

Calculating Family Expenses using ServiceNow

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Category: ServiceNow System Administrator

Problem Statement:

Educational institutions often face challenges in managing large volumes of student and teacher data, handling admissions, and monitoring academic progress. Manual processes are time-consuming, error-prone, and lack real-time visibility, making it difficult for administrators to make informed decisions.

Objective:

The objective of the Educational Management System is to develop a centralized and automated platform on ServiceNow that streamlines administrative tasks within educational institutions.

Skills Required:

- TensorFlow

Project Description:

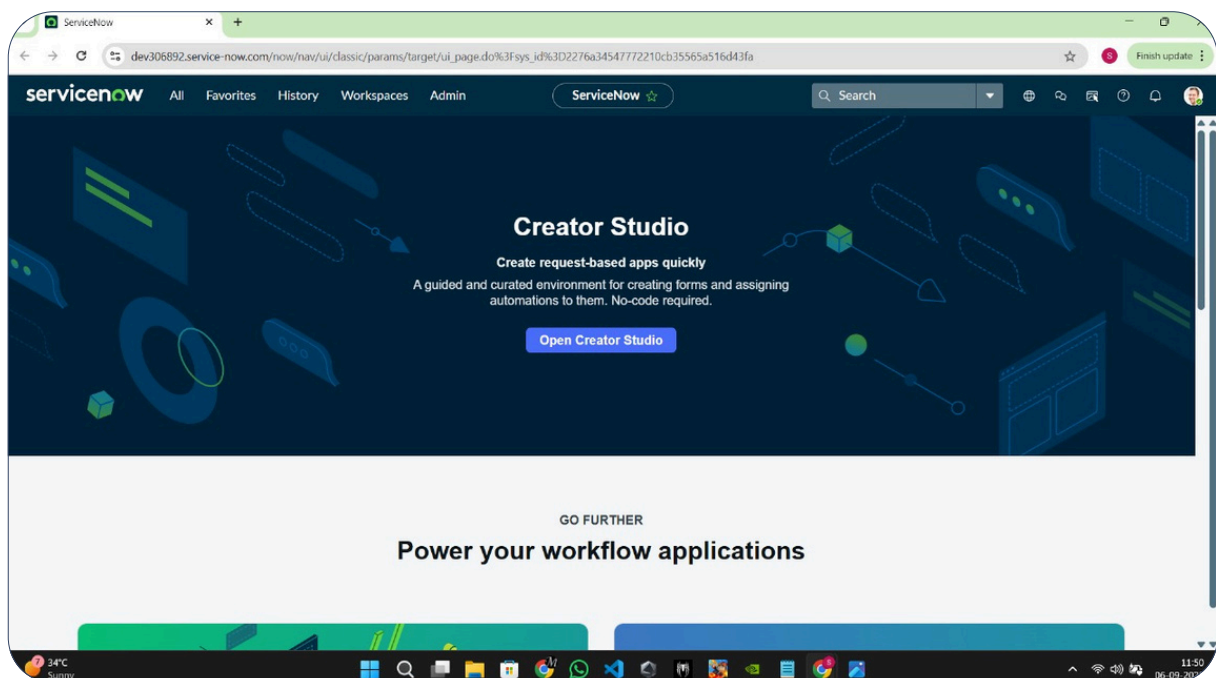
The Educational Management System is a comprehensive platform designed on ServiceNow to streamline administrative processes within educational institutions. It enables efficient management of student and teacher data, automates the admission process, and provides tools to track and monitor student academic progress.

TASK INITIATION

Milestone 1 : Setting up ServiceNow Instance

Activity 1: Create and Access Instance

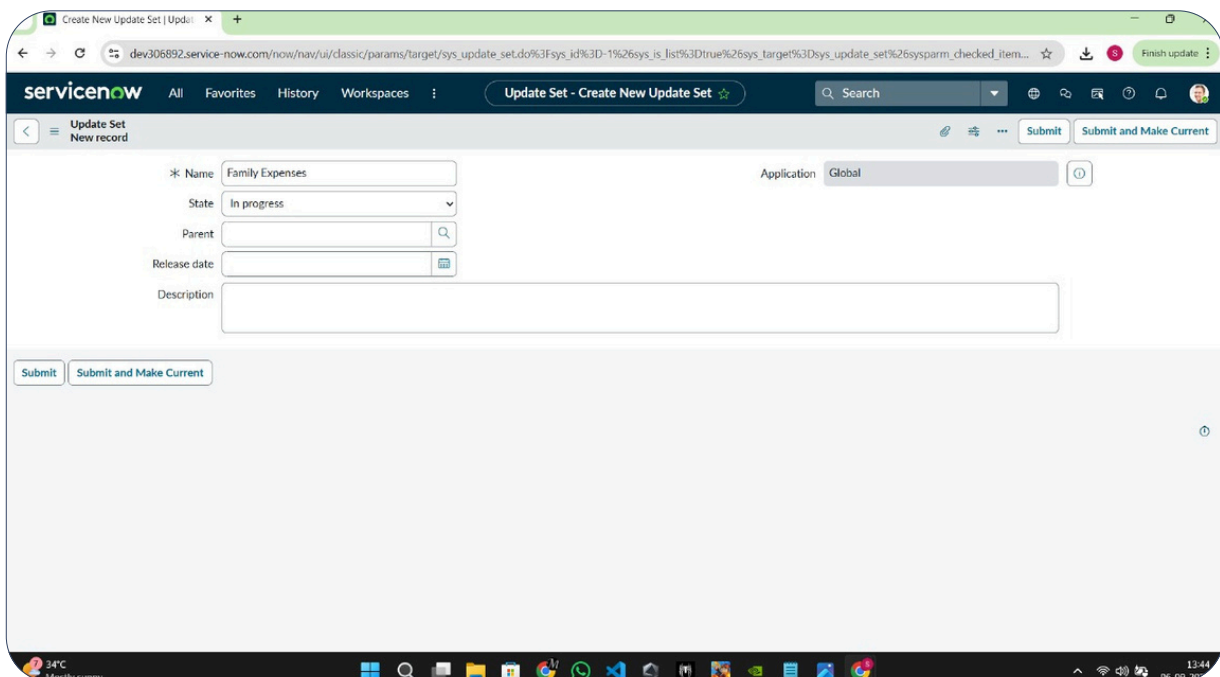
1. Open ServiceNow Developer Site.
2. Sign up for a developer account and log in.
3. Navigate to Personal Developer Instance.
4. Click Request Instance and fill the required details.
5. Submit the request.
6. Once approved, check your email for instance details.
7. Log in using the provided credentials.
8. Verify that you can successfully access and navigate the instance.



