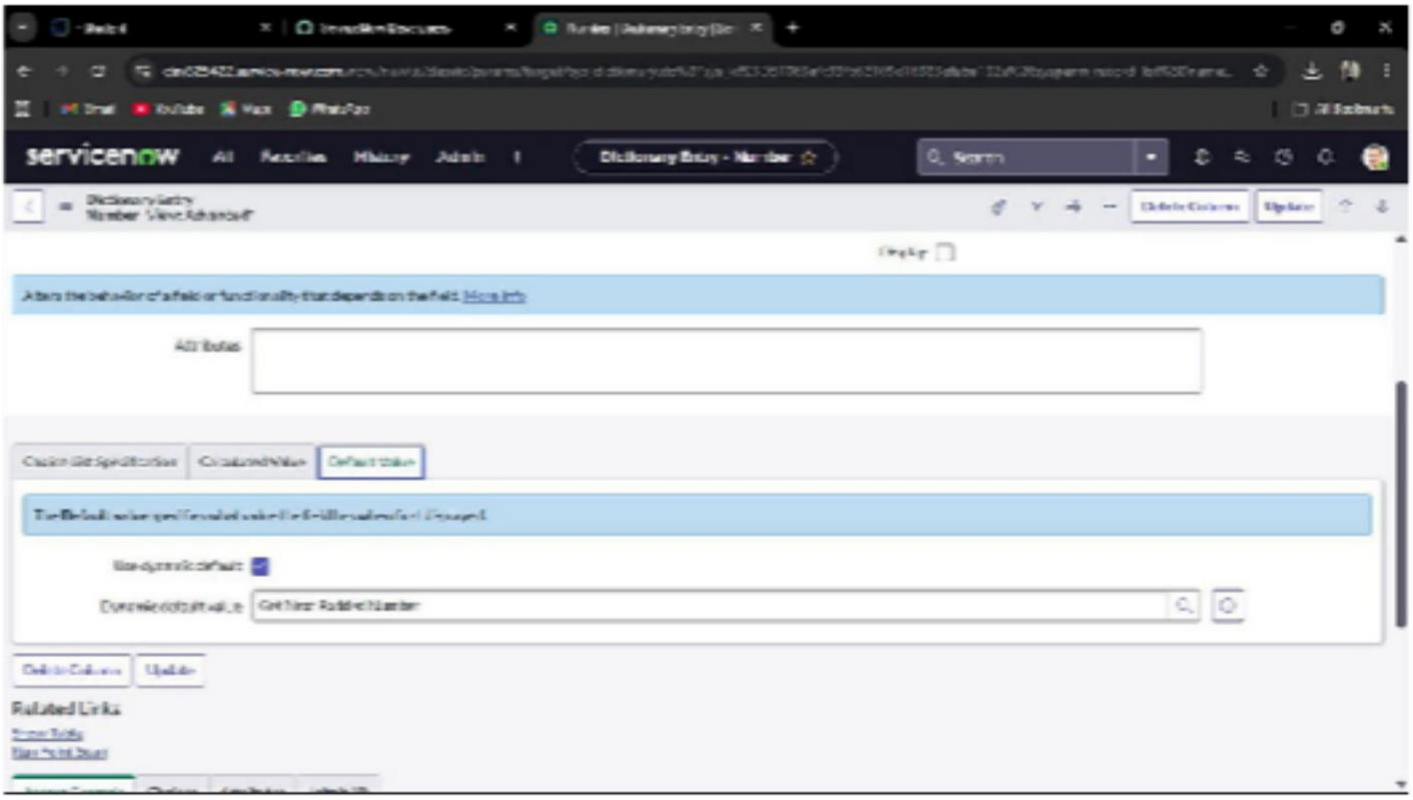
   MaxLength:800



MILSTONE3:CREATIONOFTABLEFAMILYEXPENSES

Activity1-MakingtheNumberFieldanAuto-Number Open the Family Expenses table.