Milestone 2 : Create Local Update Set

Activity 1: Create Update Set

1. Click on All >> Local Update Sets.
2. Click on New.
3. Enter the details: Name: Educational Organisation.
4. Click on Submit, then select Make Current to activate the update set.



The screenshot shows the ServiceNow interface for creating a new update set. The browser address bar displays a URL from dev306892.service-now.com. The page title is 'Update Set - Create New Update Set'. The form includes the following fields:

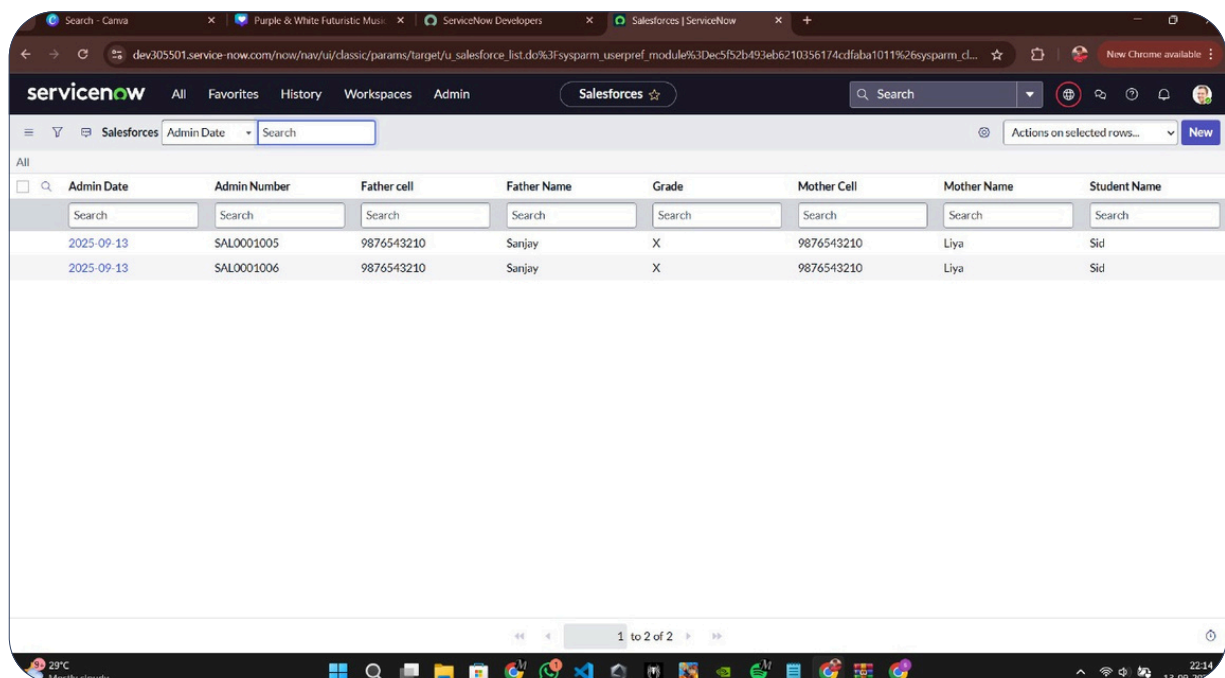
- Name:** Family Expenses
- State:** In progress (dropdown menu)
- Parent:** (empty field with a search icon)
- Release date:** (empty field with a calendar icon)
- Description:** (empty text area)
- Application:** Global

At the bottom of the form, there are two buttons: 'Submit' and 'Submit and Make Current'.

Milestone 3: Creation of New Update Set

Activity 1: Create Local Update Set

1. **Open ServiceNow.**
2. **Go to All >> in the filter, search for Local Update Set.**
3. **Click on New.**
4. **Enter the following details:**
5. **Name: Family Expenses**
6. **Click on Submit.**
7. **Select Make Current to activate the update set.**



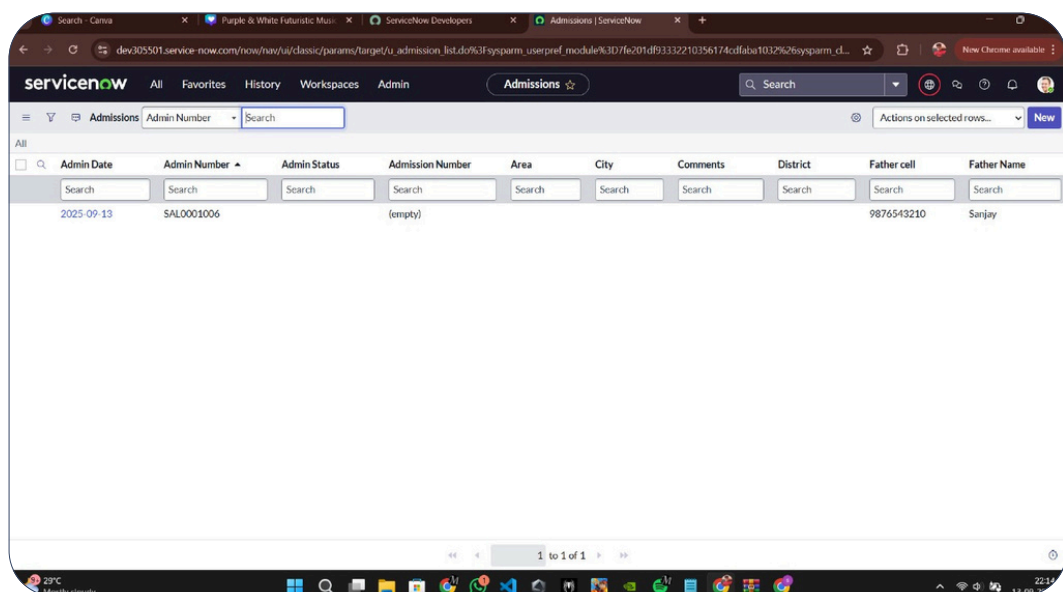
The screenshot shows the ServiceNow Admin console interface. The top navigation bar includes 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The main content area displays a list of update sets with the following columns: Admin Date, Admin Number, Father cell, Father Name, Grade, Mother Cell, Mother Name, and Student Name. The table contains two rows of data.

Admin Date	Admin Number	Father cell	Father Name	Grade	Mother Cell	Mother Name	Student Name
2025-09-13	SAL0001005	9876543210	Sanjay	X	9876543210	Liya	Sid
2025-09-13	SAL0001006	9876543210	Sanjay	X	9876543210	Liya	Sid

Milestone 4: Creation of Salesforce Table

Activity 1: Create New Table

1. Go to All → Tables → New
2. Label: Salesforce (Name auto-generated)
3. Save the table
4. Add columns (set labels & types)
5. Set Admin Number → Display = True
6. Enable Extensible
7. Set Dynamic Default = Get Next Padded Number
8. For Grade column → add Choices (Label, Value, Sequence)



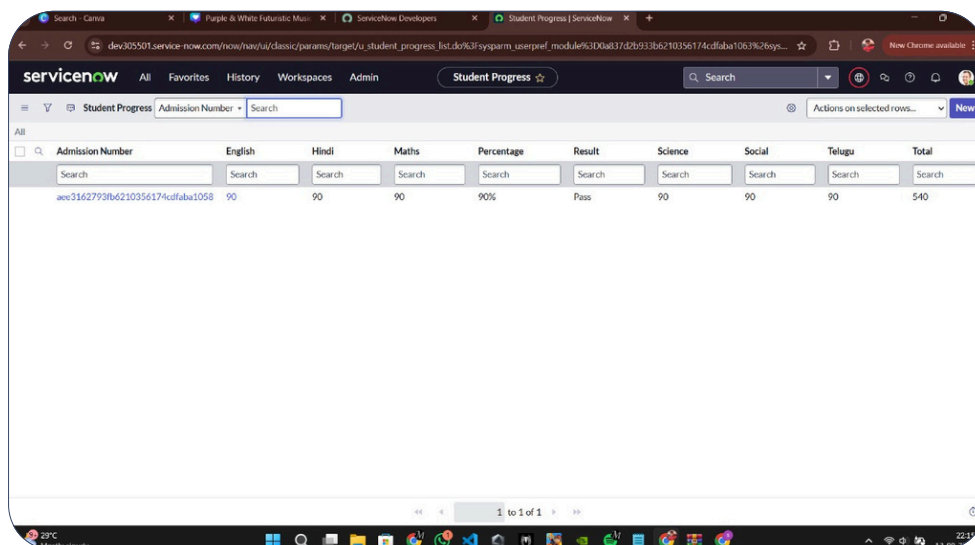
The screenshot shows the ServiceNow interface for the 'Admissions' table. The table has columns for Admin Date, Admin Number, Admin Status, Admission Number, Area, City, Comments, District, Father cell, and Father Name. A single record is displayed with the following values:

Admin Date	Admin Number	Admin Status	Admission Number	Area	City	Comments	District	Father cell	Father Name
2025-09-13	SAL0001006	(empty)						9876543210	Sarjany

Milestone 5 :Creation of Salesforce Table

Activity 1:Table Setup

- 1.Go to All → Tables → New
- 2.Label: Salesforce (Name auto-generated)
- 3.Save the table
- 4.Add columns (set Labels & Types)
- 5.Set Admin Number → Display = True
- 6.Enable Extensible
- 7.Set Dynamic Default = Get Next Padded Number
- 8.For Grade column → add Choices (Label, Value, Sequence)

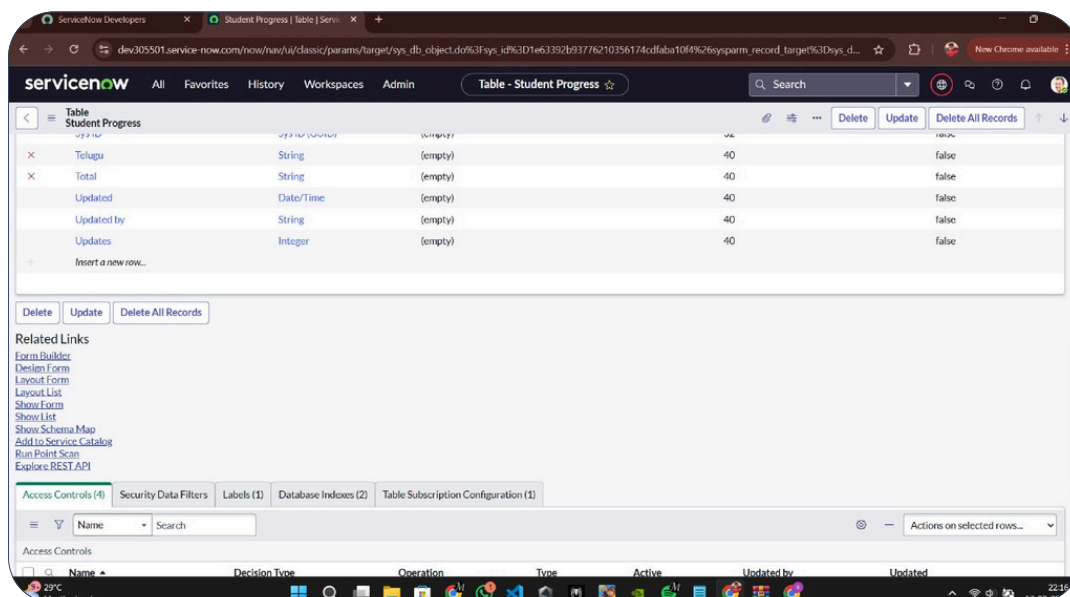


Admission Number	English	Hindi	Maths	Percentage	Result	Science	Social	Telugu	Total
ace3162793fb621035617cdfaba1058	90	90	90	90%	Pass	90	90	90	540