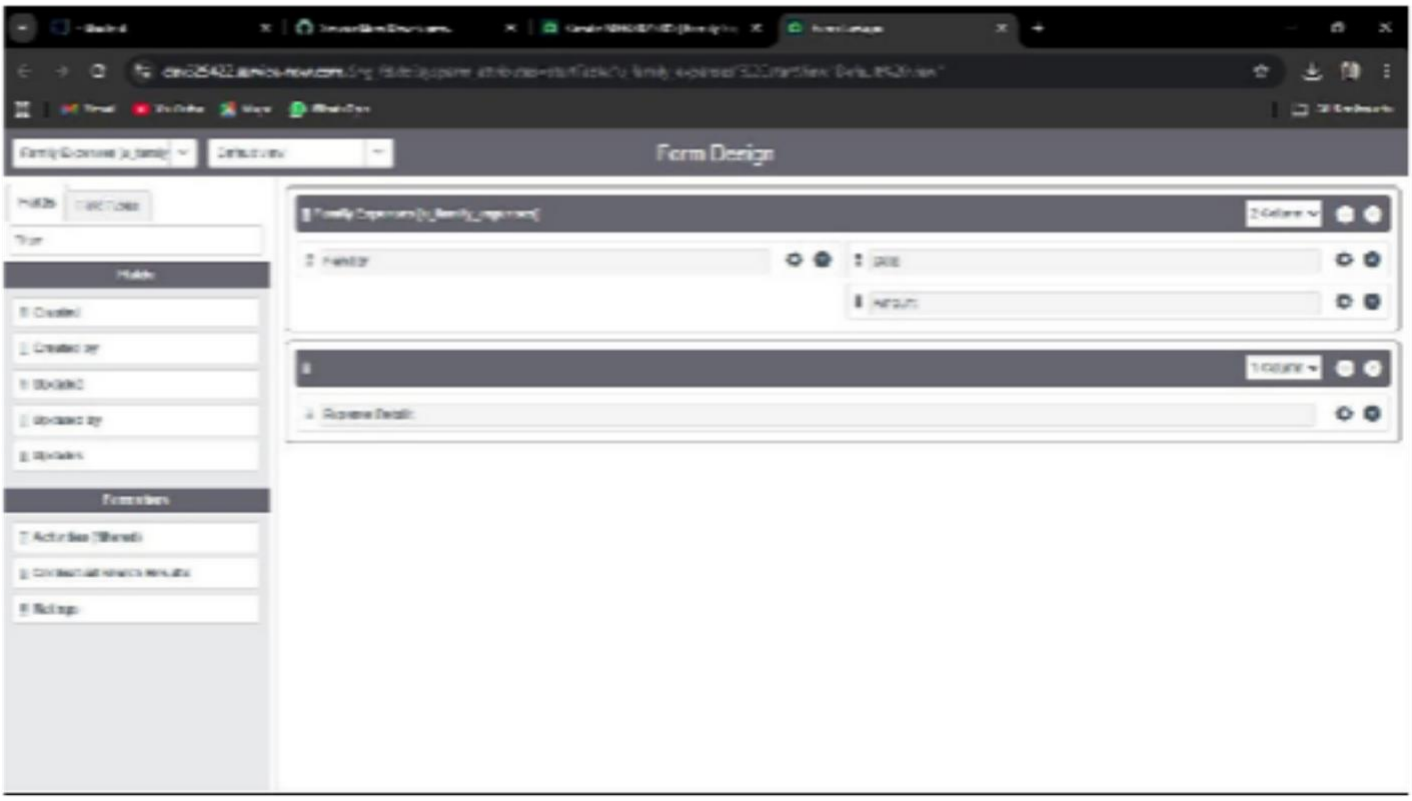
- Locatethe Numberfield/columnanddouble-clicktoopenits properties.
- Scrolldownandswitchtotheadvancedview.
- IntheDefaultValuesection.
  - Checkthebox forUseDynamicDefault.
  - SettheDynamicDefaultValuetoGetNextPadded Number.
- ClickUpdatetosavethe changes.



MILSTONE3:CREATIONOFTABLEFAMILYEXPENSES

Activity:-ConfiguringtheForm

- NavigatetoAll inthefilter.searchforFamilyExpenses.
- OpentheFamilyExpensestable.
- ClickonNewtocreateanewformentry.
- Ontheformheader.right clickandselect:
  - o Configure FormDesign.
- IntheFormDesigner,usedrag-and-dropto:
  - o Rearrangefields.
  - o Grouprelatedfieldstogether.
  - o Addsectionsifrequiredforbetterclarity.
- Savethecustomizedformlayout.