Milestone 6 : Creating Student Progress Table

Activity 1: Table Setup

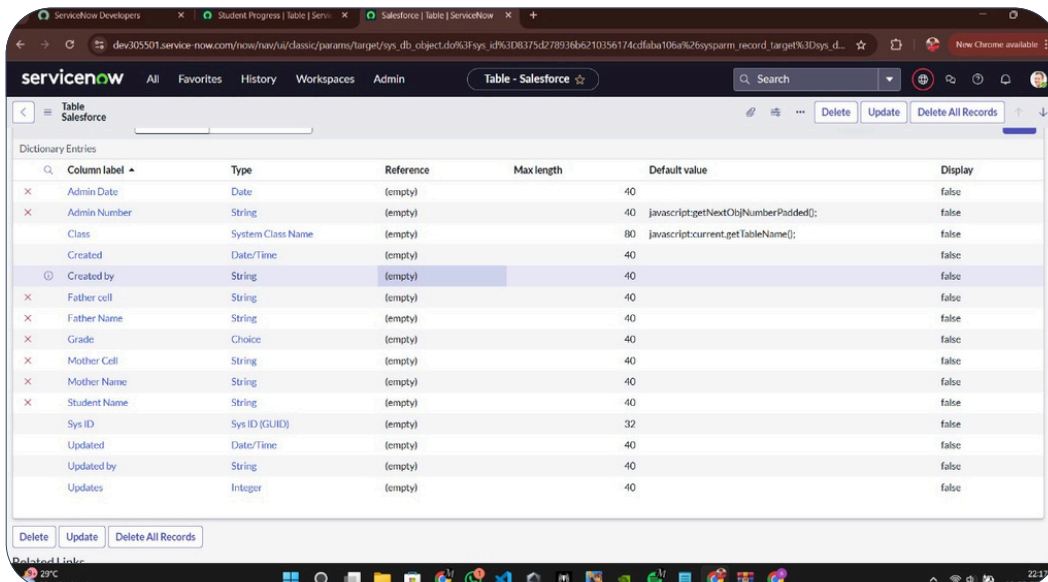
1. Create new table: Student Progress
2. Add module to menu → Salesforce
3. Add fields (Subjects, Marks, Grade, Remarks, etc.)
4. Set correct Labels, Types, Choices
5. Save the table
6. Verify module under Salesforce
7. Confirm fields are correctly configured



Milestone 7: Configuring Form for Student Progress Table

Activity 1: Form Layout Setup

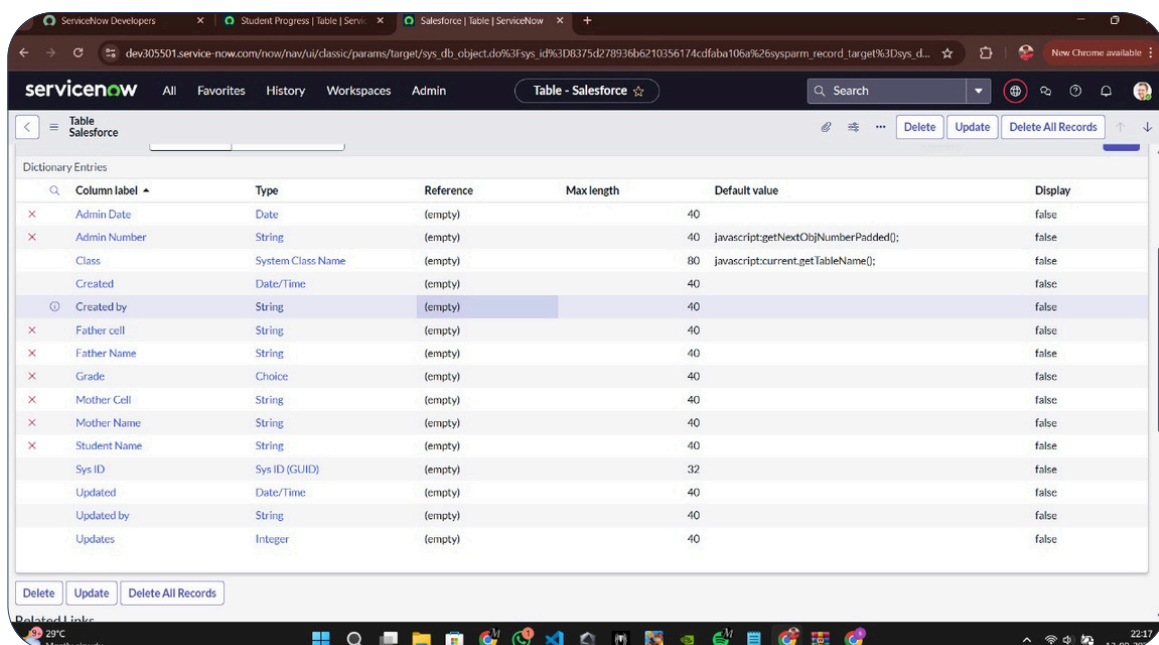
1. Open Student Progress Table page
2. Click on Layout Form
3. Add field Admission Number [+]
4. Arrange fields as required
5. Save the layout



Milestone 8: Creating Form Design for Salesforce Table

Activity 1: Configure Form Design.

1. Go to All → System Definition → Tables
2. Search and open Salesforce table
3. Right-click on top toggle → Configure → Form Design

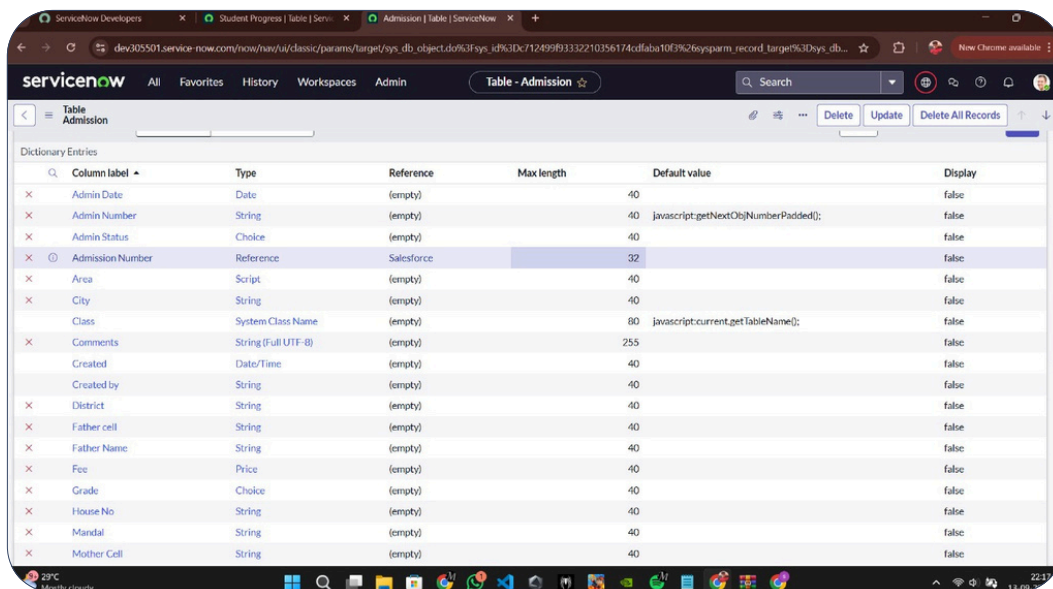


Column label	Type	Reference	Max length	Default value	Display
Admin Date	Date	(empty)	40		false
Admin Number	String	(empty)	40	javascript:getNextObjNumberPadded();	false
Class	System Class Name	(empty)	80	javascript:current.getTableName();	false
Created	Date/Time	(empty)	40		false
Created by	String	(empty)	40		false
Father cell	String	(empty)	40		false
Father Name	String	(empty)	40		false
Grade	Choice	(empty)	40		false
Mother Cell	String	(empty)	40		false
Mother Name	String	(empty)	40		false
Student Name	String	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Updated	Date/Time	(empty)	40		false
Updated by	String	(empty)	40		false
Updates	Integer	(empty)	40		false

Milestone 9 : Creating Form Design for Admission Table

Activity 1: Configure Form Design

1. Follow same steps as in Activity 1 (Form Design setup).
2. Configure the required fields for Admission Table.
3. Save the form layout.



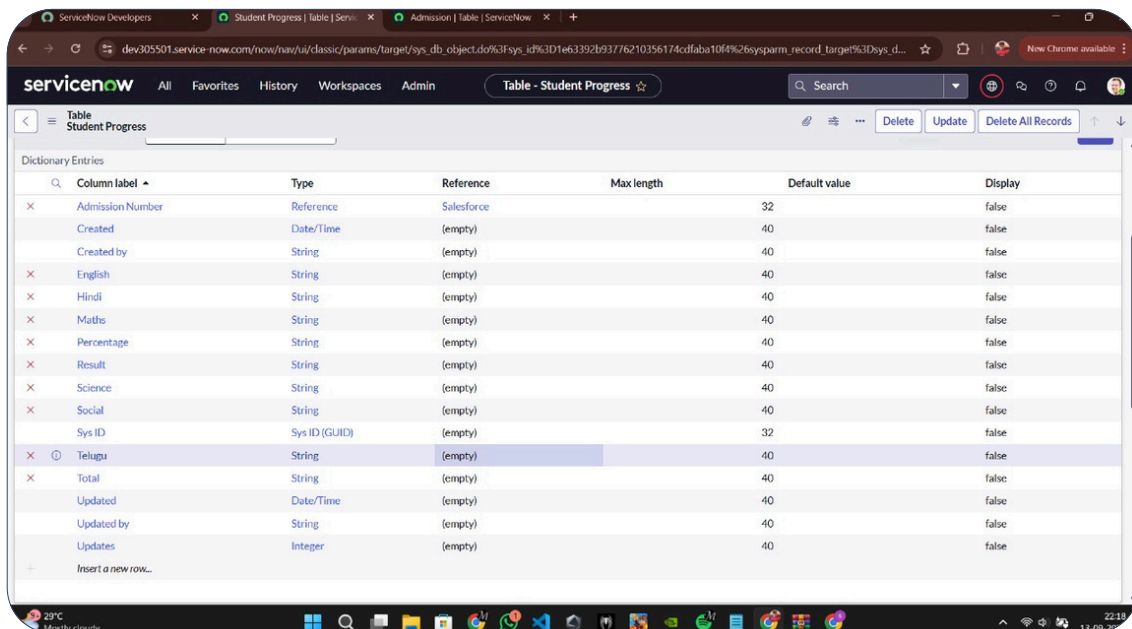
The screenshot shows the ServiceNow configuration page for the 'Table - Admission'. The 'Dictionary Entries' section is expanded, displaying a list of fields with their respective types, references, and default values.

Column label	Type	Reference	Max length	Default value	Display
Admin Date	Date	(empty)	40		false
Admin Number	String	(empty)	40	javascript:getNextObjNumberPadded();	false
Admin Status	Choice	(empty)	40		false
Admission Number	Reference	Salesforce	32		false
Area	Script	(empty)	40		false
City	String	(empty)	40		false
Class	System Class Name	(empty)	80	javascript:current.getTable();	false
Comments	String (Full UTF-8)	(empty)	255		false
Created	Date/Time	(empty)	40		false
Created by	String	(empty)	40		false
District	String	(empty)	40		false
Father cell	String	(empty)	40		false
Father Name	String	(empty)	40		false
Fee	Price	(empty)	40		false
Grade	Choice	(empty)	40		false
House No	String	(empty)	40		false
Mandal	String	(empty)	40		false
Mother Cell	String	(empty)	40		false

Milestone 10 : Creating Form Design for Student Progress Table

Activity 1: Configure Form Design

1. Follow the same steps as Activity 1 (Form Design setup).
2. Configure the fields for Student Progress Table.
3. Save the form layout.



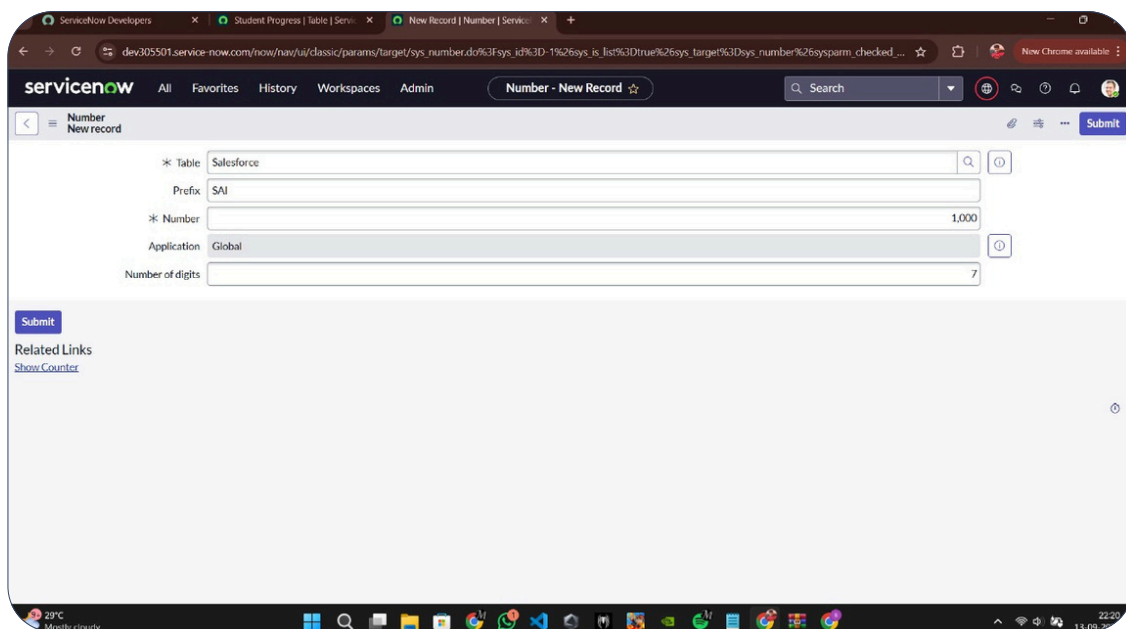
The screenshot shows the ServiceNow interface for configuring the 'Table - Student Progress'. The 'Dictionary Entries' table lists various fields with their types, references, and display settings.