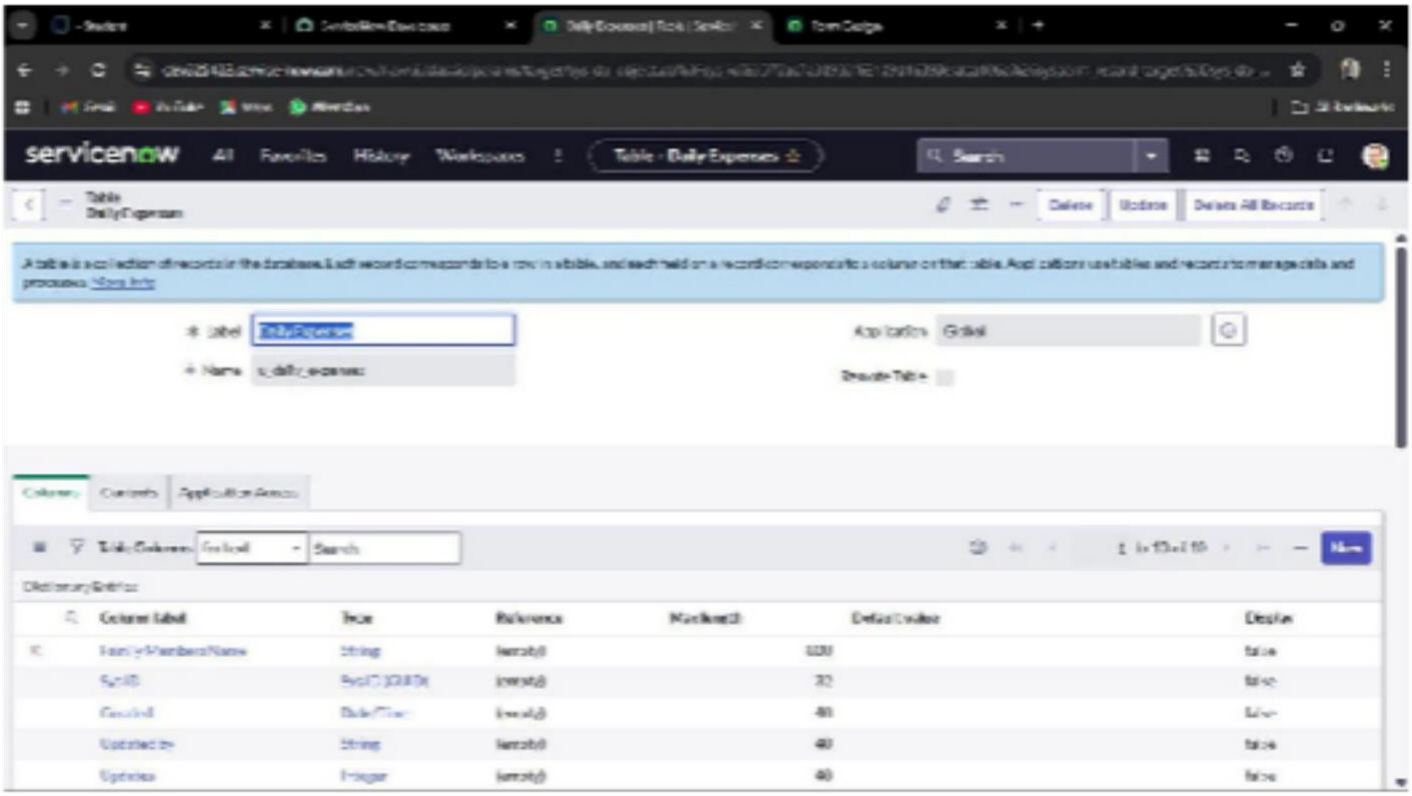


MILSTONE4:CREATIONOFTABLEDAILYEXPENSES

MILSTONE4:CREATIONOFTABLEDAILYEXPENSES

Activity1-CreatingTheDailyExpensesTable

- [ ] NavigatetoAll:Tablesusingthefilternavigator.
- [ ] ClickonNewtocreate anewtable.
- [ ] Fillintherequireddetails:
- [ ] Label:DailyExpenses
- [ ] Name:(Auto-populatedbythesystem)
- [ ] AddModuletoMenu:Family Expenditure
- [ ] Gototheformheader.right-click.andselectSave.



MILSTONE4:CREATIONOFTABLEDAILYEXPENSES

Activity2–CreatingColumns(Fields)

OpentheDailyExpensestable.

NearColumns,double-clicktoinsertanewrowandaddthefollowingfields:

1. ColumnLabel:Numbero

   Type:String

2. ColumnLabel:Dateo

   Type:Date

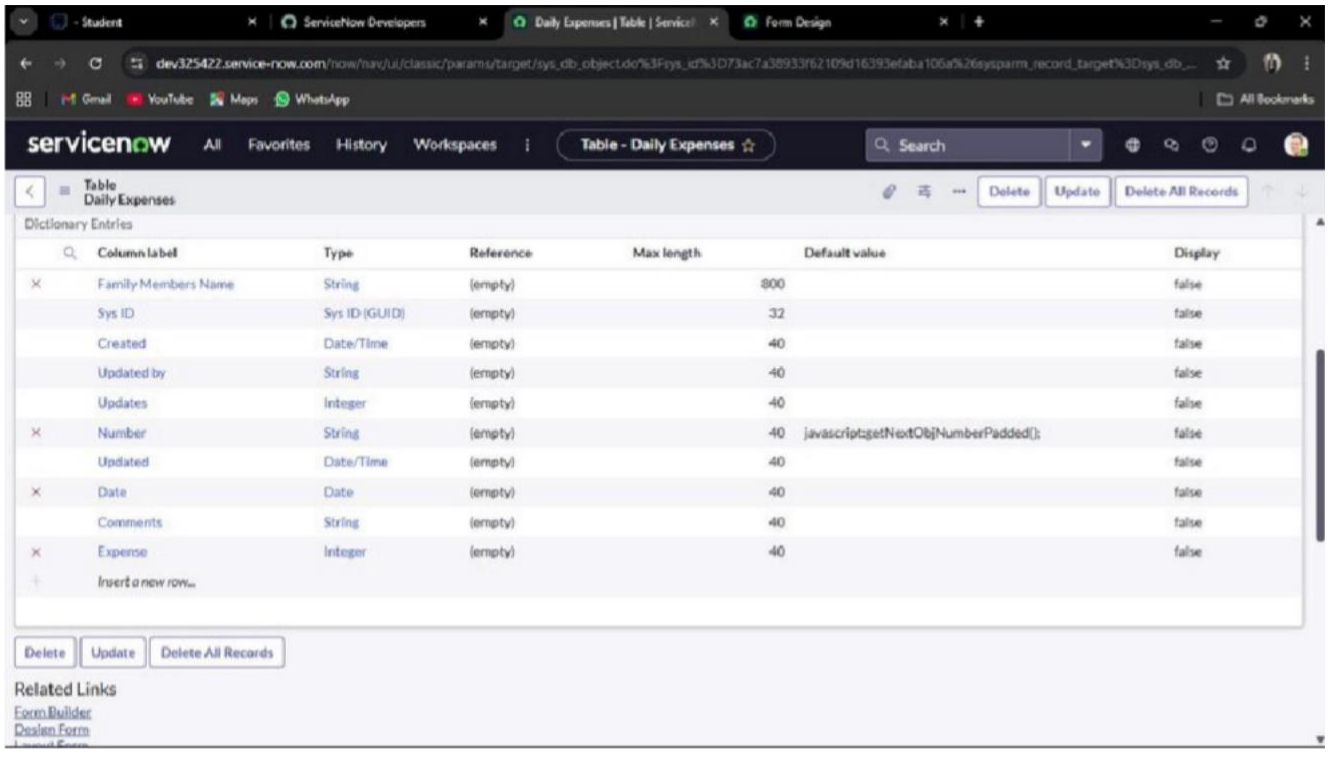
3. ColumnLabel:Expenseo

   Type:Integer

4. ColumnLabel:FamilyMemb

   erName o Type:Reference

   - o MaxLength:800



MILSTONE4:CREATIONOFTABLEDAILYEXPENSES

5. ColumnLabel:Commentso

   Type:String ₀MaxLength:

   800

Activity3–MakingNumberFieldanAuto-Number

OpentheDailyExpensestable.

LocatetheNumberfield/columnanddouble-clicktoopenitsproperties.

ScrolldownandswitchtotheAdvancedView.

IntheDefaultValuesection:

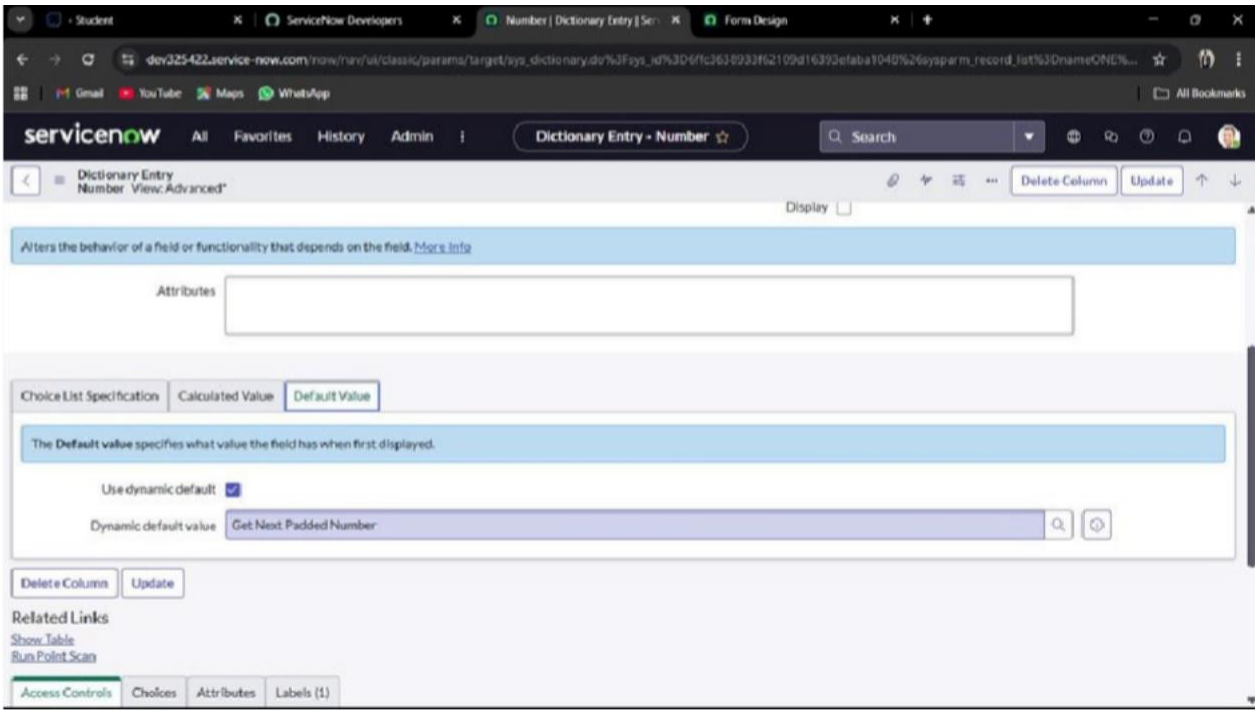
- CheckttheboxforUseDynamicDefault.
- SettheDynamicDefaultValuetoGetNextPaddedNumber.

ClickUpdatetosavechanges.

Configuring Number Maintenance:

NavigatetoAll>NumberMaintenance.