Column label	Type	Reference	Max length	Default value	Display
Admission Number	Reference	Salesforce	32		false
Created	Date/Time	(empty)	40		false
Created by	String	(empty)	40		false
English	String	(empty)	40		false
Hindi	String	(empty)	40		false
Maths	String	(empty)	40		false
Percentage	String	(empty)	40		false
Result	String	(empty)	40		false
Science	String	(empty)	40		false
Social	String	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Telugu	String	(empty)	40		false
Total	String	(empty)	40		false
Updated	Date/Time	(empty)	40		false
Updated by	String	(empty)	40		false
Updates	Integer	(empty)	40		false

Milestone 11: Creating Number Maintenance for Admin Number

Activity 1: Configure Number Maintenance

1. Go to All → Number Maintenance → New.
2. Fill in the required details.
3. Click Submit.



The screenshot shows the ServiceNow 'Number - New Record' form. The form is titled 'Number - New Record' and has a 'Submit' button in the top right corner. The form contains the following fields:

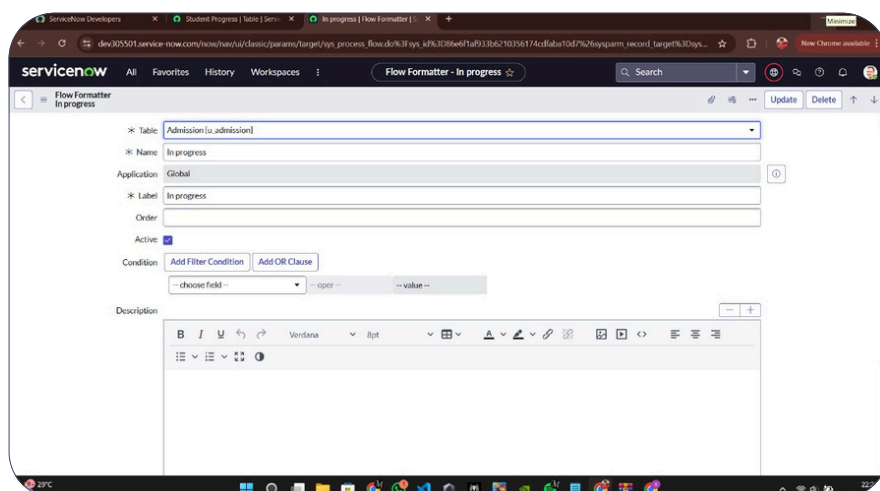
- Table:** Salesforce
- Prefix:** SAI
- Number:** 1,000
- Application:** Global
- Number of digits:** 7

Below the form fields, there is a 'Submit' button and a 'Related Links' section with a link to 'Show Counter'.

Milestone 12 : Creating Process Flow for Admission Table

Activity 1: Configure Admission Table Process Flow

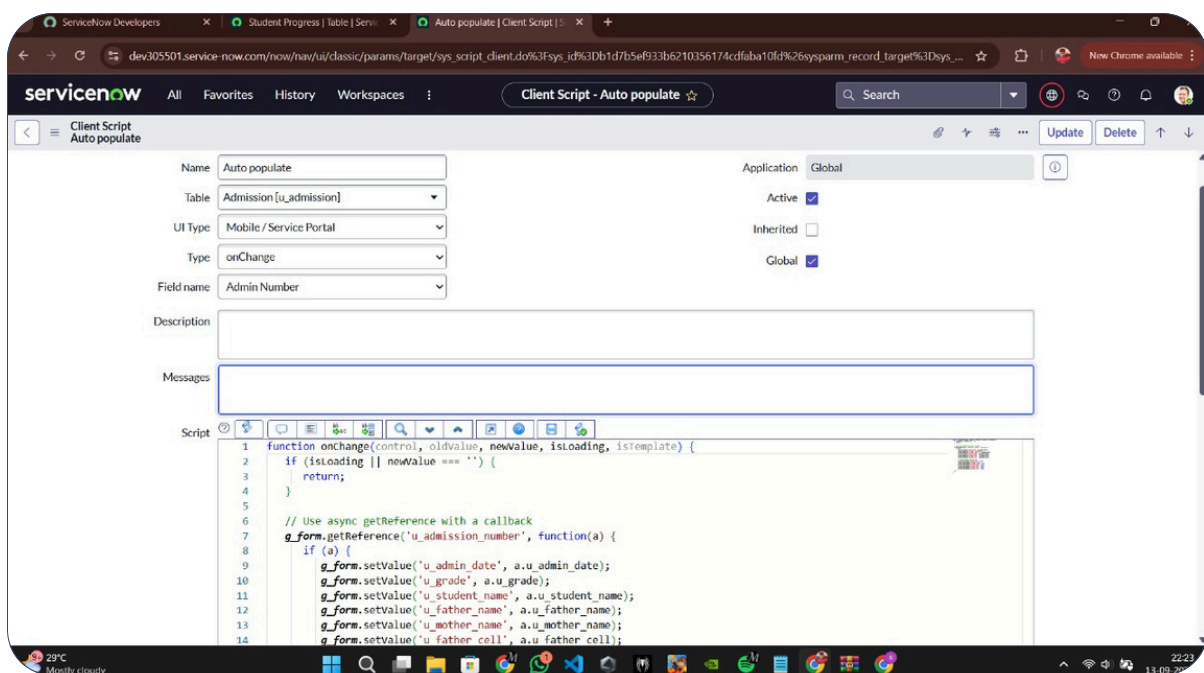
1. Go to All → Process Flow → New.
2. Fill in the required details.
3. Right-click on toggle → Save.
4. Replace Name & Label → Click Insert and Stay.
5. Add states in order:
6. New
7. InProgress
8. Joined
9. Rejected
10. Rejoined
11. Closed
12. Cancelled