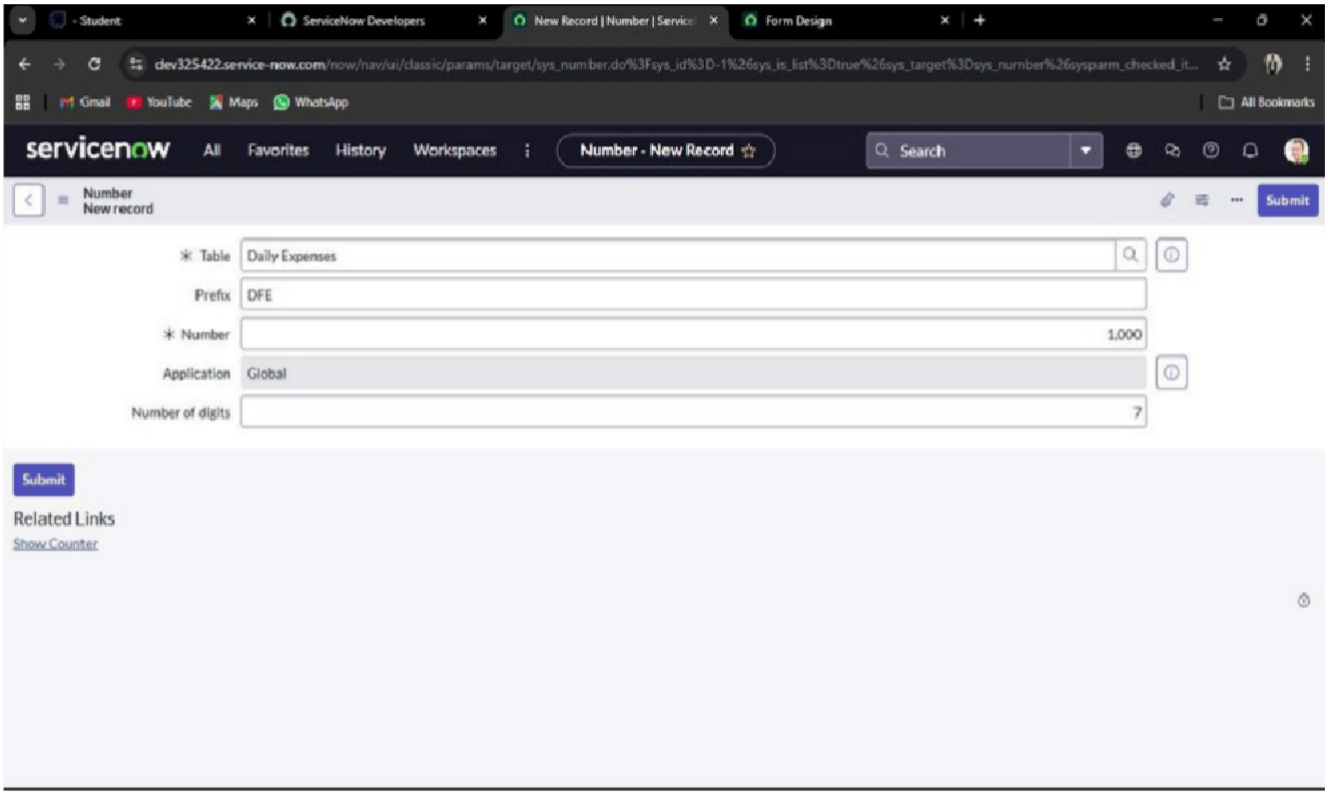
ClickonNew.



MILSTONE4:CREATIONOFTABLEDAILYEXPENSES

Enterthedetailsasfollows:

- Table:FamilyExpensesoPrefix:MFEClickonSubmit.


- Student
ServiceNow Developers
New Record | Number | Service
Form Design
dev325422.service-now.com/now/nav/ui/classic/params/target/sys_number.do%3Fsys_id%3D-1%26sys_is_list%3Dtrue%26sys_target%3Dsys_number%26sysparm_checked_it...
Gmail
YouTube
Maps
WhatsApp
All Bookmarks
servicenow
All
Favorites
History
Workspaces
Number - New Record
Search
Number
New record
Submit
Table
Daily Expenses
Prefix
DFE
Number
1,000
Application
Global
Number of digits
7
Submit
Related Links
Show Counter

MILSTONE4:CREATIONOFTABLEDAILY EXPENSES

Activity4–ConfigureTheForm

NavigatetoAll>DailyExpensesusingthefilter.
OpentheDailyExpensestable.
ClickonNewtocreateanewformentry.
Ontheformheader,right-click,thenselect:

Configure>FormDesign.

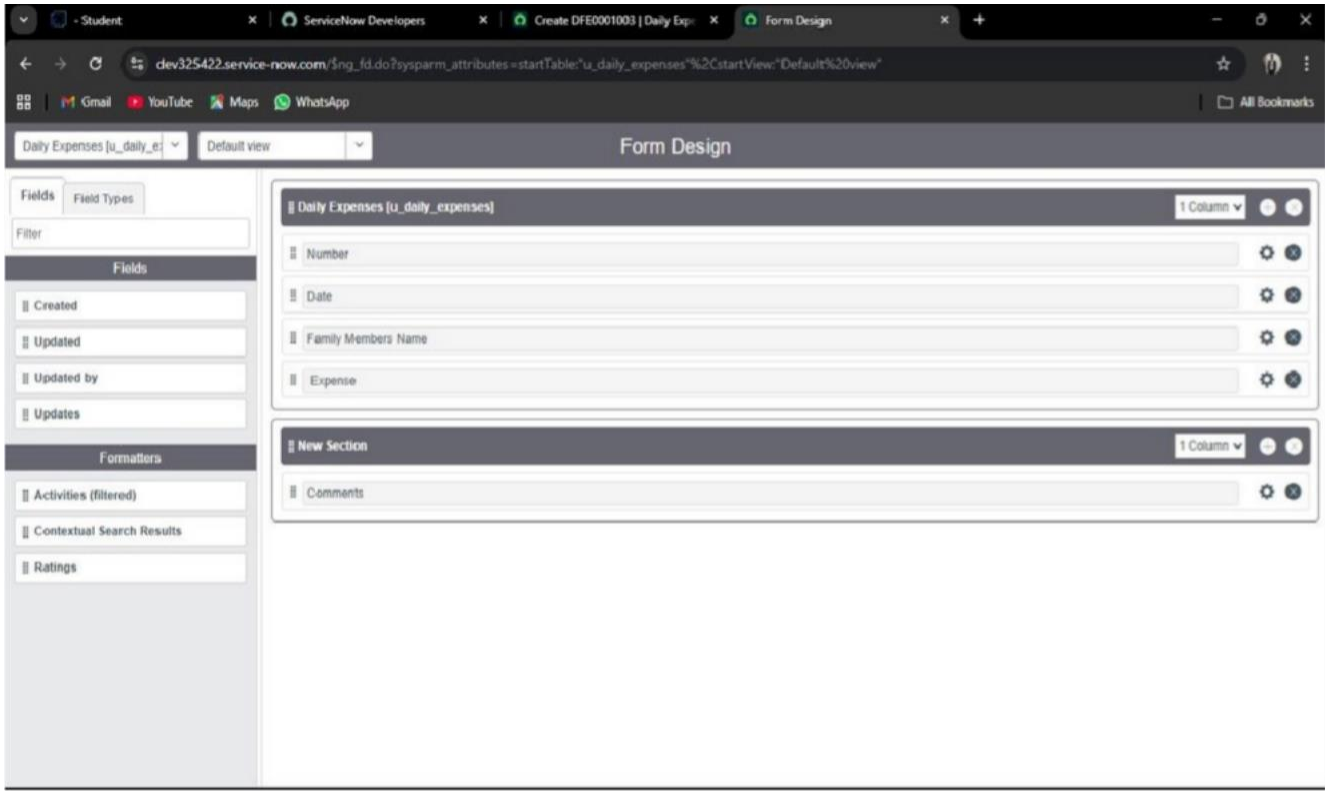
IntheFormDesigner,draganddropfieldstocustomizetheformlayoutas per requirement. Applythefollowingconfigurations:

NumberField → SetasRead-Onlybyclickingthegeariconandchecking Read-Only.

DateField → SetasMandatorybyclickingthegeariconandchecking Mandatory.

FamilyMemberNameField → SetasMandatoryusingthesame method.

ClickSavetoapplythechanges.



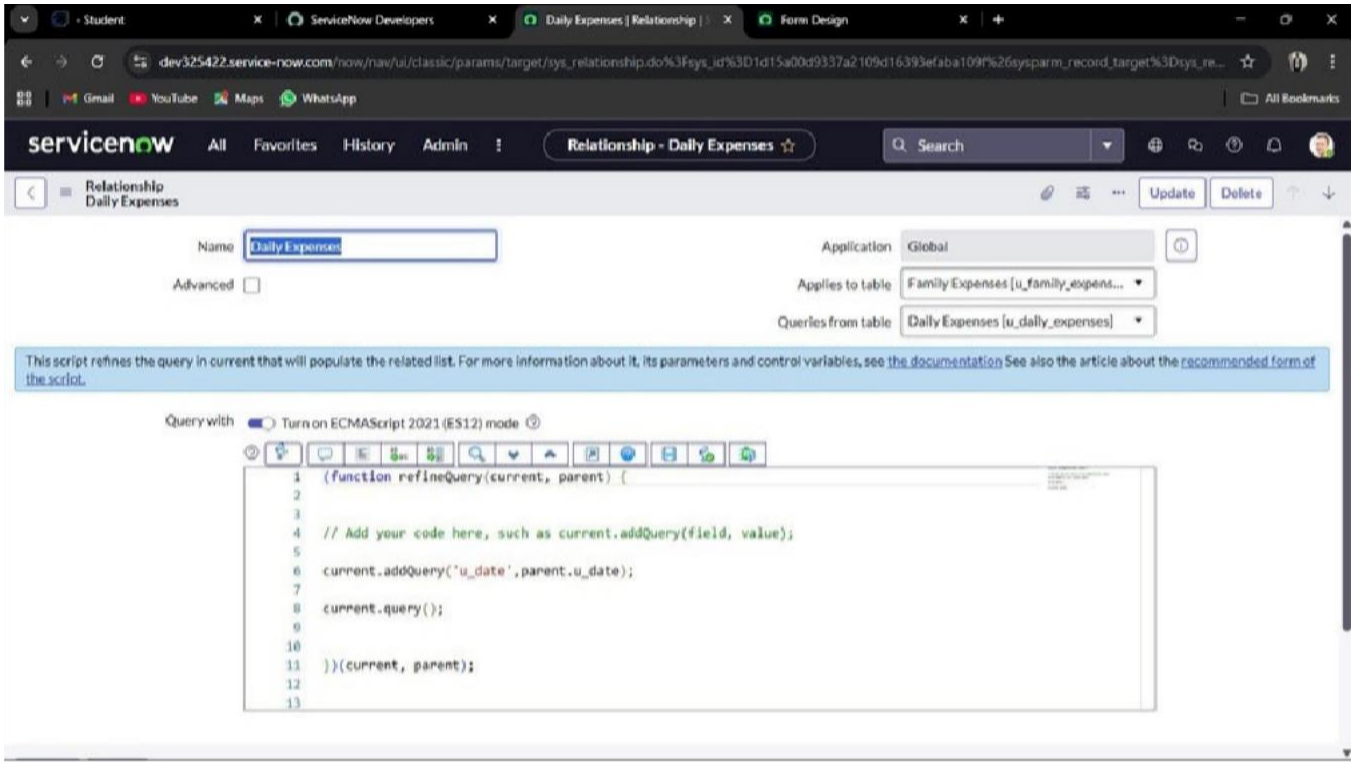
MILSTONE5:CREATIONOFRELATIONSHIP BETWEEN FAMILYEXPENSESAND DAILY EXPENSES TABLES