Milestone 13 : Creating Auto Populate Client Scripts for Admission Table

Activity 1: Configure Auto Populate Script

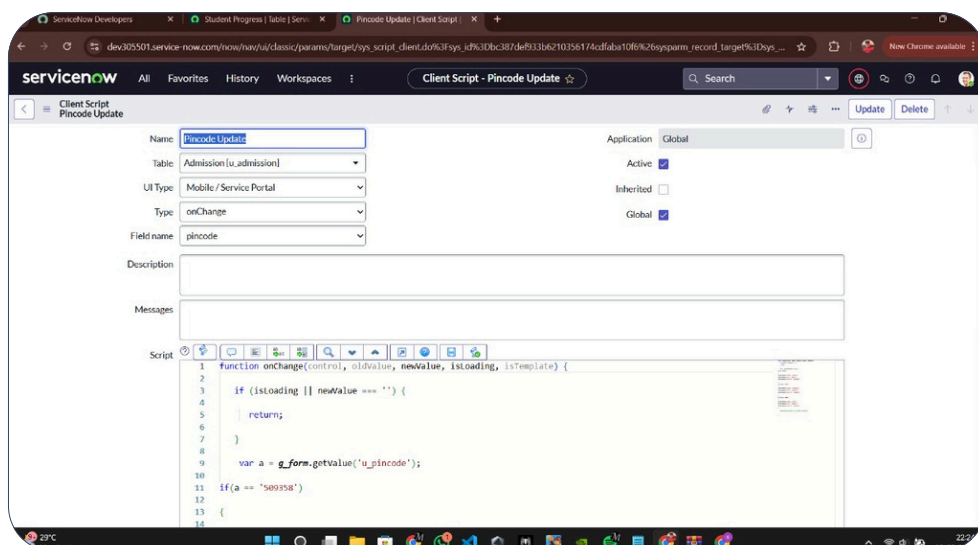
1. Go to All → Client Scripts → New.
2. Fill in the required details.
3. Write the script:[in Portal Instruction]
4. Enable Isolate Script.
5. Save the script.



Milestone 14 : Creating "Pincode Update" Client Script for Admission Table

Activity 1: Create OnChange Client Script for Admission Table

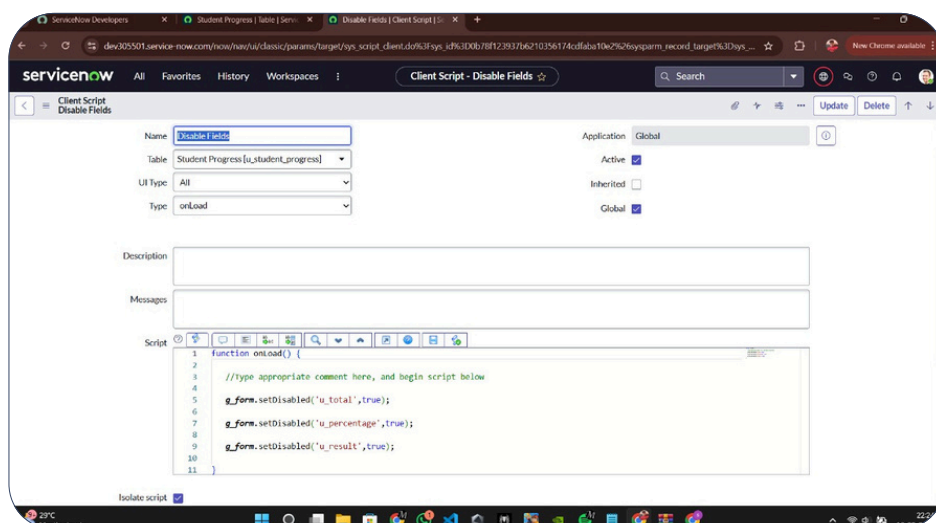
1. Navigate to Admission Table → Client Scripts → New and fill in required details (Name, Table, Type, Field).
2. Enable Isolate Script and Save.
3. Write the script to automatically update u_mandal, u_city, and u_district fields based on the entered u_pincode.
4. Include conditions for specific pincodes (e.g., 509358, 500081, 500079) to set corresponding mandal, city, and district values.
5. Test with different pincode inputs and validate that the fields update correctly.



Milestone 15 : Creating Disable Fields Client Scripts for Student Progress Table

Activity 1: Configure Disable Fields Script

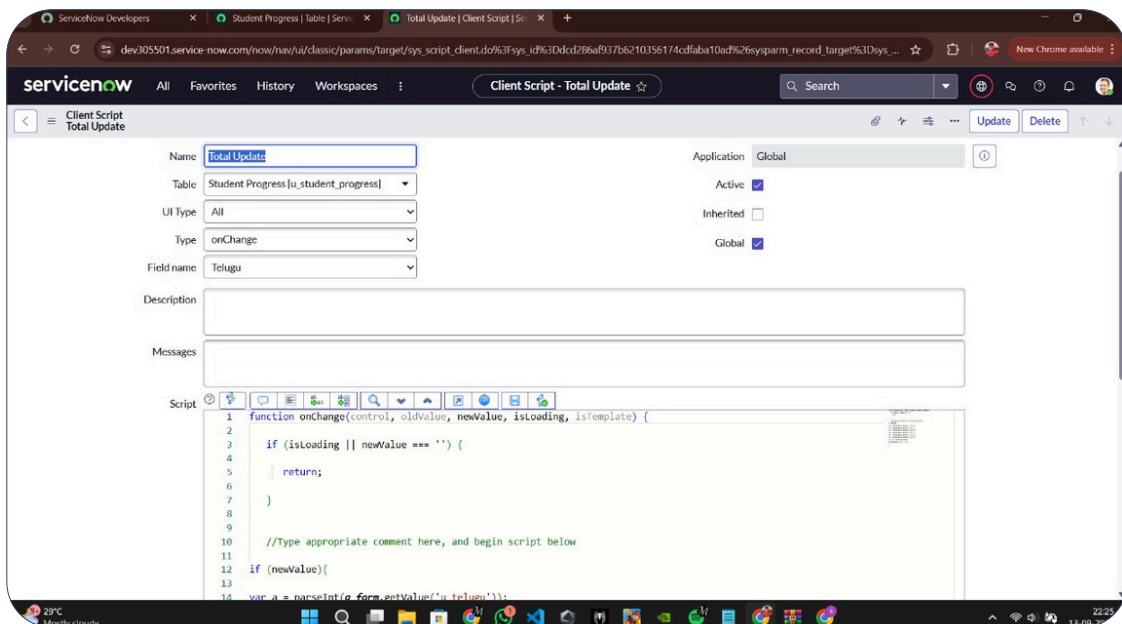
1. Go to All → Client Scripts → New.
2. Fill in the required details.
3. Write the script:
4. `function onLoad() {`
5. `// Disable calculated fields on form load`
6. `g_form.setDisabled('u_total', true);`
7. `g_form.setDisabled('u_percentage', true);`
8. `g_form.setDisabled('u_result', true);`
9. `}`
10. Enable Isolate Script.
11. Save the script.



Milestone 16 : Creating "Total Update" Client Scripts for Student Progress Table

Activity 1: Configure Total Update Script

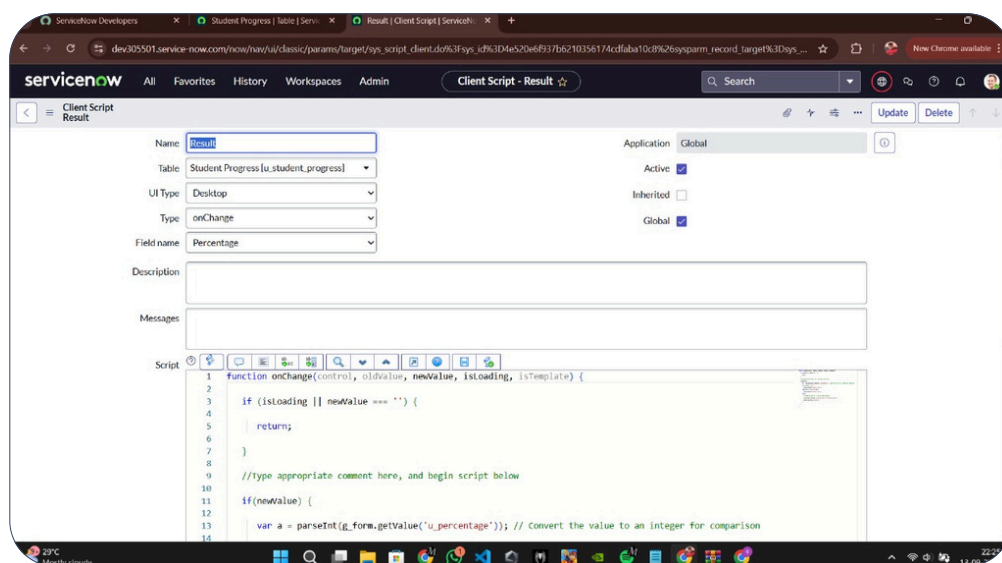
1. Go to All → Client Scripts → New.
2. Fill in the details (Table = Student Progress).
3. Write the script:[In Portal Instruction]
4. Enable Isolate Script.
5. Save the script.



Milestone 17 : Creating "Result" Client Script for Student Progress Table

Activity 1: Create Client Script

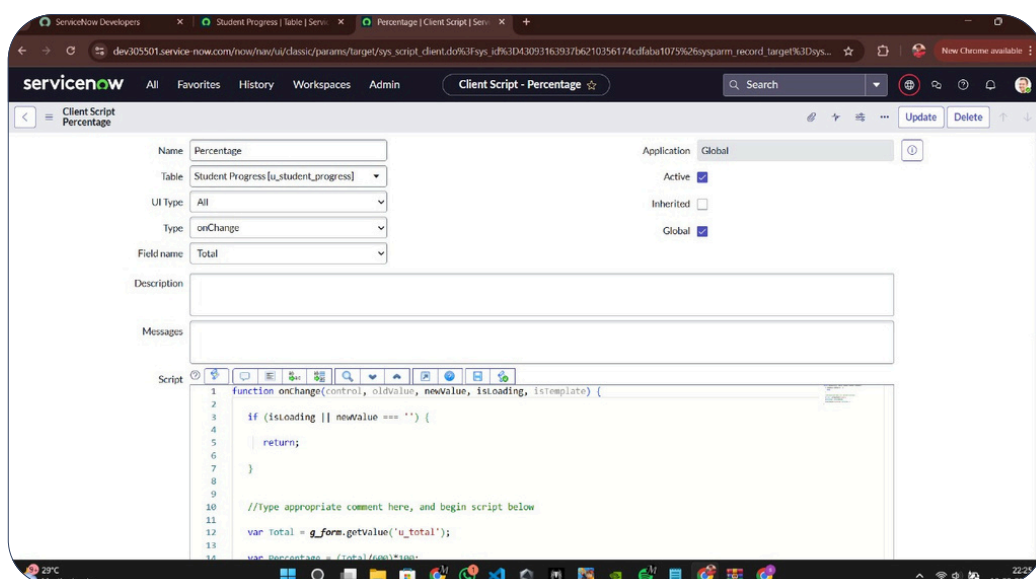
1. Navigate to Student Progress → Client Scripts → New and fill in required details (Name, Table, Type, Field).
2. Enable Isolate Script and Save.
3. Write the script to calculate u_result as Pass or Fail based on u_percentage.
4. Add error handling for invalid percentage values and clear u_result if out of range.
5. Test with different inputs and document script logic for future reference.



Milestone 18 :Creating "Percentage" Client Scripts for Student Progress Table

Activity 1: Configure Percentage Script

1. Go to All → Client Scripts → New.
2. Fill in the details (Table = Student Progress).
3. Add the script:
4. function onChange(control, oldValue, newValue, isLoading, isTemplate) {
5. if (isLoading || newValue === '') {return; }
6. var Percentage = (Total / 600) * 100;
7. g_form.setValue('u_percentage', Percentage + '%');}
8. Enable Isolate Script.
9. Save the script.



Conclusion:

The Educational Management System developed using ServiceNow offers a robust and efficient solution for managing the diverse administrative needs of educational institutions. By centralizing student and teacher information, automating admission procedures, and providing tools to monitor academic progress, the platform significantly reduces manual workload and enhances operational efficiency. The integration of advanced technologies like TensorFlow further enables predictive analytics and intelligent insights, supporting data-driven decision-making. Overall, this system not only streamlines administrative processes but also contributes to a more organized, transparent, and effective educational environment.