NavigatetoAll>Relationshipsusingthefilternavigator. ClickonNewtocreateanewrelationship.Fillinthedetailsasfollows:

Name:DailyExpenses

AppliestoTable:FamilyExpenses

RelatedListTable:DailyExpensesClickSave.

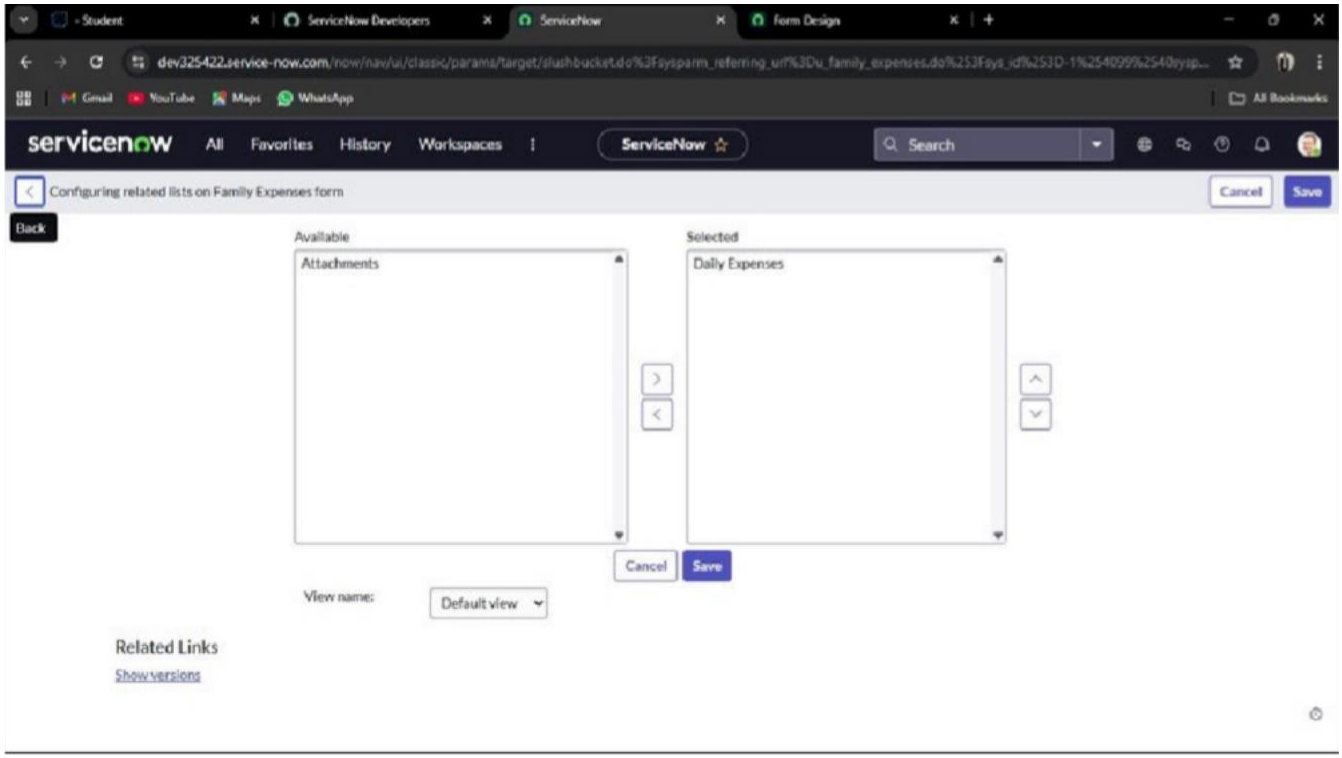


MILSTONE6:CONFIGURINGRELATEDLISTON FAMILY EXPENSES

NavigatetoAll>FamilyExpensesusingthefilter.
OpentheFamilyExpensestable.
ClickonNewtoopentheformview.
Ontheformheader,right-click,thenselect:

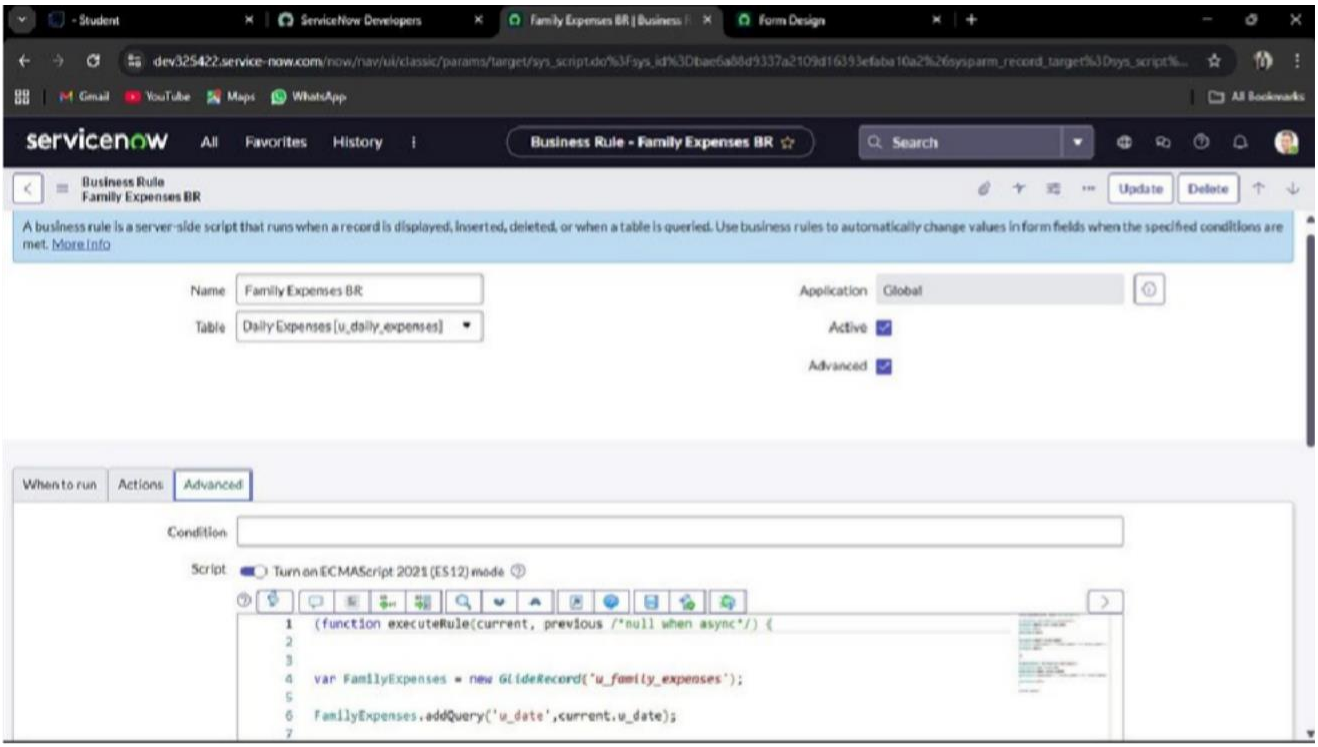
Configure>RelatedLists.

Fromtheavailableoptions,addDailyExpensestotheSelectedArea.
ClickSavetoapplythechanges.



```
            NewFamilyExpenses.insert();
        }
    })(current,previous);
```

Gototheformheader,right-click,thenselectSave.



CONCLUTION

The Family Expenses Management System built on ServiceNow demonstrates how the platform can be leveraged beyond IT workflows to solve real-world problems.Bysystematicallycreatingtables,relationships,forms,andbusiness rules, the project enables seamlesstrackingofbothdaily expenses and family-levelexpensesin an automated manner.

Theuseofauto-numbering,mandatoryfields,relatedlists,andbusinessrules ensures data integrity, consistency, and accuracy. The relationshipconfigurationfurtherenhancesvisibilitybylinkingdaily records to family-level summaries, providing a clear financial overview.

Through this project, we learned how to apply ServiceNow features suchastablecreation,formdesign,fieldconfiguration,scripting,andautomationto buildacompleteapplication.Moreimportantly,ithighlightshowlow-code/no- code platforms like ServiceNow can be extended into personal finance, household management, and non-IT use cases.

Overall,theprojectprovidesapractical,scalable,anduser-friendlysolutionfor managing family expenses efficiently while also strengthening skills in ServiceNow application development.